AN ALTERNATIVE APPROACH TO INTERNATIONAL FINANCE: CHINA'S OFFICIAL FOREIGN RESERVES

by

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Abstract

This thesis seeks to develop an alternative conceptual framework through which to understand international finance. It will then apply this framework to the case of China's recent official foreign exchange accumulation. One view of international financial relations suggests an agenda of state-to-state financial relations, especially in terms of financial power relations between nations (Andrews et.al. 2006). Another view suggests that finance, while being globally mobile, expresses clear national characteristics such that the aggregation of financial transactions will tell a coherent national story, such as a story of mercantile policy rooted in national trade and payments imbalances (Goldstein 2004). This thesis develops an explanatory critique of these approaches, and suggests an alternative theoretical approach to understanding international financial relations. It does this by augmenting a theory of international financial intermediation — understood as a socially determined, value-chain driven process of cross-border and cross-currency financial transformation by and through international financial intermediary institutions (Scholtens and Van Wensveen 2003) — with a strategic relational approach to state policy.

This framework is then applied with a view to understanding the development of a process of official foreign exchange accumulation by China's monetary authorities. It seeks to account for why Chinese official reserve accumulation has predominately taken the form of US dollar assets, and to explain recent pressures and responses by China's authorities to their official US dollar 'liquidity dilemma'. This thesis argues that the recent pattern and level of China's foreign exchange accumulation is primarily a secondary by-product of other foreign exchange, monetary and financial risk-mitigation objectives which operate in the context of a rising structural surplus and rising inflows of foreign exchange liquidity. Finally, despite the popular view, this pattern of recent official reserve accumulation has been a relatively durable two-way international financial intermediary relationship. China's authorities will continue to accumulate US government debt securities unless they decide to 'float' the exchange rate. Even then, while the cross-border intermediaries would change — from official to commercial intermediaries — the pattern of international asset accumulation is likely to continue.

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In Australia, Stephen Morgan, then at the University of Melbourne, armed me with good advice on reviewing the past five years of the APEL journal and key books on China's banking system before I headed off to China. In my Department, of Government and International Relations at the University of Sydney, Graeme Gill, Linda Weiss, Daryl Jarvis and then-visiting David Marsh provided crucial early feedback and encouragement on this project, as did Mike Rafferty at the Workplace Research Centre. At ANU, Associate Professor Ligang Song, director of the China Economy Program and Prema-chandra Athukorala at the Crawford School of Economics. Anita Chan at the UTS China Research Centre. Huw MacKay at Westpac Bank in Sydney helped with data queries. Mike Beggs, Chris Jeffries, and Roni Dermibag for discussing these themes on Friday after work. For editorial assistance in copy editing and proofing parts of this thesis, Eric Adams, Mark Goudkamp, Bruce Knobloch and Veronica Ganora came through. All of the errors are of course my own. Finally, a huge thanks and love is due to Rachel Dowling for her great support and patience, and to Ziggy Dowling for his cute smiles and wonder at the world.

Statement of Originality

This is to certify that to the best of my knowledge, the content of this thesis is my own work. This thesis has not been submitted for any degree or other purposes.

I certify that the intellectual content of this thesis is the product of my own work and that all the assistance received in preparing this thesis and sources have been acknowledged.

Luke D. Deer
(August 31, 2010)

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List of Abbreviations

BIS	Bank for International Settlements
CCP	Chinese Communist Party
CIC	China Investment Corporation
CFETS	China Foreign Exchange Trading System
CNY	Chinese Yuan (PRC currency unit), or Renminbi
COFER	Currency Composition of Official Foreign Exchange Reserves
ECB	European Central Bank
FDI	Foreign Direct Investment
HKMA	Hong Kong Monetary Authority
IFI	International Financial Intermediation
IMF	International Monetary Fund
IPE	International Political Economy
IR	International Relations
PBC	People's Bank of China
PPP	Purchaser Power Parity
PRC	People's Republic of China
SAFE	State Administration for Foreign Exchange
SOCB	State Owned Commercial Bank
SOE	State Owned Enterprise
TIC	Treasury International Capital
TVE	Township and Village Enterprise
RCC	Rural Credit Cooperatives
RMB	Renminbi (People's Currency), also known by its unit, the Yuan
SDR	Special Drawing Right (IMF currency unit)
SEZ	Special Economic Zone
SWF	Sovereign Wealth Fund
TIC	Treasury International Capital
TVE	Township and Village Enterprise
USD	United States Dollar
USCC	United States-China Economic and Security Review Commission
US Treasury	United States Department of the Treasury

Note on Chinese names

Chinese names in this thesis are written in the original order, with the surname followed by the given name. The spelling of Chinese names, places and terms is based on the phonetic spelling system of *pinyin*.

Chapter 1

Understanding China's official foreign exchange reserves in international finance

The politics of high finance made a comeback during the recent global financial crisis. In March 2009, the Chinese premier Wen Jiabao told an international press conference that: 'We have lent a huge amount of money to the US. Of course we are concerned about the safety of our assets. To be honest, I am definitely a little worried. I would like…to once again request America to maintain their creditworthiness, keep their promise and guarantee the safety of Chinese assets' (Wen quoted in Wines, *New York Times,* March 14, 2009). The next day the White House press secretary for Barack Obama, Robert Gibbs, responded directly to Wen's 'expression of concern', stating that: 'There is no safer investment in the world than in the United States' (ibid).

The key 'worry' for Wen Jiabao was how to maintain the future value of China's current official holdings of US debt securities, valued at over $1.2 trillion US dollars as of mid-2008 (US Treasury et.al. 2009). China's authorities' took high profile losses on their US security holdings during the financial crisis, and with each financial loss China's leaders took political losses at home. China's new sovereign wealth fund, the China Investment Corporation (CIC), took losses on their first major financial investment in the US private equity company Blackstone Group in mid-2007 (Bradsher, *New York Times,* August 2, 2007). Then, China's official sector was forced to start selling their stock of US agency (mortgage exposed) securities in August 2008 — a stock of $500 billion US dollars in agency securities by mid-2008 (US Treasury et.al, 2009) just as the sector was starting to be pulled down by the crisis. US agency officials had rebuffed China's official requests for a guarantee on the value of their stocks of agency securities (Drezner 2009, 36-37).

Wen Jiabao's 'expression of concern' in early March 2008 was motivated by an imminent US Congress decision to approve a bill that that gave the US Federal Reserve authority to make large debt-purchases through expanding its 'balance sheet'. Many economists and financial officials in China and elsewhere believed this was a US government policy of 'monetising' US private and official debt obligations (O'Grady, *Wall Street Journal*, May 23, 2009) — a policy which was expected to generate long term inflation in the US and therefore to reduce the future value of China's current US dollar asset holdings. According to Wen's statement, 'We have expectations as to the effects of these measures' (ibid). Nevertheless, the debt-purchase bill was passed and on March 18 the US Federal Reserve announced that it would buy up to $1.2 trillion in US official mortgage and Treasury debt (US Federal Reserve 2009). Yet that wasn't the end of the matter for China's leadership. Within a week, China's central bank governor, Zhou Xiaochuan, issued a public international document that called for 'the reform of the international monetary system' to remove 'the inherent deficiencies caused by using credit-based national currencies' and to replace these 'credit-based national currencies' with the IMF's Special Drawing Right (SDR) currency units (Zhou 2009). It was a call to replace the US dollar as the dominant global reserve currency.

There is good reason for the Chinese state to be worried about the standing of the US dollar. The seemingly inexorable rise of China's national trade and financial payments surpluses in the first decade of the new millennium was accompanied by rapid official foreign exchange reserve accumulation by China's monetary authorities — most of which has taken the form of US debt securities. In 2006, China's monetary authorities overtook Japan's monetary authorities to become the largest single holder of official foreign exchange reserves in the world (IFS 2009). Like Japan's official foreign exchange holdings, most of China's official foreign exchange holdings have taken the form of US debt securities — especially US government debt. By mid-2008 Chinese monetary authorities' holdings of US debt securities was worth US$1.2 trillion, of which

US $500 billion was in long-term US Treasury debt and $500 billion was in US quasi-government agency debt, mostly public mortgage backed securities (US Treasury et.al. 2009). By February 2009, China's monetary authorities had amassed reported official foreign exchange reserves valued at US$ 2.2 trillion dollars (PBC 2009). These official foreign exchange reserves were accumulated by China's central banking authority, the People's Bank of China (PBC) and managed on behalf of the PBC by China's State Administration for Foreign Exchange (SAFE).

However, China's recent foreign exchange accumulation poses a problem for our understanding of international finance. The conventional understanding of international finance by at least a generation of financial journalists, policy makers, economists and international relations scholars largely reflects the international economic discourse that dominated the most of the 20th century – since the automatic adjustment mechanisms of the gold standard became replaced by a balance of payments focus on 'external stability'. According to this view, international finance is understood in an international trade-dominated discourse in which finance is largely posed as the reciprocal of trade in goods and services, plus the means by which trade imbalances are financed. It is an analysis that has at its basis a conception of accounting balance (the balance of payments) and national 'sustainability' in the global economic system. In this view, China's recent official foreign exchange accumulation and its bilateral counterpart in growing US national debt are 'unsustainable payments imbalances' which demand economic policy 'adjustment'. Many International Relations (IR) and International Political Economy (IPE) scholars have tended to share this conventional treatment of international finance — albeit with a disciplinary focus on the 'the politics of adjustment' (e.g., Andrews ed. 2006).

The central problem with these conventional frameworks is that their analysis of the content of international financial relations has been secondary. For economics this content has been secondary to the study of purported departures from 'equilibrium'

current account and trade balances. And for IR/IPE the relational content has been secondary to the politics of inter-state bargaining over 'balance of payments adjustment'. As such, the conventional treatment of international finance largely reflects the US international financial policy discourse and US state strategy within international finance, rather than providing a framework for the critical analysis of international financial relations per se.

This thesis develops an alternative conceptual framework for understanding international financial relations, which it then applies to the analysis of China's recent official reserve accumulation. This framework is developed by augmenting a general framework for understanding the generative social and value chain processes of international capitalist accumulation with a theory of international financial intermediation (IFI) (Scholtens and Van Wensveen 2003). This conceptual framework is then applied to analyse the development of China's official foreign exchange accumulation as a recent historical conjuncture within international finance. The results of this analysis suggest a different understanding of the processes and institutional forms which have generated China's recent official reserve accumulation. This introduction sets out the basis of this study.

1.1 **China's official reserve accumulation: A problem in understanding international finance**

It is clear that the level of Chinese official reserves is a major point of debate. Our starting point must be to explain what international reserves are and what China's international reserve position looks like. Official reserve assets are defined by the International Monetary Fund's *Balance of Payments Manual* (2008, 161-62) as: 'those external assets that are readily available to and controlled by monetary authorities'. These external assets include: foreign exchange assets such as foreign banknotes, foreign bank

deposits, treasury bills, short and long-term government securities; and minor IMF positions in the form of Special Drawing Rights (SDRs) and monetary gold assets. SDRs are an international currency unit issued by the IMF whose value is calculated from a basket of key currencies — the US dollar, euro or the yen, for which SDRs are exchangeable by the relevant central banks (IFS 2008). The dominant class of foreign reserve assets are foreign exchange reserves — the most well known is US Treasury securities, but euro and other currency-denominated assets are also used. Official reserves are typically referred to as foreign exchange reserves in popular usage. Both terms are used in this thesis.

To be counted as official reserves, these assets must be held by monetary authorities and be readily 'usable'. 'Monetary authorities' refers to central banks and their agencies. A slightly wider definition of monetary authorities, which is also used in this thesis, is the official — i.e., government financial sector, or simply the official sector. Reserves must be 'usable,' by which is meant 'readily available in the most unconditional form. A reserve asset is liquid in that the asset can be bought, sold, and liquidated for foreign currency (cash) with minimum cost and time, and without unduly affecting the value of the asset' (IMF 2008, 162). Therefore official reserves are overwhelmingly held in the form of short-term securities that are readily convertible to cash at short notice (Nugee 2000, 26), hence the dominance of foreign exchange instruments in official reserve portfolios. This definition of 'usable' reserves, therefore, excludes the foreign assets of state investment funds — i.e., Sovereign Wealth Funds (SWFs). SWFs tend to invest long term and tend to hold less liquid financial assets that are not directly controlled by monetary authorities — ostensibly, therefore SWF assets are not official reserves.

China's recent official reserve accumulation has occurred alongside a sharp rise in reserve accumulation by monetary authorities across emerging market economies since the 1990s. This phenomenon has been called 'the puzzle of reserve accumulation' by a

recent European Central Bank (ECB) paper (Dorrucci and Pinaeau 2006, 10), because recent reserve accumulation has been in 'excess' of traditional reserve adequacy benchmarks. Yet perhaps there is a bigger problem of understanding that is revealed by this conceptual 'puzzle', and that is with traditional understandings of international finance — especially a lack of appreciation of financial globalisation. In this respect, the development of China's recent official reserve accumulation poses a problem in our understanding of international finance. Because of this problem, how we understand international finance also has conceptual and policy implications for our understanding of the consequences of China's official reserve accumulation.

The notion of a 'puzzle' of recent official reserve accumulation highlights the problem of how to understand the development of recent official reserve accumulation by Chinese and other emerging market monetary authorities. A key rationale for recent official reserve accumulation from the specialist literature on official reserves is the shift from trade to asset and currency based rationales for reserve holding by emerging market monetary authorities in the post-financial globalisation era. This is discussed below. Such a 'precautionary' explanation for recent official reserve accumulation certainly makes more sense than the old trade-based rationales, and recent official reserve accumulation does not look 'excessive' if compared against new financial variables (Wyplosz 2009, 4). However, the problem remains as to whether this rationalisation explains the phenomenon of emerging market foreign exchange accumulation, including that by China's authorities.

There has been a sharp nominal rise in official reserve accumulation by emerging market authorities since the 1990s (figure 1-1).

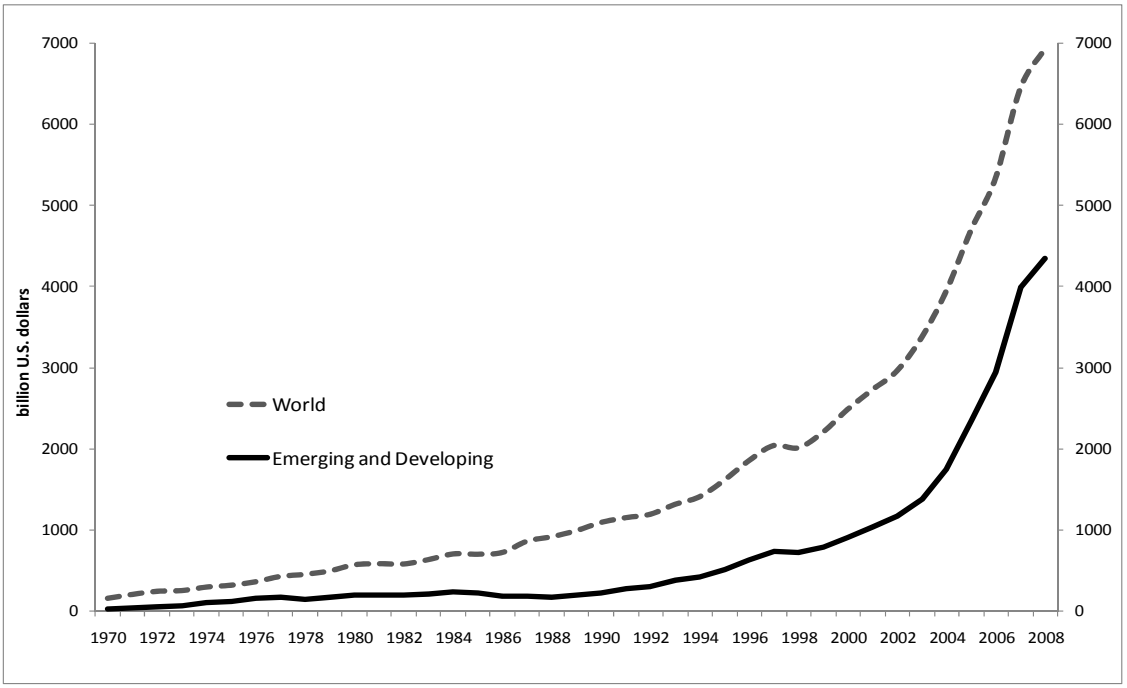


Figure 1-1 International reserves, world & emerging market, 1970-2008, in billion US dollars.
Data from International Financial Statistics (IFS) Online Database, 2009. International Monetary Fund.

Given this sharp nominal rise in reserve accumulation, recent studies have claimed that reserve accumulation by these monetary authorities is in 'excess' of optimal 'reserve adequacy' benchmarks (e.g., Green and Torgenson 2007, 6) The 'traditional' benchmark was that monetary authorities should hold enough official reserves to finance three months of imports in the event of a payments shortfall on the national current account — i.e., a payments deficit (Ben-Bassat and Gottlieb 1992, 1). Yet by 2006, the top nine official reserve holders held stocks of foreign exchange reserves in excess of, and in some cases well in excess of, the three months of imports (figure 1-2).

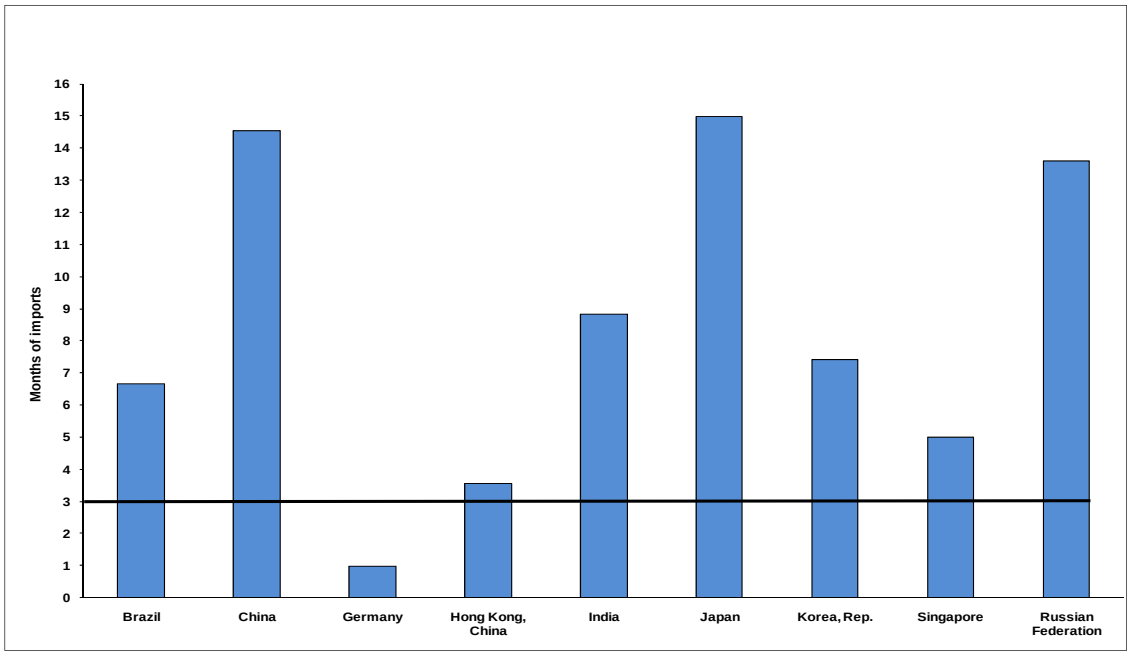


Figure 1-2. Total reserves by months of imports for the top nine holders 2006 (excluding Taiwan, China). Author's calculations based on data from World Development Indicators (WDI) Online database, World Bank.

It is argued here that claims of excessive official reserve accumulation need to be critically evaluated, for they tend to presume that what could be seen as 'excess' in the 1960s is the same as what we mean by 'excess' today. A central proposition of this thesis is that finance has changed its role. A process begun in the 1970s, accelerating in the 1980s, that might be called 'financial globalization' is changing the meaning and role of official reserves. Prior to this, in the 'high national' post-war period of international finance, financial payments between countries were typically mediated by official foreign exchange control institutions at the state level. Monetary authorities had to maintain sufficient stocks of official foreign exchange reserves to finance foreign currency denominated international payments transactions. Monetary authorities accumulated foreign exchange reserves when there was an overall national payment surplus, and ran down official foreign exchange reserves when there was a national payments deficit. As such, the notion of a 'payments imbalance' was a meaningful constraint in so far as a

payments deficit had to be met by monetary authorities running down their stocks of official reserves.

However, from the early 1970s and 1980s the official sectors in most industrialised countries shifted to floating exchange rates and no longer were required to intermediate cross-border financial payments — which increasingly took the form of 'privately' mediated and decentralised financial transactions. As a result, monetary authorities in countries with floating exchange rates no longer needed to accumulate large stocks of official reserves. In general these authorities stopped accumulating official reserves. In effect, the removal of the key post-war rationale for holding official reserves, i.e., 'financing deficits', has meant that contemporary rationales for holding reserves, and the place of international reserves within international finance, are now more indeterminate. Hence, the apparent puzzle of recent reserve accumulation by emerging market monetary authorities.

Yet, the puzzle is more apparent than real. Although the transformation in post-war international finance, including the shift towards privately mediated cross-border transactions, meant that the financial-centre countries no longer needed to accumulate reserves, at the same time, reserve accumulation became more important for emerging market authorities who sought to maintain fixed or heavily managed exchange rates. The key reason is the financial risks inherent in foreign currency borrowing under fixed or heavily managed exchange rates — which effectively socialises the exchange rate risk on what is often 'private' debt. Hence the experience of 'emerging market' financial crises during the 1990s: in Latin America from the early 1990s; India in 1991; and in the years 1997-98 in East Asia, Russia and Latin America again. These were financial account, rather than current account crises, manifested as debt and currency crises, the major variable being the level of external debt — often borrowed by domestic firms in foreign currency under fixed domestic exchange rates. Monetary authorities found their

stocks of foreign exchange reserve were less than they needed to repay the socialised cost of foreign currency debt. Subsequently, the key rationale for monetary authorities holding reserves in emerging markets became asset and currency based.

Since the late 1990s monetary authorities in developing countries have adopted the rule that they should hold foreign reserves at least equal to the level of short-term external debt i.e., debt with a maturity of less than one year (Wijnholds and Kapteyn 2001, 31). Many crisis-hit countries in the 1990s had short-term external debt levels — debt with maturity of less than one year — in excess of their reserves in 1990 (figure 1-3). However, by 2004, this situation was reversed, and short-term debt-to-reserve ratios, were generally less than 1.

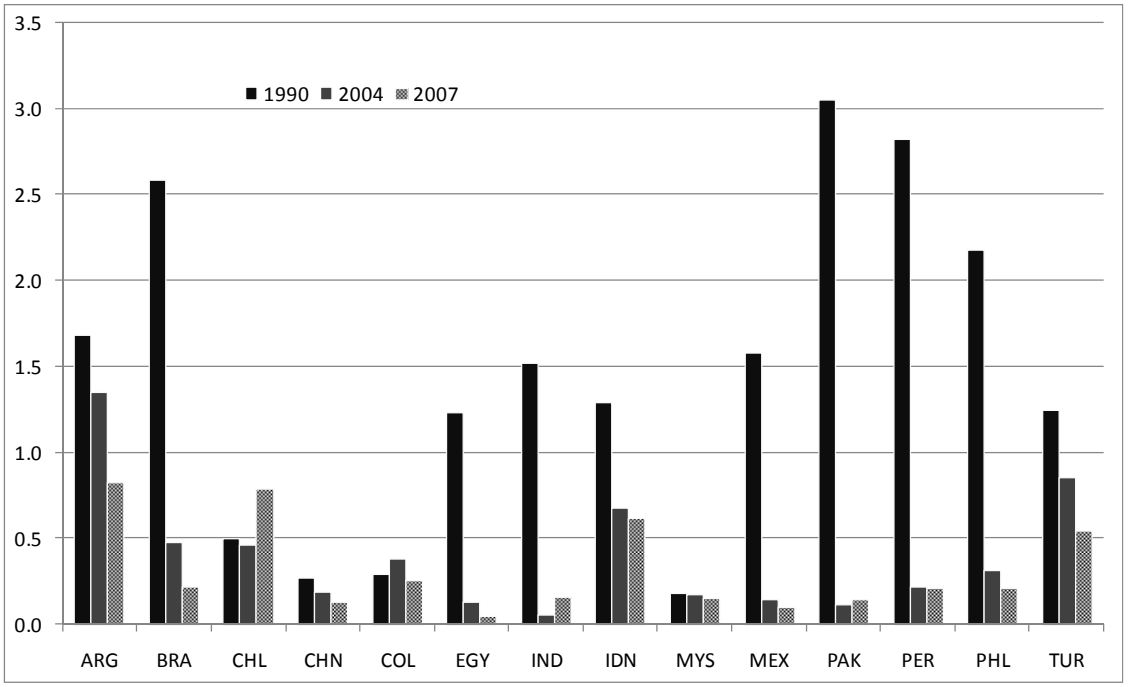


Figure 1-3. Short-term debt/reserves ratios in selected emerging market economies in 1990, 2004, 2007. The 1990 and 2004 bars show this ratio before and after the 1990s financial crises. Short-term debt has a maturity of less than one year. Author's calculations based on World Development Indicators (WDI) Online Database, World Bank. Adapted from Rodrik (2006, 258).

It should be noted that other financial 'adequacy' measures are also used and there is no reason why the ratio of reserves to short-term external debt is the only relevant

benchmark. Other financial benchmarks include the ratio of official reserves to broad money (M2), i.e., cash plus deposits in the domestic banking system, which is used as a proxy for the potential for capital flight. In emerging market economies, the ratio of official reserves to broad money has barely kept up in recent decades (figure 1-4). Similarly, the ratio of global reserves to daily foreign exchange turnover has not risen in the past two decades (figure 1-5). Overall, the contrast between the trade and financial measures of official reserve adequacy is striking (Wyploz 2009, 3-5) as is shown in figure 1-6, which compares both gross external debt over trade and official reserves over trade for emerging market countries.

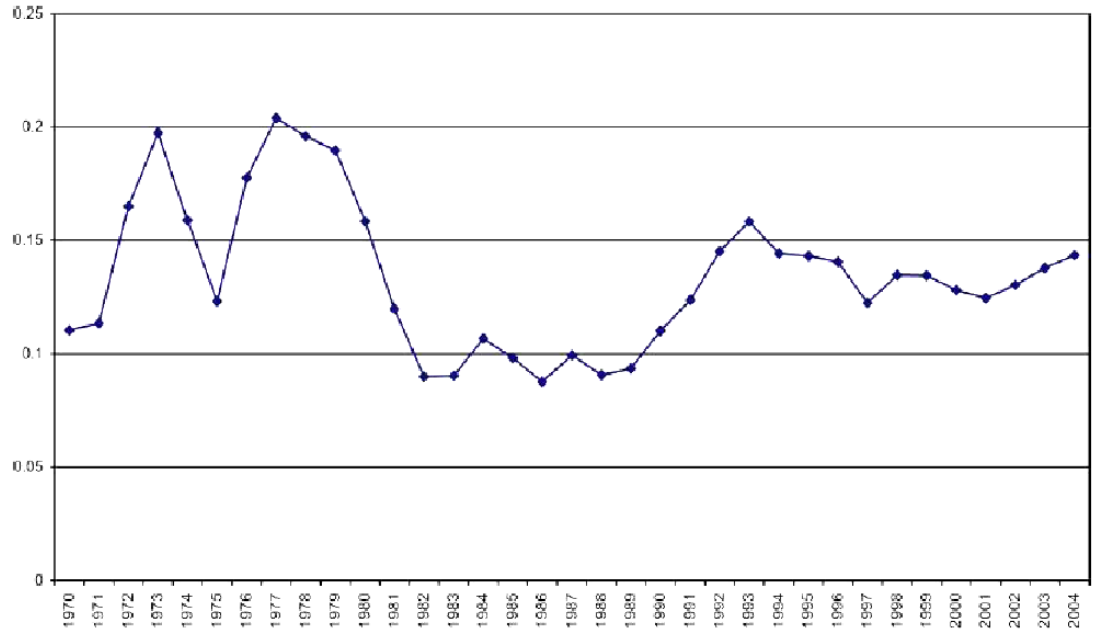


Figure 1-4. Reserves as a ratio of broad money (M2) in emerging economies, 1970 to 2004, excl. China and Taiwan. Broad money (M2) consists of all money asset claims on commercial financial intermediaries, such as demand and savings deposits in commercial banks, plus currency notes and coins. Reprinted from Rodrik (2006, 257).

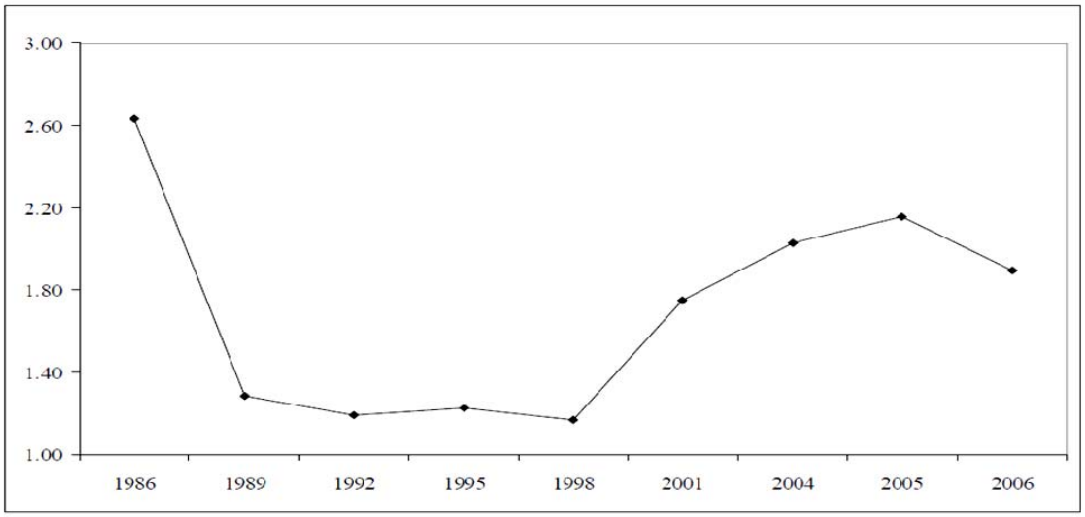


Figure 1-5. Ratio of global reserves to daily average foreign exchange turnover, 1986-2006.
Reserve data from World Development Indicators (WDI) Online, World Bank. Daily average foreign exchange turnover estimated from International Financial Services, London. Reprinted from Mendoza (2007, 3).

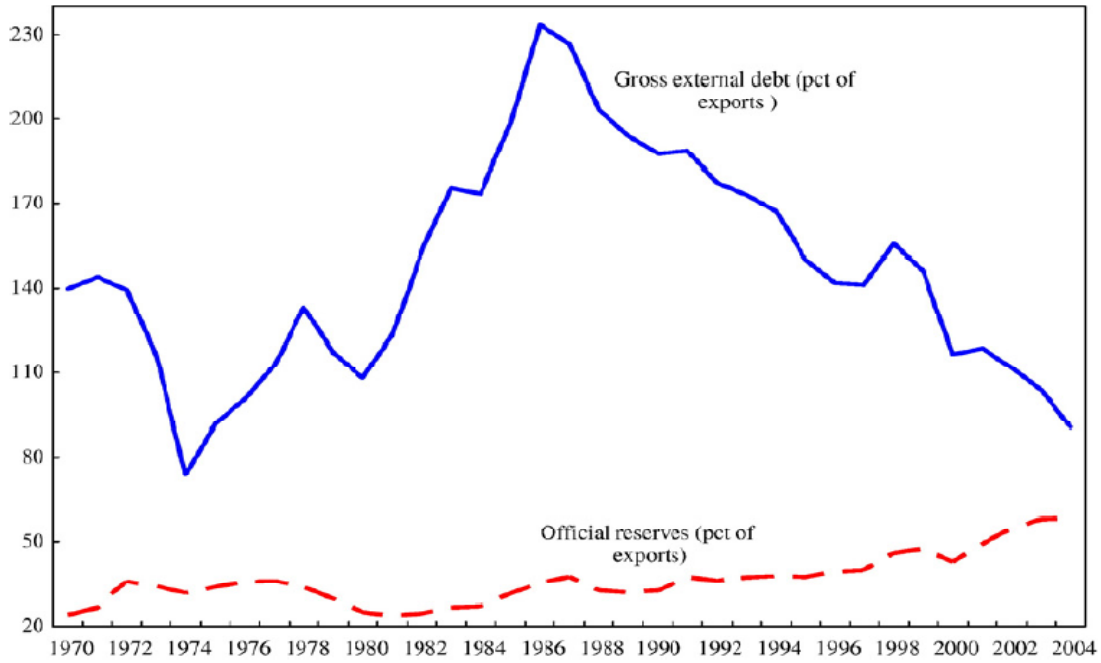


Figure 1-6. External debt and official reserves, emerging & developing countries, 1970-2004.
'The series “gross external debt” is the sum of external debt liabilities for the entire emerging market and developing country group as percent of the sum of total exports of goods and services. The series “official reserves” is the sum of official reserves for all countries of the group as a percent of the sum of total exports of good s and services'. Reprinted from: Lane and Milesi-Ferreti (2007, 238).

Measures of what is an ‘adequate’ stock of official reserves held by monetary authorities have undergone substantial revisions with changes in financial globalisation. Official reserves are no longer central to international financial payments in the way they once were for many industrial countries. At the same time, from the early 1990s many emerging market monetary authorities were caught with lower official reserves than they needed, and reserve adequacy benchmarks in these countries have been revised to ensure that reserve holdings at least cover external debt. In this respect, claims that recent official reserve accumulation by monetary authorities, in China or other emerging market economies, are ‘excessive’ by traditional measures are misguided. Nevertheless, the new financial reserve adequacy benchmarks only suggest a rationale for accumulating reserves by emerging market authorities. Such a rationale assumes that recent official reserve accumulation must be ‘functional’, which missed the critical point that finance has become more about flows than stocks. As such, this precautionary financial or asset-based rationale does not adequately explain recent official reserve accumulation by Chinese or other emerging market authorities.

The question then of how to understand the development and consequences of China’s recent official reserve accumulation is a problem in understanding international finance. In the international economics literature the assumption that international finance, especially cross-border financial transactions, should be privately mediated and exchange rates ‘market-determined’ lends itself to the assumption that official reserve accumulation by authorities in emerging markets is a result of policy mercantilism — for instance through a policy of managing exchange rates. Paradoxically, pre-financial globalisation trade-based reserve adequacy measures are then mobilised as evidence that recent official reserve accumulation is excessive, even when those measures have lost any analytical meaning because of the general transformation in post-war international finance.

How international finance is understood has implications for questions asked about the significance and consequences of China's recent official foreign exchange accumulation. China's reserve accumulation has become a prominent question in world politics as well as within international finance. But again, it is something of a paradox that despite the transformation in the organisation of post-war international finance, especially the rise of private, decentralised global finance, that conventional IR/IPE scholarship tends to reduce the analysis of international financial relations to an analysis at the national level. The central question for recent international relations scholarship that has touched on Chinese official foreign exchange accumulation, (see Bowles and Wang 2006, 2008, Chin and Helliener 2008, Kirshner 2008) has been the question of national 'financial power' relations between China and the US.

However, an analysis of the consequences of China's recent official reserve accumulation, including its importance within inter-state political relations, presupposes an understanding of the broader contours of contemporary international finance. The bigger problem here is a conceptual problem about how we understand international finance. One view of international financial relations suggests an agenda of state-to-state financial relations, especially in terms of financial power relations between nations (Andrews et.al. 2006). Another view, suggests that finance, while being globally mobile, expresses clear national characteristics such that the aggregation of financial transactions will tell a coherent national story — such as a story of mercantile policy rooted national trade and payments imbalances. Now in the case of China, where there is extensive official intermediation (and state control) of international financial flows, both these attributes of international financial relations have some coherence. But, we should note that both these two dimensions of 'national finance' will not necessarily behave in harmony, and that even in the case of China, inter-national financial flows will not necessarily sum to a coherent, let alone strategic, national story.

1.2 **Is the international financial orthodoxy adequate?**

The conventional understanding of international finance — which has been broadly accepted by a generation or more of financial journalists, policy makers, economists and international relations scholars — largely reflects the post-war international economic orthodoxy. This has dominated the interpretation of China's recent official foreign exchange accumulation. This conventional understanding of international finance is manifested in the widely accepted international economic discourse about recent 'global economic imbalances', and its international relations counterpart is the analysis of the 'the politics of adjustment', understood as the substance of financial power relations between nation-states. However, the orthodox approach to real-world problems in international finance, such as China's recent official reserve accumulation, is typically preconceived within an economic nationalist discourse by the literature — as is implicit in the conceptualisations of 'global economic imbalances'. The orthodoxy fails to make critical conceptual distinctions between the political discourse of international 'payments adjustment', its relationship with state strategies and practices, and the conceptualisation and analysis of the substantive international financial phenomena. The deeper problem within the orthodox international financial problematic is that its conceptual objects of analysis — from standard international economics and mainstream IR/IPE — are either systematically misleading, or conceptually inadequate for explaining the international financial phenomena that the approach purports to understand. There is a need for a thorough critical understanding and critique of the orthodox problematic, as a basis for developing an alternative conceptual framework for analysing international financial relations.

1.2.1 **The ‘economics’ of the international financial orthodoxy**

As stated above, the conventional understanding of international finance draws heavily on the international economic discourse of the 1970s and 1980s. This discourse centred on debates about international payments and exchange rate ‘adjustment’ between nation-states, and was intellectually based on the standard post-war international macroeconomic framework. This was a framework conceived within what might broadly be conceived as ‘Keynesianism’ with its presumptions of a policy regime of national capital controls serving to delineate a clearly-definable national economic space in which international financial flows were both empirically and theoretically exceptions. The ‘external sector’, as it was widely called, was something that was best kept ‘balanced’, for to be balanced meant that there would be no net external impact on the domestic economic aggregates, and macroeconomic policy could focus on domestic policy agendas. The emergence of China’s recent trade and financial surpluses, the renewed growth of US current account and payments deficits, and the so-called ‘global economic imbalances’, have revived much of this earlier international economic discourse. However, there are fundamental conceptual as well as empirical problems with the orthodoxy’s understanding of international financial relationships, with major conceptual and policy consequences for how we understand China’s recent official foreign exchange accumulation (and its international financial counterpart in the growth of US liabilities) in international finance.

The intellectual basis of the international economic discourse in the 1970s and 1980s was the standard international macroeconomic framework that dominated post-war thinking about international finance. According to this theory, international economics studies the ‘special problems of economic interaction *between sovereign states’* (Krugman and Obstfeld 2000, 3 *emphasis added*). Its core problematic was the purported need for individual nation-states (the unit of analysis) to maintain ‘external balance’ on their

international i.e., ‘external’ payments, by ensuring current account (mainly trade) deficits or surpluses were modest in scale and temporary in duration (ibid. 2000, 537). Exchange rates were assigned an ‘equilibrating’ role in the process of adjustment due to the need to maintain national economic ‘external balance’. The key economic policy debate in the 1970s and 1980s was over whether this was best achieved through fixed or floating exchange rates, but economists agreed that exchange rate-led adjustment could secure national economic ‘external balance’. International finance, according to the standard framework, was largely understood as a passively accommodating financial counterpart to national current account surpluses and deficits. With minor changes, this international macro-theoretical framework has remained central to recent thinking about international finance. For instance, the standard international economic policy models and analysis (IMF 2007a; 2007b), the core graduate international economic texts (the still widely used Obstfeld and Rogoff 1996), popular international financial journalism (Wolf 2008), and the analytical framework of mainstream IPE in international finance (Cohen 2006, 31-50) all operate within this framework.

This conventional framework has dominated thinking about China’s recent trade surpluses and official foreign exchange accumulation. According to the standard analysis, China’s recent official foreign exchange accumulation is a result of currency ‘manipulation’ by China’s authorities to secure an ‘undervalued’ exchange rate to facilitate export-led growth. As a consequence, the Chinese economy has developed large ‘external payments imbalances’, which are taken as (somewhat circular) evidence that the economy has become unbalanced. The policy prescription is that China’s authorities should revalue the Chinese currency to reduce their external payments surpluses and ‘rebalance’ their ‘domestic economy’ (Paulson 2007, IMF 2006). This understanding has been central to recent US government activism over China’s ‘exchange rate policy’, which has been aimed at securing Chinese currency appreciation against the US dollar. The ostensible belief by some members of the US Congress is that this would reduce

China's bilateral trade surplus with the US — and by implication reduce China's recent official foreign exchange accumulation and the growth of US international financial debt to Chinese authorities (see for instance, Senators Schumer and Graham, *Wall Street Journal* 2006, September 25). China's payments 'imbalances' have been central to the recent international policy discourse about so-called 'global economic imbalances' (e.g., IMF 2007a) as a cause of international financial instability. According to a recent US-China security review commission report to the US Congress, 'Beijing's industrial policy was a contributing factor to the imbalances that led to the global financial crisis' (USSC 2009, 2).

However, a major problem with this orthodoxy is that methodological definition of its concepts of national economic 'external balance' and 'equilibrium' exchange rates are logically circular and do not generate the expected empirical relationships to the phenomena they purport to understand. The concepts are circular because any pattern of current account surpluses or deficits that is sustained over the medium to long-term is by definition 'sustainable', is therefore in 'equilibrium' and in 'external balance', albeit an equilibrium and balance differently conceived from the conventional wisdom. Moreover, despite Paul Krugman's recent claims to the contrary about the need for the US to 'take on China' over its alleged 'currency appreciation' (*New York Times* 2010, March 15), economists have been unable to find any coherent relationship between exchange rate price levels and any particular balance of payments outcome since they started keeping track of the data in the 1970s (Krugman 1993). The underlying theoretical problem is the belief that there are predictable exchange rate effects on merchandise trade volumes. But this belief only holds if we accept the orthodoxy's ontological assumption that we live in a world of discrete national economies (Bryan 1995), between which there is the discrete national production of finished goods, subject to clear exchange rate price valuation effects. Yet, if we see the reality of a world economy constituted by highly integrated

international production and financial value-chain processes, as is the case with the global production integration in China, the standard theory does not hold.

The standard economic framework has a set of distorting analytical implications for how we understand international financial phenomena, such as China's recent official reserve accumulation and the related growth of US financial liabilities. The standard international macroeconomic theory assigns a passive role to international finance — i.e., a view of international finance (cross-border capital flows) as the accommodating counterpart to current account (mostly trade) balances. However, as has been long pointed out by a minority of international economists, there is also an autonomous role for international finance (Salant 1972). This makes intuitive sense if we take into account the micro-finance view of how financial agents (and by implication, financial institutions as well,) seek to maximise their 'risk-adjusted return on value'. In other words, there is an independent generative role for financial processes and financial intermediary institutions, including cross-border financial processes and relationships. This suggests an alternative conceptual approach to understanding international financial relations as well as an alternative analytical path for understanding China's recent reserve accumulation and the associated growth in US liabilities as problems in understanding international finance. The alternative conceptual approach developed here centres on an understanding of international financial flows as a sphere that itself needs to be explained, rather than placing finance in a discourse of its role in national balance. This will be explored further in five. First, however, it is important to highlight the political dimensions of international finance.

1.2.2 **The 'politics' of the international financial orthodoxy**

China's official accumulation of US liabilities has revived the discourse of 'great power' financial conflict (e.g., Summers 2006) or 'high finance', which was popular in the 1970s. Not surprisingly the politics of the international financial orthodoxy has tended to centre on questions of international financial power relations *between states* (e.g., Andrews 2006, 7-30), including the analysis of 'political bargaining' over 'who should bear the cost of payments adjustment to disequilibrium' (Cohen 2006, 31). This 'political' problematic has occupied mainstream IPE scholarship in the field, however, its explanatory capacity is severely limited because it tends to uncritically reduce the study of international financial relations to 'the politics' of inter-state bargaining within the already given terrain of 'payments adjustment' between states. As such, the application of this conventional political problematic to the analysis of China's recent official foreign exchange accumulation does little to move our understanding of the substantive financial relations beyond the recent international economic policy and political discourse. The alternative conceptual approach for understanding international financial relations developed in this thesis incorporates a theory of international finance as a dynamic and expanding set of value-chain processes, forms and international financial intermediary processes, while distinguishing between these broader financial processes and forms, and the practices of particular strategic state actors and institutions.

The belief in a potential threat to US geopolitical interests has loomed large in the popular and academic 'international financial power' discourse about China's recent official accumulation of US debt securities. According to Larry Summers (2006, 3), the former Clinton administration treasury secretary and now Obama administration economic advisor, the recent growth of 'foreign government financing' of US government debt from 'East Asia' (China) had become a 'balance of financial terror' that could be mobilised during a geopolitical conflict with the US. Indeed, the US Congress'

US-China economic security review commission (USSC 2008, 2009) considers China's accumulation of US dollar assets to be a multi-faceted threat to US 'national security'.

At a less geopolitically charged level, 'the politics of adjustment', understood as inter-state political bargaining, over 'who will pay the cost of adjustment' (Cohen 2006, 31) has been central to mainstream IPE's approach to international finance. Thus, according to Andrews (2006a, 1): 'At the macro-level, the problem of adjustment to balance-of-payments disequilibrium is central to discussions of monetary power'. Similarly for Pauly (2006, 1): 'International monetary struggles are about power and different perceptions of fairness to the adjustment burden'. Yet this IPE approach provides a restricted frame for the understanding of politics and international finance, a frame that relegates the political object of analysis to bargaining between states, while uncritically accepting the conceptual framework of international economic 'adjustment' as it was understood in 1970s and 1980s as a pre-analytical given. But, if the 'economic' assumptions of this framework are suspect—and there are good reason for thinking they are — then our approach to the understanding of international finance within IPE needs to conceptually distinguish between the discourses of 'international monetary power', state strategies in 'international finance', and the broader international financial relations within which they exist and partly constitute.

The application of this conventional IPE approach to the analysis of a US-led 'debate' over China's exchange rate policies does little to move our understanding of these issues of international financial relations beyond the mainstream economic policy discourse. Thus according to Bowles and Wang (2006, 233-57; 2008, 335-53), the 'debate' over China's exchange rate policies is an international game of 'problem assignment' between the US and China over the 'politics of adjustment.' Kirshner (2008, 131-61) analyses these issues in similar terms. Although all these analysts recognise that the economic claim of 'who should pay' is 'ambiguous', they do not question the underlying economic

framework that says ‘balance of payments adjustment’ is necessary. This suggests that the mainstream IPE approach to understanding ‘balance of payments’ phenomena in international finance requires a more direct challenge and a fundamental conceptual rethinking.

Conclusion

In conclusion, the international financial orthodoxy is systematically constrained and conceptually inadequate for understanding contemporary international finance. The conventional international macroeconomic framework assumes a world of discrete national economies in which international finance is the temporary accommodating counterpart to current account (especially trade) deficits and surpluses, which must ‘equilibrate’ within each nation-state. Yet, such a framework lacks a positive account of the development of sustained international financial processes and forms since the 1970s, which arguably renders the conventional macroeconomic assumptions suspect. For the same reason, this also renders as problematic, the conventional political treatment of international finance in terms of ‘political bargaining’ between states over problems of ‘payments adjustment’. An alternative conceptual approach is needed to understand the development of real-world international financial phenomena, such as China’s recent official foreign exchange accumulation, and this should include a more critical political understanding of the discourse of ‘balance of payments adjustment’ in international finance than has generally been the case.

1.3 **The methodological problem: A realist approach**

Dissatisfaction with the conventional approaches to international finance has led some IPE scholars to attempt to redefine the theoretical objects of analysis in the field to

account for the social, institutional and historical ‘foundations’ of international financial relations — e.g., Germain (1997), Seabrooke (2001; 2006) and Konings (2008, 35-61). Although this thesis shares that broad approach, the range of potential theoretical objects and real-world problems within the field is relatively open to ever closer theoretical, analytical and historical specification. Thus the methodological problems arise of how to evaluate, select and/or develop relevant theories for understanding international finance in the global political economy and how to articulate relevant theories with concrete historical analysis. The approach taken here is to specify the ontological assumptions that inform this thesis, which are realist, as a basis for articulating a method of theory development and a method of concrete historical analysis.

1.3.1 **A realist ontological approach**

The question of how to define a methodological approach to the study of international finance within the social sciences is, in the first instance, a problem of ontology. Different methodological approaches within the social sciences often seek to understand distinctive but related objects of analysis (and sometimes the same objects) with different theories and methods. Nevertheless, if we accept the existence of domain-specific fields such as international finance, different methodological approaches may also generate distinctive and useful insights about similar or related objects of analysis at different levels of determination. At the same time, different methodological approaches may entail what might be considered (often by rival approaches) as bad, problematic or inadequate categories and theories about similar objects of analysis. This poses the challenge of how to choose between a range of potentially relevant and conflicting methodological approaches to similar and related classes of objects.

At one level, the answer is straightforward — the relevant methodologies are concept-dependent, and it is a matter of choosing what the researcher thinks best explains the problem or object of analysis. However, if we are to reflect and evaluate those choices, we must also reflect on the deeper ontological assumptions — about what exists in 'reality'— that underlie those methodological and theoretical choices.

The ontological approach taken in this thesis is a realist approach to social science — it is an ontological approach based on the foundational proposition that the real physical and social world exists independently of our knowledge of it (Bhaskar 1975). This distinction between the independence of the world and its objects (things that exist) from our knowledge of them, undermines any complacency about our knowledge of the world, because it underlines that our knowledge and ideas are fallible — i.e., the acceptance of the knowledge-independence proposition renders the object-knowledge relationship problematic (Sayer 2000, 2). A related proposition is the existence of a real world with a stratified ontology, in other words the proposition is that reality–including the social world — has ontological depth. The notion of ontological depth, allows us to draw a distinction between the domains of the *real*, the *actual* and the *empirical* (Bhaskar 1979, 16-19). This distinction between these ontological layers is necessary because it enables us to understand the existence of a real world with objects (relations) that have *emergent* properties or causal powers (Sayer 2000, 12). As such, a physical object or social relation can be understood to exist (the domain of the *real)*, but its properties may or may not be activated (the domain of the *actual*), and it may, or may not effect, in combination with other objects, an outcome in the *empirical* realm. Thus we can philosophically understand the existence of a *real* world that is constituted by objects with emergent properties or causal powers, but we can also understand the contingency (ibid, 17) of outcomes in the actual and empirical realms.

1.3.2 **A non-positivist critical/scientific realist epistemology**

The realist ontological propositions, of real-world independence from the researcher's knowledge of the world and of a stratified, depth ontology, nevertheless suggest a realist epistemological approach to knowledge that maintains the possibility of social scientific inquiry (Bhaskar 1979). Much ink has been spilt over the epistemological problem of social scientific knowledge, however, the realist approach, advocated here, is that a reflexive social scientific inquiry is both possible and necessary, but that researchers must seek to avoid the twin pitfalls of naive objectivism (present in empirical realism or actualist realism) as well as interpretivism (Sayer 2000, 33-35). However, the bigger problem remains of how to evaluate competing concepts, theories of concepts about the same 'objective' situation or 'facts', without lapsing into either naive objectivism or interpretivism. The appropriate criteria for social scientific conceptualisation and empirical analysis, therefore, must be motivated by the research objective of explanatory adequacy (Bhaksar 1979, 58) and this suggests approaches to theory development and methods of empirical analysis, which must also be mutually conditioning and iterative.

A scientific realist approach to knowledge seeks to avoid the twin pitfalls of naive objectivism and interpretivism, conventionally presented as polar opposites — but perhaps better understood as mirror image responses to the same knowledge-independence problem. Naive objectivism (and empiricist or actualist realism) says that what exists is that which is directly observable, or conflates the two, and this suggests a flat ontology, rather than a stratified ontology (Sayer 2002, 12). Although interpretivism is often presented as an alternative to naive objectivism, it is actually a mirror image response (ibid) because interpretivists hold that we (i.e., the researchers) cannot know what exists beyond what we can interpret and therefore we should not seek to pass off our 'ideal' representations as 'knowledge' of the 'real'. Indeed interpretivists maintain that the *ontological distinction* between the researcher's 'ideal' or representations of the

'real'— and what exists — the 'real'— is meaningless (see, for instance, de Goede 2003, 80-81, 92). In this sense, interpretivism and empirical realism collapse or conflate the ontological distinction between the researcher's knowledge of the world, and the existence of a real-world independent of the researcher's knowledge.

The alternative to naive objectivism and interpretivism is a scientific or critical realist approach to the knowledge-independence problem, and this provides a starting point for social scientific inquiry. Because the social world exists independently of the researcher, the researcher's understanding of the world cannot be collapsed into what is directly observable (Sayer 2000, 2). However, the acceptance of a stratified depth ontology suggests that an appropriate epistemological approach to knowledge is one that allows us to posit the existence of objects (and relations) whose empirical properties are not given by our capacity to directly observe them, but whose existence (or effects) may be posited (conceptualised) through an ongoing process of social scientific inquiry. At the same time, because our knowledge of the social world is concept dependent, we cannot take for granted the already existing categories, meanings, and concepts used to explain what exists. These tools of explanation are also objects in the world, and indeed may also be performative of the social reality which they seek to explain or describe. Therefore concepts, theories and discourses must also be subjects of social scientific inquiry (ibid, 10). By maintaining the knowledge-independence distinction, our knowledge may be considered as more or less partial and contestable conceptualisations of reality.

The distinction between scientific and critical realism is problematic and requires more attention than is possible in this thesis. However, a general response is given here. The *critical* realist distinction has been adopted by some researchers to indicate a non-positivist epistemology (e.g., Sayer 2000). There seems to be positive and negative reasons for adopting the term *critical*. The category of 'scientific realism' is often held (by adherents and detractors) to equate with a positivist epistemology by researchers in

the natural and social sciences, and in this sense critical realists seek to positively distinguish their approach to realism as non-positivist. At the same time, critical realists seek to disassociate their position from the negative criticism of 'scientism' and 'positivism' in the social sciences. As such, the label critical also seems to denote an approach to social inquiry which seeks to problematise existing categories, concepts and theories, rather than taking 'what exists' as already given. However, the notion that a realist approach to scientific knowledge entails a positivist epistemology is a bad categorical error. There is no reason why a scientific realist approach must entail a positivist epistemology, either in the natural or in the social sciences (for a non-deterministic, non-positivist approach to biology see, for instance, Lewontin, Rose and Kamin 2004). Similarly, few scientific realists — either in the natural or social sciences — would accept that they fail to problematise knowledge-concepts or the knowledge-independence problem. Accordingly, this thesis is informed by the proposition of a stratified realist ontology and a non-positivist epistemology. This approach is compatible with critical realism, but it is also scientific realist.

The critical realist ontology also suggests a criteria for the evaluation of theory, concepts and analyses based on the criteria of explanatory adequacy (Bhaskar 1979, 58), and this has implications for the approach to theory development and empirical (including historical) methods in this thesis. The research problem of understanding posed by theory and knowledge evaluation boils down to the problem that: 'Rival theories and sciences have different transitive objects (theories about the world), but the world they are about — the intransitive world — is the same...' (Sayer 2000, 10-11).[1] Different theories, concepts, sciences and analyses about the same or related phenomena in the world may usefully explain or have insights into particular objects of knowledge at different levels

[1] Critical realists following Bhaskar (1975) distinguish between the transient and intransient dimensions of knowledge, with the former, transient dimension, being our social knowledge of the world, and the intransient dimension being the world which that knowledge is about. Both are objects that exist in the world (are real) and both are objects for social scientific inquiry.

of determination. This is clearly the case in seeking to explain phenomena in the fields of international or global political economy as well as in the sub-field of international finance. What might be understood as economic or political phenomena by rival or distinct sciences are nevertheless, ontologically speaking, causally related phenomena. None of the domains of 'the economy', 'politics' or for that matter 'society' are closed systems, rather they mutually constitute a structured open system. Nevertheless, because social reality is ontologically stratified, what exists in the empirical realm in a given geo-historical context is a contingent outcome of the interaction of multiple complex causal mechanisms (Sayer 2000, 22).

The existence of a stratified, real-world ontology suggests a general method of theory development that seeks to incorporate and evaluate different theories, concepts and assumptions, with a process of movement between theory and empirical analysis at different levels of determination. The realist proposition of a stratified, real-world ontology suggests that any given set of events or relations can be philosophically understood as the contingent outcome, in a definite geo-historical context, of multiple causal mechanisms, operating at different levels of determination (Sayer 2000, 12). Moreover,

> if one accepts that such 'contingent necessities' exist in the real world, it follows that an adequate understanding of such events requires us to combine concepts, assumptions and principles of explanation from different theoretical systems and to relate them to a given, theoretically defined explanandum (Jessop 2008, 11).

The existence of different theories, concepts or explanations about relevant objects or relations suggests the possibility of developing a synthetic framework, which incorporates specific theories of concepts at different levels of determination. In this respect this thesis takes a broadly social science approach to understanding international financial relations (and China's recent official foreign exchange accumulation) that is explicitly interdisciplinary in scope and ambition. It is interdisciplinary in scope because

the evaluation of relevant theories, concepts and empirical analyses about the phenomena under investigation are taken from interdisciplinary sources. It is interdisciplinary in ambition because, while existing disciplinary approaches may offer distinctive insights and in some cases be mutually supporting, a general inter-disciplinary approach is needed to adequately understand international financial relations. However, such an approach also suggests a method of explanatory critique that seeks to evaluate different theoretical systems, concepts, and assumptions, based not simply on the consistency of their own logics, but also their capacity to explain the phenomena under investigation in relation to other relevant theoretical systems, concepts and assumptions (Bhaskar 1979, 58).

Such a research strategy suggests a method of theory development that entails a process of analytical movement between relevant theories or concepts and empirical analyses in both directions at successive and more concrete levels of determination (Jessop 2008, 11). Thus the method of theory development and analysis in this thesis proceeds through an analytical movement that seeks to evaluate relevant theories, concepts and assumptions in relation to relevant sets of phenomena — e.g., processes, agents, institutions and discourses. This process of movement between theory, concepts and assumptions and empirical analysis is pursued through distinct stages of analysis, rising from the more abstract to increasingly concrete levels of determination. The notions of more abstract and more concrete levels of determination should not be confused with the notion of distinct domestic or international ‘levels’ of analysis, or — what this thesis considers to be — the false dichotomy between ‘inside-out’ or ‘outside-in’ approaches to the domestic level of analysis, which are respectively favoured by approaches to comparative political economy and international relations theory. Rather, the method in this thesis proceeds differently, from an investigation of abstract, but historically and socially determinant, theoretical properties of objects or relations, to the analysis of specific empirical forms and historical conjunctures at increasingly concrete levels of determination, with the objective of developing an increasingly adequate theoretically

defined explanation. The next stage in the method of articulation therefore requires turning from defining a general framework to considering specific historically and socially determinant theories.

1.4 **A theory of international financial intermediation**

This thesis seeks to apply this general realist framework to understand China's recent official foreign exchange accumulation as a problem in international finance. There are many relevant layers of determination of China's recent foreign exchange accumulation as recent international financial development in a specific geo-historical context. But despite the more critical IPE approaches to international finance seeking to broaden the objects of inquiry to include the social, institutional and historical 'foundations' of international financial relations, the problem remains of what to say about the conventional understanding of international finance in both standard international economics and mainstream IR/IPE — specifically the way in which the standard international macro framework understands China's recent official foreign exchange accumulation as a necessarily unsustainable balance of payments aberration. Even some of the more critical literature lacks a developed understanding of international finance in terms of financial form-specific processes and international financial intermediary forms. An alternative approach to understanding China's recent official foreign exchange accumulation is developed in this thesis by incorporating a specific theory of international financial intermediation as a value-chain process of financial transformation (Scholtens and Van Wensveen 2003). This theory of international financial intermediation has the benefit of opening up the terms of inquiry to an understanding of the development of China's recent official foreign exchange accumulation, as one side of a process of official international financial intermediation.

Some more critical IPE approaches have also sought to develop the understanding of finance by broadening the objects of inquiry to include a focus on the historical, social and institutional foundations of the emergence of international finance. At the same time, there has been a shift towards more mid-range studies of the institutional behaviour of particular (often non-state) actors within international finance (e.g., Porter 2005 or Sinclair 2005). A general theme in this literature has been that institutional and non-state financial actors are 'constitutive' of financial relations. However, in both the conventional state-based IPE frameworks, and the some of the more recent critical studies of new financial actors, there remains a tension between specific issues of agency on the one hand, and the analysis of financial form-specific processes and dynamics on the other. Although financial actors and financial processes may be considered to be mutually constitutive of overall financial relations, it would a mistake to reduce our understanding of finance and financial relations to actor behaviour, and this conceptual distinction remains crucial to the challenge of effective analysis and understanding of real-world international financial problems.

There remains a need, therefore, for an understanding of international financial relations that considers relevant theories, concepts, and assumptions about what is specific to the processes, dynamics and forms of finance in general, as well as the specific cross-border or cross-currency dynamics of and forms of international finance in particular. As such this thesis seeks to incorporate relevant financial form-specific concepts — such as the concepts of financial 'value' and financial intermediation — that can help us to understand real-world financial objects of analysis. This suggests an approach to financial questions, such as exchange rates policies, government bond-issuance and mortgage policies which goes beyond treating these specific financial forms as contextual issues that are 'externally' structured. Rather, the approach taken here also seeks to understand how specific financial processes, dynamics, and institutional forms are also 'internally' structured, and indeed may also therefore exist as mechanisms with properties which may

also act to ‘structure’ their wider environment. This does not mean that internal financial ‘logics’ exist as general abstractions outside of definite social and historical contexts. However, it does suggest that an adequate understanding of international financial relations requires us to consider the properties of definite financial processes and dynamics as well as their specific institutional forms.

This thesis incorporates, and augments, a theory of international financial intermediation, understood as a dynamic value-chain process of financial transformation (Scholtens and van Wensveen 2003), into a general framework for understanding international finance. Although the concept of financial intermediation — i.e., a process that involves the simultaneous creation of a financial asset and liability by financial intermediary institutions — is generally accepted, explanations for why financial intermediation arises remains subject of theoretical disagreement.[2] A related theoretical controversy is why *international* financial intermediation arises — i.e., defined as any financial intermediation that entails a cross-border or cross-currency dimension — and crucially why the direction of such international value-chain processes appears to have historically been characterised by a flow of funds from financial intermediaries in ‘poor’ countries to financial intermediaries in ‘rich’ countries (Kindleberger 1976). A theoretical explanation put forward by Scholtens and van Wensveen (2003) is that international financial intermediation is a value-chain process of financial transformation across key dimensions of risk, maturity, instrument, and often currency-denomination by international financial intermediary institutions. The central theoretical proposition is that international financial intermediation, rather than a temporary aberration that arises within otherwise ‘perfect markets’, is explained by the desire of financial agents to seek ‘risk’ adjusted returns to

[2] The prevalent neo-classical financial theories assumes financial intermediation is an aberration that arises due to failures of markets to clear due to some sort of interference, for instance, asymmetries of information between savers and investors, or government interference (Scholtens and Van Wensveen 2003).

present value, discounted into an uncertain future. The proposition in this thesis is that such a theory of international financial intermediation, properly augmented with an understanding of 'value' (and related concepts) as an historically determinate social category, provides a crucial and relatively open explanatory basis for understanding the development of international financial relations, including China's recent official foreign exchange accumulation.

Financial intermediation is understood as *a dynamic value-chain process* (Scholtens and van Wensveen 2003) — or rather a myriad of value-chain processes — through which claims to value (value-claims), are pooled, channelled, and 'financially transformed' (and created) by financial intermediary institutions along multiple financial dimensions. The notion of 'value' is understood as a historically determinant social category, which takes the form under capitalism of money or financial claims. This theoretical understanding of financial intermediation as a value-chain process suggests complex chains of linked financial claims and chains of intermediary processes in motion. The theoretical proposition about claims to 'value' is that there is an impetus for financial agents (including financial intermediary institutions) — *within capitalism* — to seek to maintain (and in some cases to maximise their risk-adjusted return on) their present claims to financial value, discounted into an uncertain future.[3] International financial intermediation (IFI) entails a similar set of value-chain processes, but it is defined as any financial intermediation (the simultaneous creation of both assets and liabilities) with a cross-border or cross-currency dimension (Scholtens 1992, 471).

[3] This is *not* a claim for any of the following general abstractions: the existence of the profit-utility maximising rational individual; for methodological individualism; or that all individuals or financial intermediary institutions act to maximise returns. Rather the claim being made here is more concrete and determinant: that the historical development of capitalist productive-financial relations operates as a generative mechanism (not the only mechanism) that compels financial agents (broadly understood) to seek to maintain their present claims to financial value discounted into an uncertain future.

This theoretical understanding of IFI as a value-chain process, or rather many value-chain processes — through which financial claims (e.g., forms of asset and liability or financial instrument) are transformed — introduces a crucial analytical distinction between value and value-chain processes, and the institutional forms of financial intermediary institutions and financial instruments. International financial intermediary institutions consist of official, i.e., government, financial intermediary institutions and private intermediary institutions, and quasi-blends in between, but what they share is a counter-party role to processes of cross-border or cross-currency financial asset transformation. The analytical distinction between IFI as a value-chain process, and the specific institutional forms which financial intermediary institutions and financial instruments may take, allows us to more precisely analyse the changing processes, dynamics, and patterns of international finance.

Although the patterns of international financial intermediation, and particular institutional configurations, are historically and concretely determined, a key variable in these patterns has been the extent and forms of 'financial development' between financial centres (Kindleberger 1976). The notion of 'financial development' here is taken as a descriptive measure of *financial depth*, i.e., accumulated financial claims, and *financial breadth* of intermediary forms (see for instance, the discussion in Naughton 2007, 450). This is why the 'breadth and depth' of the US international securities market, is often invoked to explain its role as the key international financial intermediary centre. A related proposition — explored in this thesis in relation to China's recent official foreign exchange accumulation — is that a higher proportion of international financial intermediation in developing countries is via offshore financial centres.

This theory of IFI provides an alternative to the conventional approach to understanding international finance, which focuses on national accounting measures of 'payments relations between states' national measures which are assumed to need equilibration at

the level of each individual nation-state (Bryan 1995, 112). However, an understanding of international financial intermediary value-chain processes provides an alternative path for analysis, based on specific international financial intermediary processes, which are cross-national by definition. For instance, the purchase of a US Treasury bond by Chinese monetary authorities is understood as being part of the process of IFI between China's monetary authorities and the US Treasury — the purchase of a financial asset creates a simultaneous liability, which is in 'balance' by definition. This tells us neither whether it is the demand for US securities of Chinese assets, nor the supply of those assets, which is driving the intermediary relationship; it also does not tell us why that demand or supply exists in the form it does, nor about the sustainability of the liability or asset side of the relationship, or whether structural or policy reasons are best able to explain these relations. These are questions for analysis in this thesis. Nevertheless, the theory of international financial intermediation does provide an alternative basis for analysis of international financial relations to the conventional national accounting view of international finance.

In conclusion, this thesis seeks to develop an alternative conceptual framework for understanding international finance, by incorporating and augmenting a theory of international financial intermediation, understood as a value-chain process of financial transformation. This alternative conceptual approach has potentially greater explanatory capacity than the existing approaches to international finance — i.e., the international financial orthodoxy in both mainstream economics and politics — because it provides an alternative analytical path for understanding international, i.e., cross-border and cross-currency, financial relations based on an analysis of how and why specific international financial intermediary value-chains have developed historically. The role of international financial intermediaries in seeking to channel value-claims, pool risk and to maintain the present value of present financial claims into an uncertain future is applicable to both official as well as private international financial intermediary processes and activities.

Such an understanding can be used to analyse contemporary international 'balance of payments' phenomena. As such, an understanding of international financial value chain processes can be incorporated into a relatively open explanatory framework for international financial relations. This thesis will now apply this framework to the concrete analysis of the development and consequences of China's recent official foreign exchange accumulation.

1.5 **Understanding the case of China's recent foreign exchange accumulation**

This theory of IFI applied in this thesis seeks to understand the development and consequences of China's official foreign exchange accumulation, and it suggests a rich path of inquiry. The proximate sources of 'balance of payments' components of China's official foreign exchange surplus are relatively well understood among specialists; however, answers to questions such as: how to determine the deeper causes of China's foreign exchange surplus; what is the role of structural and policy explanations in both the overall surplus and recent official foreign exchange accumulation; why the predominant form of China's monetary authorities' foreign exchange accumulation has been US dollar assets; and how to understand the consequences of that foreign asset accumulation, are more difficult to ascertain. The framework used to analyse these questions in this thesis incorporates the following theoretical elements to provide a basis for analysis: a wider theoretical conception of capital accumulation — similarly understood as a set of historically determinant value-chain processes that entail internally related processes of socio-economic and institutional transformation — and which also constitute a concrete 'growth model'; a 'strategic relational' theoretical approach to understand the changing strategic and institutional role and policy objectives of China's monetary authorities (Jessop 1990; 2008, 29), and a theoretical understanding of IFI as a two-way value-chain process of financial transformation.

The proximate sources of China's recent official reserve accumulation can be identified — and to some extent quantified — by examining China's recent balance of payments account structure. Although a persistent current account and (especially) a trade surplus first emerged in 1998, what is apparent in the data analysed in this thesis has been the development since 2001 of 'twin surpluses' on the current *and* financial accounts since 2001 (PBC 2008, 17-18). A detailed analysis of the composition of these 'twin surpluses' provides a descriptive account of the sources and level of China's foreign currency inflows. It does not however, explain their development or potential consequences. The question is: where is the surplus coming from? The approach taken in this thesis is to begin with an investigation of the wider processes of global capital accumulation in China — understood as a value-chain process of socio-economic and institutional transformation. Key elements in this analysis include an evaluation of the role and emergence of a vast 'surplus labour' pool in China in the post-Mao 'reform' period; the policy and structural shift in 'accumulation strategy' or 'growth model' from the pre- to post-reform periods; the development of Chinese located export-assembly production as a the final export platform within global production networks since that reform era; and the role of policy and institutional changes in explaining recent levels of consumption, investment and high 'savings'.

The mid-range theoretical 'strategic relational approach' to state policy, developed by Jessop (1990; 2008, 29) is a key theoretical concept in this analysis and is used to understand the shifts in the Chinese authorities' 'accumulation strategies' across the pre- and post-reform periods as well as their related monetary and financial policies. This 'strategic relational approach' provides an analytical bridge between the analysis of 'value-chain' processes of capital accumulation and the mediating role of state policies, institutions and policy actors as they seek to facilitate ongoing accumulation and policy changes to key 'growth models' (i.e., accumulation strategies) (Jessop 1990, 199). This approach is used to understand the strategic policy shift of the Chinese party-state

leadership from the late 1970s from an ‘import-substitution industrialisation’ strategy to an ‘export-oriented’ growth model. The analytical objective is understand the relationship between ‘structural’ changes, which may be internal to concrete ‘value-chain’ processes and their institutional configurations, and the role of policy shifts in initiating, facilitating or responding to key structural changes, as a basis for better understanding the determinates (i.e., the necessary contingency) of recent large scale financial surpluses in China.

The key theoretical innovation in this thesis however, is the integration of a theory of IFI within this wider strategic relational framework. Although a theoretical conception of capital accumulation processes and a strategic relational approach to understanding the role of policy actors provides a general framework for analysing the emergence of a surplus in China, a value-chain specific understanding of international financial intermediary processes is the key to understanding China’s recent official foreign exchange accumulation. This thesis argues that an understanding of the recent structure of global capital accumulation in China is required to understand where the recent surpluses have come from and how they have been generated. However, an understanding of the monetary and financial role of China’s monetary authorities in seeking to facilitate processes of internal capital accumulation via official international financial intermediation is the key to understanding why the recent surpluses have taken the form of official reserve accumulation.

The processes of international financial intermediation remain effectively socialised by China’s monetary authorities and its departments or agencies. China’s central bank, the People’s Bank of China (PBC) is the key official financial intermediary and it intervenes directly in the onshore foreign exchange ‘market’, the China Foreign Exchange Transaction System (CFETS) (Green 2006), where the PBC ‘buys’ foreign exchange from the commercial banks and ‘sells’ domestic currency bonds within an officially

managed exchange rate band. Key parts of this system are institutionalised foreign exchange controls and effective capital controls, on cross-border and cross-currency transactions, which are managed by the State Administration for Foreign Exchange (SAFE) under the authority of the PBC. Until recently SAFE regulations placed 'retention' ceilings on the amount of foreign exchange held by enterprises, institutions and individuals, which required these agents to surrender 'excess' foreign exchange to the SAFE. The SAFE also buys and manages the stock of international currency instruments such as US Treasury securities under the authority of the PBC.

The history of the reform era suggests major changes in monetary, financial and foreign exchange pressures, which have generated different pressures for official international financial intermediation. The proposition put forward in this thesis is that although the accumulation of greater stocks of foreign exchange has been a direct policy objective in recent decades, recent levels of accumulation have largely been an unintended by-product of other policy objectives in the context of a rising structural surplus. A related proposition is that, although a 'full float' of China's currency would end *official* foreign exchange accumulation by China's monetary authorities it would not alter the underlying structural surplus over coming decades — nor the bilateral 'trade surplus' with the US What would change is the institutional, international-locus and asset *composition* of China's international financial intermediation, with international financial consequences.

1.6 **The limits of this thesis**

The framework of this thesis is limited by the quality of public quantitative and qualitative data on the development of China's recent official foreign exchange accumulation. These data limitations are however, not insurmountable given that this thesis is also delimited in scope by its research objectives. The key problem in

researching the China case is the limited quality of public quantitative data and the relative lack of publicly available qualitative and intensive data on the motivations and internal political and policy considerations of China's authorities. However, a bigger challenge is delimiting the scope of this thesis research project given its primary research objective: to understand the development and consequences of China's recent official foreign exchange accumulation *as a problem in understanding international finance.* The criteria of explanatory adequacy suggests a problem in understanding international financial phenomena, such as recent official foreign exchange accumulation, is the existing theoretical frameworks for understanding international finance. Therefore the scope of this thesis is positively delimited by the substantive research objective of evaluating existing theoretical frameworks and attempting to redefine the problem under investigation and hence develop a relatively open and synthetic framework as well as specific theories for understanding international finance. The empirical scope of this research project is delimited to the research problem of China's emergent official IFI as a two-way process with the US international government securities market for conceptual and systemic reasons that flow from the thesis' main objective.

This thesis compiles and analyses extensive quantitative data to evaluate propositions about the development and consequences of China's recent official reserve accumulation. However, Chinese monetary authorities do not report the *sources* of their official foreign exchange reserves, or the *currency* or *asset composition* of their official reserves. Although the conceptual problems in national economic and financial statistics are central to the analysis and argument in this thesis, the statistical accuracy of national payments and economic data is generally poorer in developing countries, and this includes statistics in a vast and rapidly changing mainland China. Nevertheless, Chinese official data sources are the best data sources available for aggregate official reserve and national payments data, and with appropriate qualifications, these public Chinese official sources are used as a basis for descriptive empirical analysis wherever possible.

China's monetary authorities do not directly report the *sources*, *currency* or *asset* composition of their recent official reserve holdings. However, aggregate reserve and balance of payments data are available and these provide a basis for descriptive empirical analysis in this thesis. The most complete Chinese official time-series data on aggregate official reserve holdings and national balance of payments is publicly available from the People's Central Bank (PBC 2009a) and the State Administration for Foreign Exchange (SAFE 2009) websites. This data provides the basis for a descriptive empirical analysis of the changing sources of China's recent official foreign exchange accumulation in chapter five of this thesis. This data has been supplemented with time-series data from the International Financial Statistics database (IMF, various years) and the World Development Indicators Online database (World Bank, various years) as well as data from the private CEIC database (CEIC, various years) which compiles a wide range of Chinese official data.

Analysing the sources of China's official reserves is not straightforward. The component sources of China's official reserves have to be derived from Chinese official national balance of payments accounts data. Potential sources of foreign exchange inflows include foreign exchange earnings on the current account (trade and services), financial account inflows (foreign direct investment) and portfolio inflows. However, official foreign exchange reserve increases cannot be directly aggregated from these balance of payments inflows for two reasons. First, official reserve assets are subject to currency valuation changes in the foreign asset in which they are held, yet these asset price valuation changes have not been recorded separately in the aggregate data until 2010. Second, there has been a problem with 'unofficial capital flows'. With these qualifications in mind, because of the conceptual limits of the separate national balance of payments accounts, the above sources are supplemented with sector and industry specific data where possible to produce a finer grain analysis. These issues are detailed in chapters six and seven.

The limited data on the currency and asset composition of China's official foreign exchange reserve holdings qualifies our understanding of the sources of reserve accumulation, as well as our capacity to evaluate the international consequences of China's recent reserve accumulation. China's authorities, like many other developing countries' authorities, do not directly report the currency and asset composition of their official reserve stocks to the International Monetary Fund's Currency Composition of Official Foreign Exchange Reserves (COFER 2009) database. The currency composition of China's official reserves has to be inferred from other data sources, such as reports of international currency turnover in mainland China, the exchange rate and unofficial statements by insiders. Changes in reported aggregate reserve levels, therefore, could be the result of new reserves, or it could be valuation changes to existing assets.[4] The lack of public data on the composition of China's reserves is also a problem for evaluating claims about the consequences of China's reserve asset composition within international financial markets. Ironically, the only available data on the international asset composition of China's official reserve holdings data is that reported in the U.S Treasury International Capital (TIC) flow data-reporting system (US Treasury, various years) — but the TIC system captures only about half of the aggregate official reserves reported by Chinese authorities. The analytical impact of this limit is discussed in more detail in chapter eight of this thesis, which will evaluate the debate over the recent consequences of China's reserve capital inflows in US international capital markets

Qualitative data limits

Even the best statistics can only tell us so much, and in some cases can provide a false sense of statistical (and conceptual) clarity. A potentially bigger limit encountered by this thesis is the relative lack of publicly available qualitative data from China's authorities on

[4] In March 2010 the Chinese SAFE reported separate valuation changes to China's official reserves for 2009 on its Chinese language site, but not the currency or asset composition of its reserves.

their recent official foreign exchange accumulation and related pressures, policy-deliberations and responses. This more qualitative material is useful for evaluating the considerations and intentions of China's authorities in pursuing or not pursuing certain policy objectives. Nevertheless, the quantity and quality of relevant official documents published by Chinese authorities, including in English, has improved in recent years, and these official documents and statements are used to ascertain recent policy pressures and to identify official policy rationalisations. A wide range of secondary material on the economic reform and post-reform periods by leading Chinese and English speaking economists and other social science scholars is also used. These sources are supplemented with insights from informal interviews with a handful of current public and private economists in mainland China during a four-month period of in-country study in mainland China in 2006.

The lack of quality public material from China's monetary authorities on their recent official foreign exchange accumulation and related policies is partly explained by the opaque deliberations and practices of central bankers in general and by China's monetary authorities in particular. The extent of China's recent official reserve accumulation, the intentions of Chinese authorities, the reasons why Chinese authorities think it has been happening, and the composition (and potential losses) of those reserves — are politically (and potentially financially) sensitive for China's authorities — on the international and the domestic political stage. There have no doubt been political tensions *within* China's party-state leadership and *between* different institutional bodies party to the deliberations on monetary and financial policies, most of which are not readily apparent from glib official policy statements. Although this problem is real enough, and it imposes certain types of limitations on the nature and ambitions of this thesis — discussed in 1.6.3 — the lack of this sort of qualitative information shouldn't be overstated because it is arguably not unique to the processes of internal debate played out within China's monetary and financial policy elites.

To deal with these limitations, multiple sources of qualitative data are used in this thesis. Official reports by Chinese monetary authorities and speeches and interviews by key officials about China's recent official reserve accumulation and related macro-policy issues are used wherever possible in this thesis. The quality of official public reports from research departments at the PBC and the SAFE have made big improvements in the depth and scope of analysis in recent years — especially the PBC research department monetary policy reports (PBC, various years), which are published on a quarterly and annual basis. Key speeches and statements from China's top monetary and financial policy officials are also more publicly available, including in English.

There is a growing amount of secondary material that is publicly available from Chinese and other international economists on international finance in China. This secondary material is published by leading Chinese economists at leading policy think tanks in Beijing and other international universities, from researchers at international financial institutions such as the Bank for International Settlements (BIS) regional office in Hong Kong, and the Hong Kong Institute of Monetary Research (HKIMR) at the Hong Kong Monetary Authority (HKMA), as well as private international economists and analysts at the international banks in China. These researchers form a relatively well developed international 'epistemic community', which also overlaps with key Chinese policy officials and researchers. In this respect, and given the intense international debate about these issues, it is not hard to find the key rationalisations and claims about the development and consequences of China's recent official foreign exchange accumulation as a problem in international finance, including official and unofficial policy rationalisations.

This qualitative material is also supplemented by insights gained from a period of in-country study by the author at Fudan University in Shanghai from August to December

2006, but also participation at international conferences in Beijing in 2006 and Hong Kong in 2006 and 2007. As an initial and thesis research project, the success in gaining formal interviews with officials and researchers in Beijing was extremely limited, though not for lack of trying. Nevertheless, this period of in-country study enabled many informal discussions with Chinese and international researchers, especially researchers living in or visiting Shanghai at Fudan University's School of Economics, but also in Beijing and Hong Kong. These discussions generated many insights about this thesis' research questions. Where possible these contributions have been credited in the acknowledgements section of this thesis, and in some cases they have been cited directly if the discussant was also an author who has published on the topic.

Thesis delimitations

This thesis is delimited by its primary research objective of understanding the development and consequences of China's recent official foreign exchange accumulation *as a problem in understanding international finance*. As such, it is conceptually delimited by the research challenge of effectively understanding and critiquing the conventional international financial problematic of inter-national adjustment to balance of payments 'disequilibrium' and hence developing a relatively open alternative conceptual framework for understanding recent official reserve accumulation and 'global economic imbalances' within contemporary international finance. This conceptual delimitation has been chosen because contemporary popular, economic and political understandings of international finance continue to conceive of international finance in conventional and misleading terms, and because what seems to be lacking is an alternative way of understanding these questions. This thesis is also empirically delimited by its conceptual objective and the choice of its empirical case — the development and consequences of China's recent official foreign exchange accumulation — which has been chosen because of its political and systemic centrality to understandings of contemporary international finance. While there are limits to the veracity of quantitative and qualitative data on the

specifics of the ‘China’ case — such as China’s recent official foreign exchange reserve asset composition, or what China’s authorities think explains what has been going on — these data limitations are not insurmountable, nor central to the thesis’ main objective.

Conclusion to chapter 1 and structure of thesis

This thesis is structured in three parts. Parts one and two address the main conceptual and theoretical argument, which structures the empirical analysis developed in part three, of the significance and implications of China’s official reserve accumulation. The first two parts (chapters two and three, and chapters four and five) are mainly theoretically oriented as they seek to develop an explanatory critique of the conventional approaches to international finance, to redefine the international financial problematic, and to develop an alternative framework for understanding contemporary international finance. Parts one and two also contain an analytical discussion of the empirical implications of contrasting theoretical approaches for the analysis of the ‘China’ part of the recent so-called ‘global economic imbalances’. Part three (chapters six, seven and eight) seeks to apply the alternative framework developed in parts one and two to the empirical analysis of China’s recent official reserve accumulation as a problem in understanding international finance. Part three is empirically focused, but incorporates theoretical discussion where necessary.

Part one (chapters two and three) develops an explanatory critique of the standard international economic theory, its core concepts, and its analytical implications for understanding China’s role in the recent so-called ‘global economic imbalances’. As such, part one also seeks to develop an alternative conceptual approach to the empirical analysis of China’s recent external balances and exchange rate policies in international finance. Chapter two develops a critique of the concept of ‘external balance’ — a core concept in the standard international economic theory (especially Keynesian economic theory) — and its implications for understanding China’s recent current and financial

national accounting ‘surpluses’ as ‘external imbalances’. In contrast to the standard view, chapter two then seeks to develop an alternative conception of capital accumulation that is increasingly constituted by globally integrated (and non-nationally centred) processes, and then posits an alternative interpretation of China’s ‘external imbalances’ as the outcome of what have been relatively sustainable circuits of global capital accumulation. Chapter three develops the explanatory critique of the standard international economic framework by evaluating the normative economic concept and theories of ‘equilibrium’ exchange rates and the policy prescription of exchange rate-led ‘adjustment’. This normative conception of ‘equilibrium’ exchange rate prices, its related theories and policy assumptions have been central to the recent international policy discourse about China’s recent ‘payments imbalances’. Chapter three contrasts the standard view with an alternative approach to thinking about currency price determination based on the understanding of international currencies as *vehicle currencies* (Hartman 1998). This approach suggests an international financial asset-vehicle based view of exchange rate prices and an alternative explanation for fixed exchange rate policies based on an understanding of the role of key international vehicle currencies, such as the US dollar. Chapter three then presents the main alternative explanations for China’s recent exchange rate arrangements in light of this theoretical analysis.

Part two of this thesis moves the focus of explanatory critique from standard international economic theory to mainstream (and some more critical) International Political Economy approaches to international finance (chapter four) and seeks to develop an alternative framework for understanding international finance within IPE by augmenting a theory of international financial intermediation (chapter five). Mainstream IPE approaches largely take the standard international economic framework as a pre-analytical given and restrict the analysis to the politics of ‘adjustment’ between states and related notions of monetary and financial ‘state-power.’ The analysis based on these approaches is largely indistinguishable from the international, especially the US, policy discourse. More

critical approaches in the tradition of Susan Strange's concept of 'structural power', including the more 'agency' centred explanations, do not necessarily provide a thoroughgoing alternative, and in some cases are largely compatible with the standard international macro view of international finance.

In contrast to the existing IPE approaches, chapter five seeks to develop an alternative framework for understanding international financial relations by augmenting a theoretical conception of IFI as entailing value-chain processes of financial transformation — whose financial logic, while intermediated through nationally-linked currency and other financial instruments, also transcends them. This understanding of IFI is compatible with an alternative minority view of international finance and the US 'payments deficits' that was developed in the 1960s by prominent international economists (Depres, Kindleberger, and Salant 1966) and which seems to have been ignored (and in some cases poorly understood), as well as written out of standard economic and IPE intellectual histories, including Cohen (2008). Nevertheless, the theory as it is developed in chapter five provides the basis for an alternative framework for understanding the development of contemporary international finance as well as the historical development of financial intermediary relations between key international financial centres and the financial periphery.

Part three (chapters six, seven and eight) seeks to apply the alternative framework to develop a distinctive empirical analysis of the development and consequences of China's recent official reserve accumulation. Chapter six develops a descriptive empirical analysis of China's recent current account (mostly trade) and financial surpluses and asks what exactly the proximate sources of China's recent official foreign exchange accumulation are. The analysis in this chapter is informed by a critical approach to the interpretation of national 'balance of payments' categories and assumptions developed in the first part of this thesis. Chapter seven pushes the analysis deeper and asks what has

determined the recurrent trade and financial surpluses, and why they have taken the form of recent official foreign exchange accumulation. The empirical analysis developed in this chapter incorporates an understanding of capital accumulation as a value-chain process of social and historical transformation, the 'strategic relational approach' to state policy, and the theory of IFI developed in chapter five. Chapter eight moves the analysis on to consider the consequences of China's recent official foreign exchange accumulation, which is understood as a two-way process of international financial intermediation, primarily with US international government and quasi-government debt securities markets. Chapter eight also analyses the pressures and strategic responses of China's monetary authorities to their recent official foreign exchange accumulation, and develops a distinctive 'minority view' of the 'weight' and 'role' of China's recent official foreign exchange accumulation within US international securities markets based on the analytical framework developed in chapter five. Chapter eight brings this analysis to bear to evaluate the 'role' of China's official 'financing' in the US sub-prime and financial crisis, and also considers the prospects for Chinese official, international financial 'disintermediation', understood as a reversal of previous intermediation, from US official and other dollar assets. Chapter nine concludes this work by reflecting on the theoretical themes and analysis developed in this thesis.

The second chapter of this thesis begins by examining the misunderstandings wrought by the concept of 'external balance' in international economics, which remains central to the assumptions of international policy discourse and mainstream IPE approaches, and then moves on to develop an alternative approach to understanding China's recent so-called external balances.

Chapter 2

Beyond the discourse of ‘global imbalances’

Before the 2008 global financial crisis shook the world, the global financial discourse mostly centred on concern about the world’s growing ‘global economic imbalances’.[5] The conventional view has been that major structural imbalances in the global ‘balance of payments’ have developed between key national economies in the past decade and that these imbalances posed a threat to ‘global financial stability’. Despite the name ‘global imbalances’ most of the focus has centred on widening US current account deficits, and associated growing financial indebtedness, which emerged from the mid-1990s. The ‘global payments’ counterpart of the US deficits, has been a pattern of growing trade and financial surpluses in the emerging market economies during the 2000s, centred on China, other emerging market economies in East Asia, and the global oil-exporters. According to the financial journalist Martin Wolf — one of the ‘global imbalances’ discourse’s most relentless proponents — 'the conventional view among international economists [was] that the trends were unsustainable and undesirable' (Wolf 2008, 115).

A key problem with the ‘global economic imbalances’ discourse is that it is based on an underlying normative macro-theoretical and policy framework — developed by international economists in the 1940s, 1950s and 1960s — which held that international economic processes were nationally constituted and (should be) individually equilibrating, and that finance should be nationally confined and temporarily accommodating to current account (primarily trade) imbalances. There were always good reasons to question the post-war framework, but changes in the processes of capital accumulation in production, trade and finance over the following 50 years, accelerated by

[5] Interestingly this discourse, along with the same pattern of ‘imbalances’, has persisted after the GFC, despite the predictions of ‘adjustment’.

institutional changes to the industrialised states' exchange rate and payments systems from the 1970s and 1980s, have rendered the assumptions of the post-war categories — such as 'external balance' — arbitrary and meaningless, and the policy prescriptions, such as 'exchange rate-led adjustment', extremely problematic.

This chapter seeks to develop an explanatory critique of the underlying macro-theoretical framework of the 'global economic imbalances' discourse, starting with a critique of the category of 'external balance' (section 2.1) and the related assumption of the ontological primacy of 'nation-states' (Bryan 1995; Bryan and Rafferty 2001) in the standard international economic theory (section 2.2). The chapter then posits an alternative way of thinking about recent patterns of global capital accumulation (section 2.3), based on the analytical primacy of value-chain processes in understanding capital accumulation. This has implications for the analysis of the contemporary cross-national institutional forms of these processes in production, trade and finance. This alternative framework is then used as a starting point to develop a different frame for understanding the recent 'global economic imbalances' as relatively sustained (and temporarily sustainable) circuits of global capital accumulation. In section 2.4 we focus on developing some initial propositions about China's recent 'external balances' as a problem in understanding international finance.

2.1 **The problem with seeking 'external balance'**

The term 'global economic imbalances' became widely used as a descriptive term for the pattern of global balance of payments deficits and surpluses that emerged in the 1990s. However, the term 'imbalances' carries the implicit — and often explicit — analytical meaning that the recent pattern of global payments have been unsustainable and a threat to global financial stability. Indeed the view that the recent imbalances were unsustainable beyond the short to medium run has been a central theme in what is known

as the ‘standard analysis’ of those imbalances in recent international economics. However, the recent pattern of global payments has been *sustained* beyond the short to medium run — and into the long-run. This empirical reality highlights a major conceptual problem with the standard international economic idea of ‘external balance’. When a phenomena is found to be theoretically unsustainable, but is in fact being sustained for consecutive decades — even 40 years — it is appropriate to challenge the theoretical proposition itself. The analytical coherence of the concept of ‘external balance’ was predicated on a set of material and institutional structures, such as fixed exchange rates and cross-border financial controls, which no longer hold in much of the world economy. It is useful therefore to challenge the precepts on which the conception of balance (and the danger of imbalance) is predicated.

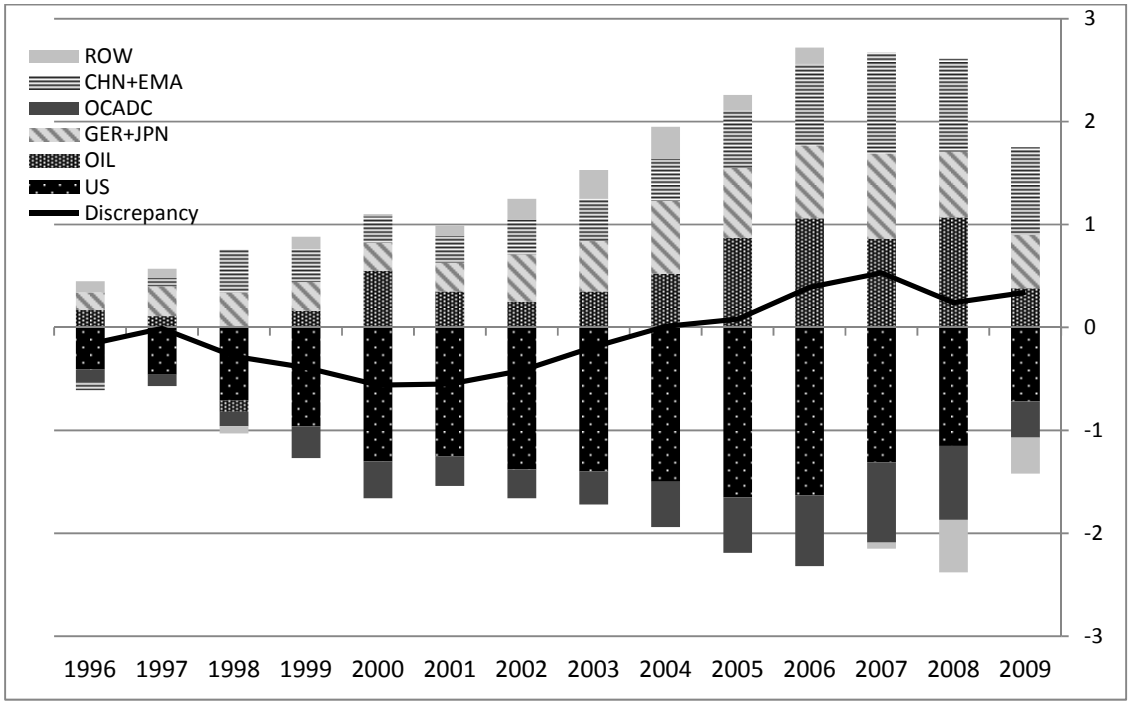


Figure 2-1 Global ‘imbalances’, current account balances in percent of world GDP.
CHN+EMA: China, Hong Kong SAR, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan Province of China, Thailand; DEU+JPN: Germany and Japan; OIL: Oil exporters; US: United States; OCADC: other current-account-deficit countries; ROW: rest of the world. Source: IMF 2010, World Economic Outlook, April 2010. Washington D.C.

Although the recent global imbalances have long been held to be unsustainable, they have in fact been sustained over the long run.[6] As can be seen in figure 2.1 (above), the recent pattern of global 'imbalances' has not only been sustained, but has become greater for well over a decade from the late 1990s. Despite the widely shared prediction of a global financial crisis due to the 'unsustainable' level of US borrowing leading to reversal of recent 'imbalances', the crisis' impact on the pattern of international capital flows was limited.[7] Indeed, the IMF even shifted its analytical goalposts from its 2005 to its April 2010 *World Economic Outlook* reports — from the claim that recent imbalances were unsustainable and must be reversed — to accepting that they have been and are sustainable and will widen in the years after the GFC (IMF 2010, chap.4, 1). However, despite the shift in the IMF's policy discourse — from resolving 'unsustainable imbalances' to 'rebalancing growth' — the underlying conceptual framework remains that national balance of payments accounting outcomes for each individual nation-state must be benchmarked to some measure of 'external balances'.

The balance of payments framework developed by Keynes (1936), and subsequent Keynesian economists such as Meade (1951), Swan (1960), Salter (1959), and Mundell-Fleming (Makin 2000, 53) became the dominant economic orthodoxy for national macroeconomic policy management in the 1950s and 1960s. Under the framework, states were assigned two national economic policy targets: 'internal balance', understood as full employment of labour and resources; and the pursuit of 'external balance' or 'balance of payments stability' (Corden 1996, 282). The policy objective of external balance meant states should pursue a 'trade balance' (i.e., zero net exports) on the national 'balance of

[6] Economists measure the short to medium run as zero to five years, and the long run as ten years or more.

[7] The focus of this chapter is the 'balance of payments' concept of 'external balance'. Initial steps towards an alternative analytical approach for understanding the recent pattern of international capital flows from China to the US are made in this chapter, but a more fully developed approach to understanding international finance is the focus of chapter five. Similarly, the debate over the consequences of the recent capital flows from China to the US, for 'global financial stability', is discussed here, but remains the focus of chapter eight.

payments' accounts, which prevented either an unstable run-down or build-up of official reserves.[8]

The nationally-centred economic assumptions of the balance of payments framework will be discussed in the next section, but for now it should be noted that the meaning of the concept and policy objective of external balance was predicated on state-institutional controls on all cross-border payments on the current and financial accounts as well as fixed exchange rate regimes. As such the concept of external balance in this period was an analytically meaningful policy objective, in so far as cross-border 'deficits' on the current account of the balance of payments had to be financed out of the existing stock of official reserves held by the national monetary authorities. Persistent deficits in the post-war period, such as those experienced by the UK or Australia, were a problem because they threatened to deplete the stock of official reserves — a problem known as the 'balance of payments constraint'. As such the concept of external balance was a strategic policy concept, but its analytical meaning rested on the material and institutional structures of national (i.e., state) finance of the post-war decades.

Because persistent current account deficits were a financial constraint for states, the policy mechanism of exchange rate adjustment was assigned to target the external balance to achieve 'balance of payments stability' (Corden 1996, 383). Under the classical gold standard, exchange rates would adjust to balance exports and imports – balance was, at least in the idealised version, an automatic process equilibrated by gold flows exerting impacts on domestic price levels. In the post-war, under fixed exchange rates, there was no such automatic adjustment. Accordingly, the balance of payments itself became an explicit objective of policy, with trade controls and controls on capital

[8] This simple formulation leaves aside the net income flows that also appear in the current account of the balance of payments, so formally the requirement is that exports plus income inflows equal imports plus income outflows.

flows used to manage both trade balances and the availability of foreign exchange reserves. Exchange rates could be adjusted as a last resort. But, under floating exchange rates, the exchange rate was again thought to adjust the balance of exports and imports so as to bring an automatic balance of payments equilibration. That was the rationale in the 1970s, when exchange rates were widely floated in the aftermath of Bretton Woods. Imbalance became a problem when it became apparent that exchange rates danced to a different tune than that required for external balance. The assumption — still widely held today — was that exchange rate adjustment could be used as a predictable policy mechanism to reduce trade imbalances (i.e., persistent deficits) by altering the price elasticity's of traded goods between nationally-produced exports and imports of foreign goods to target the appropriate level of national external balance. The hope was that a trade balance would bring about a sustainable level of official reserves. The assumptions behind the view that exchange rate adjustment would correct imbalances are considered more fully in chapter three of this thesis. Suffice it to say here, that although exchange rate adjustment was often *the result* of a balance of payments crisis i.e., a shortfall of official reserves such as occurred in the UK in the 1950s and 1960s, the exchange rate policy adjustment mechanism was not necessarily an effective mechanism for avoiding persistent deficits.

Indeed, a central claim of the monetarist international economic orthodoxy in the 1970s, was that replacing fixed with floating exchange rates would succeed as an automatic adjustment mechanism, where government policy adjustment mechanism of restoring external balance had failed. Thus the economists Friedman (1953) and Johnson (1958), are widely credited with convincing a generation of economists and policy makers that removing government controls on foreign exchange and floating exchange rates, would automatically bring about the correct 'equilibrium' exchange rate price — which they defined as the price that would bring about the correct level of external balance, defined as 'equilibrium in the balance of payments' (Freidman 1953, 71). The responsibility for

the adjustment mechanism shifted from government to the market, but the conceptual framework, policy objective and the exchange rate adjustment mechanism assigned to deliver the correct national external balance was the same. Again, the problems of exchange rate price determination and the purported relationship between exchange rate prices and the balance of payments is the focus of chapter three. However, it is worth noting here that more than 30 years after the widespread adoption of floating exchange rates persistent global payments deficits and surpluses remain the norm.

The failure of floating exchange rates to automatically remove current account imbalances, and the fact that persistent payments surpluses and deficits appeared to be sustainable over longer periods of time, led to redefinition of the meaning of ‘external balance’ in the 1980s. According to Obstfeld (1998, 898), ‘Fundamental to international finance is the somewhat elusive idea of ‘external balance’, which in practice entails a path of external indebtedness that does not threaten a country's ability to meet its international obligations’. Thus ‘external balance’ need not entail a situation of zero net exports and thus no change in ‘external balance’ in an accounting sense, but a situation in which the national flow of payments was sustainable over time. Sustainability is defined — according to the standard graduate international economic text by Obstfeld and Rogoff (1996, 68) — not as the total or gross debt, but the ability to meet interest payments on this total debt over time. Therefore, ‘an economy with growing output can run perpetual current account deficits and still maintain a constant ratio of foreign debt to both output and wealth’ (ibid).

However, this definition of external balance as a ‘path of indebtedness’ which is sustainable is much more ambiguous than it suggests. As Krugman and Obstfeld acknowledge (2000, 535), ‘the notion of external balance is more difficult to define than internal balance because there are no natural benchmarks like "full employment" or "stable prices" to apply to an economy's external transactions.’ Crucially, there is no

objective benchmark for external balance. First, there is the problem of which external account is being analysed or targeted. The current account, the financial account, or the net foreign asset position (i.e., net assets minus liabilities), could potentially be targeted. Second, there is no objective basis for judging what external balance on any of these benchmarks is sustainable over time. And a prolonged current account deficit, for instance, can be justified by ‘inter-temporal gains from trade’ if a higher growth rate in one region draws in net imports (i.e., a current account deficit) and net capital flows (a financial account surplus) from elsewhere — and the balance of payments position remains in balance by definition.

Shifting the external balance target to the net foreign asset (NFA) position — i.e., aggregate nationally defined assets and liabilities, is just as problematic. This is the approach taken by the IMF’s recently revised external stability framework (2007b), which is underpinned by the macroeconomic balance approach to the current account. It is an explicitly normative international economic framework. According to this external stability framework, the appropriate ‘current account norm’ for an individual country is the external account level which would stabilise the evolution of a country’s Net Economic Asset Position (NEAP) — private and official reserve assets minus liabilities — in a path of 'long term stability’. Even if a member state builds up a positive NEAP over a long period, such as China’s authorities’ recent official foreign asset accumulation, this is not consistent with external stability, because it implies an unsustainable evolution of its trading partners’ NEAP.

It is presumed that economic transactions maintain some national coherence, such that the aggregation of the international exposures of the aggregate of national economic citizens has collective economic coherence. That is, in all of this analysis — whether it be conceived in a balance of sustainable surpluses and deficits — the implicit assumption is that the national aggregation of transactions generates a figure which is imbued with

policy meaning. In other words, it assumes that the nation constitutes an economic unit which must pay its way, and that this is a national obligation even though the transactions of individuals (the transactions that have been aggregated to generate national data) imply individual, not collective obligations.

Indeed, the preoccupation of governments and economic commentators with 'balance of payments constrained growth' during the 1980s, which was manifested in, rhetorically at least, targeting the current account balance through microeconomic competitiveness agendas in countries like Germany, the UK and Australia, was quietly abandoned during the 1980s and early 1990s (Dluhosch, Freytag, and Kruger 1996). Governments had removed exchange rate and capital controls and found that persistent current account surpluses were automatically financed out of private capital inflows. This is not to argue that debt does not matter, but what does matter is the capacity to repay interest on debt, not the growth of the total debt stock. And here a more fundamental problem arises, which is the problems of national aggregation, the meaning assigned to those aggregates, and the related problem of the relevant unit of analysis assumed by these categories, and the wider sets of relationships at work. These questions are discussed in the next section.

Conclusion

A central assumption in the recent 'global economic imbalances' discourse is the conceptual belief that the sustainability of national balance of payments accounts can be meaningfully benchmarked to some measure of external balance. However, the concept of external balance was developed as a strategic balance of payments policy concept for states to manage payments deficits under the post-war conditions of fixed exchange rates, limited international capital markets, and closed capital accounts — a set of material and institutional structures which no longer hold — and which therefore renders the concept of external balance empty of contemporary analytical meaning. As such, the widely held assumptions about the sustainability of the recent pattern of global payments are not only

suspect but there are wider considerations for how we understand the development of the recent pattern of global payments, their potential consequences and recent international economic policy debates. The next section of this chapter extends this critique to question the economic coherence assigned to these national accounting categories in the standard international economic theory as developed by Bryan (1995) and Bryan and Rafferty (2001) before developing the idea that the preoccupation with external balance may be better understood as a strategic policy discourse, which today is mobilised in pursuit of wider political objectives, including in debates about recent capital accumulation strategies or growth models.

2.2 **Alternatives to methodological nationalism**

'External balance' was developed as a policy concept within the 'balance of payments' framework to guide national macroeconomic policy management after the Second World War. However, the 'balance of payments' is a *national accounting* identity, which presumes a 'national' coherence to contemporary economic processes and relationships that is not warranted (Bryan 1995; 2001; Bryan and Rafferty 2006). Despite major changes in the global political economy, changes which have seen a massive growth in 'private' international financial transactions, the central unit of analysis in international economics remains the individually equalibrating nation-state. But an ambiguity arises. Transactions that are taken voluntarily on the part of individuals, and generally take without an eye to nationality of counter-party, are a private responsibility. Purchases, sales, borrowing, lending, and investing create obligations only on the transacting parties. Moreover, whether sales and purchases, or borrowing or lending occur with domestic or 'foreign' counterparties is, in an important sense, incidental. Yet these individual, spatially incidental transactions are aggregated to give national meaning, and are constituted as national obligations. In other words, the problem of *methodological*

nationalism is inherent in the conventional international economic framework, and this has analytical implications for how the recent global payments imbalances are identified as problems within international finance.

2.2.1 **The limits of the national accounting identity**

According to Wolf (2008, 11), the global balance of payments is the vehicle through which international finance flows. However, the 'balance of payments' category is actually a national accounting identity that was designed to record the cross-border flow of goods, services and finance on the basis of national residency, and as such, it is a misleading and bad statistical category. There is a deeper conceptual problem with the presumed national coherence assigned to cross-border flows on the balance of payments accounts, and while this has always been the case, it is especially so now because of the ongoing changes in the organisation of production, trade and finance since the post-war period. This thesis argues that the 'balance of payments' concept is generally a misleading vehicle for understanding recent patterns of international finance and trade.

The assumption that the so-called 'global economic imbalances' are unsustainable has rested on the presumed meaning of the 'balance of payments' category. The balance of payments identity is a 'summary statistical statement of transactions in goods, services, and capital flows, between … residents and those of the rest of the world during a given period' (Kester 1992, 3). The balance of payments accounts are divided into a system of double-entry book keeping based on the division between the national current account on the one hand, and the national capital and financial accounts on the other. The current account on the balance of payments records the value of cross-border transactions of goods and services (imports and exports) between residents and non-residents, while similarly, the capital and financial account records the value of cross-border capital and

financial flows between residents and non-residents of a given nation. The financial account must 'balance' in the book-keeping sense that each transaction on the current account must be matched by an equal financial account transaction and vice versa — thus the balance of payments is always in balance by definition. By definition, a national accounting deficit on the current account of the balance of payments need not imply an imbalance in need of policy rectification, a point to which we will return to below.

This thesis argues that the balance of payments framework is a highly misleading conceptual vehicle for understanding the global political economy because it arbitrarily divides the actual patterns of global finance and trade by national residency (Bryan 1995; Kester 1992; 1995). Thus, international trade statistics based on nationally defined balance of payments trade accounts do not capture, and therefore do not represent, the shares of intra-firm trade within or between national affiliate firms. Instead global trade transactions within the same global firm or between affiliates are presented as trade between nations (Kester 1992). Similarly, international trade statistics recorded on individual national current accounts do not adequately capture or represent the development of highly integrated cross-border production networks which are based on the production and trade of intermediate parts and components across multiple cross-border locations (Athukorala and Yamishita 2008; Kester 1992, 53). The rising share of parts and components trade within highly integrated production networks renders the reported 'value' of 'final' goods exports from any particular national location — reported on the national current accounts — as somewhat arbitrary. This point is developed further in section 2.3 below, which contrasts the interpretations of China's export-processing trade surplus in the past decade based on the 'balance of payments' accounts with an understanding based on integrated production networks.

Wolf's (2008, 115) claim that 'global payments' are the vehicle through which international finance flows does not stand up to real-world scrutiny and shows the

conceptual problem of understanding international finance through the 'balance of payments' framework. Cross-border financial transactions between different geographically located offices within the same consolidated global financial institutions, for example, are reported as national balance of payments transfers between residents and non-residents. For the same reason, nationally reported financial flows on the balance of payments do not indicate the actual chains of financial relations involved, just the reporting office:

> A recorded transaction with Britain, for example, does not necessarily mean that the trade is in British securities, or that the ultimate buyer or seller is British. It can mean that a French broker, acting on behalf of a Japanese investor, carries out a transaction with a US firm in London (Kester 1995, 67).

The explosive growth of financial derivatives within international finance[9] — which 'blend' and 'bind' the 'risk-exposures' of different assets, often across currency denominations, into new financial instruments (Bryan and Rafferty 2006) — are not meaningfully represented in national balance of payments statistics and therefore renders those statistics increasingly inadequate representations of actual international financial relations. The macro-policy implications of these changes are discussed below.

2.2.2 **The problem of methodological nationalism**

The 'balance of payments' framework fails to account for the rise of globally integrated financial and trade relations, and it arbitrarily divides those relations on the basis of national residency. Although this conceptual problem is sometimes acknowledged by contemporary international economists, the accepted alternative approach, based on the

[9] For instance, the explosion in global foreign exchange transactions has been led by an explosion in the scale of global foreign exchange derivatives contracts, such as currency forwards, futures and swaps (BIS 2007).

internal, ‘savings-investment’ accounting identity is also flawed. The deeper problem is that the accepted ontology of economic reality remains based on individual nations and that this methodological nationalism remains central to contemporary frameworks, concepts and models of international economics, and therefore remains central to the standard analyses of recent global payments trends. The proposition here is that the global imbalances discourse is better understood as a strategic macro-policy discourse that draws on the standard international economic frameworks to secure specific political and capital accumulation strategies and hence that an alternative conceptual framework is needed.

Although contemporary international economists may acknowledge that the balance of payments framework fails to capture the global integration of production, trade and finance, the common alternative approach which focuses on the internal savings-investment national accounting identity is also flawed. According to Makin (2000, 15) for instance, ‘it is no longer meaningful to interpret economic and financial behaviour for any nation or region without regard to trade and investment flows’. Accordingly, domestic savings and investment patterns are held to underlie international external payments imbalances (BIS 2007, 19). To put it another way, national current and financial accounting balances are held to reflect (or be caused by) the savings and investment structures within and therefore between individual countries (Makin 2000, 21). Through this frame, the focus of analysis shifts from current accounts and trade balances, to questions of national savings and investment. Thus the recent pattern of US current account deficits can be framed as a shortfall of domestic savings compared to the level of domestic investment. Similarly, as discussed in chapter six, China’s policy officials have increasingly framed China’s external balances as an internal savings-investment problem, centred on ‘China’s high domestic savings to investment ratio’ (Zhou 2009).

Although an analysis of the national savings-investment accounts can be empirically revealing, it remains a national accounting identity which is the internal mirror image of the external balance approach to the current account. The savings identity i.e., national savings minus national investment is by definition equal to the external balance (the current accounting identity), i.e., exports minus imports. As such, neither approach can tell us the direction of causality. Nor can the savings identity or the current accounting identity be meaningfully said to decisively cause the other, although all variables within each identity are at work. Thus assumptions about wider processes and causes continue to drive the analysis. A more fundamental criticism is that the savings identity is really a version of the national internal balance concept and is flawed for the same reasons that the concept of external balance is flawed. In other words, there is no coherent 'national economic balance' reason why processes of deepening and globally integrated capital accumulation should be benchmarked to any given level of national internal balance.

The bigger problem is that the accepted ontology of economic reality in international economics is based on individual nations and that this methodological nationalism remains central to contemporary frameworks, concepts and models of international economics. Thus according to Krugman and Obstfeld's (2000, 3) international economics text, the study of international economics concerns the 'special problems of economic interaction between sovereign states'. Thus, the so-called 'open-economy' models of international economics start with the closed 'national economy' and add 'openness' in trade and investment, but the effect of the methodological starting point is that the outcomes of integration are understood as outcomes of national aggregates. Fundamentally the economic ontology of nation-states, which are politically-defined entities, sits at odds with the primary units of analysis in micro-economics, which are individuals and firms, rather than nations — and presumably it would be a mistake to reduce the activities and logics of the former to the later (Bryan 1995). However, this is precisely what is done by the 'rigorous micro-foundations' in Obstfeld and Rogoff's

(1996) widely used core graduate international economic text — that rests on the model of the isolated individual household unit, which must equilibrate for each individual unit. The individual household unit model is transposed to the international economy, which is made up of so many individually equilibrating national units. Thus methodological nationalism is central to standard international economic theory, concepts and models, and this shapes the accepted wisdom about recent global payments patterns.

This conceptual framework of methodological nationalism, in which the central unit of analysis is nation-states, has distorting analytical implications for how we understand contemporary international finance. As we have seen the balance of payments is an arbitrary accounting framework which divides up complex and highly integrated cross-border relations between capital on the basis of national residency and non-residency. In contrast, evidence from the global financial crisis, for example, suggests that the consolidated i.e., worldwide or global, balance sheets of international banks are a more relevant unit of analysis for understanding the dynamics and stresses within international finance than country or residency based measures such as the external accounts on the balance of payments (McGuire and von Peter 2009, 6-9):

> Stresses build up *across* the global [banking] balance sheet, as mismatches in the currency or maturity of assets and liabilities, and thus can be understood only by looking at banks' worldwide positions consolidated across all office locations. In some cases, banks' cross-border assets booked by offices in a particular host country can account for the bulk of that country's external asset position, and yet still represent a relatively small part of the consolidated banking systems' worldwide assets. This fact clouds the interpretation of the "national balance sheet" for many host countries, since banks' long or short currency positions booked in one office location and offset in another may signal a "mismatch" in the host country's net external position when none may, in fact, exist.

As such, the 'global imbalances' concept, which rests on the misleading benchmark of individual national external accounts, rather than on consolidated international bank balance sheets, is a misleading path of analysis.

This conceptual point makes sense if we acknowledge that cross-border finance is no longer in the main institutionally mediated by the official or national financial sectors of states, as it was under fixed rates and capital controls, but by private international financial institutions. This is not to deny the salience of government or official finance, such as sovereign debt, as a potential source of systemic instability within international finance, nor is to deny the continued role of official financial institutions in securing international money and finance. Rather it is to understand that contemporary sovereign debt problems are very different from those under fixed exchange rate systems. The relevant unit of analysis today is the consolidated balance sheet of the government financial intermediary sector — and not the overall national external accounts (flows) or the national aggregate balance sheet (stocks) as it once was.

Conclusion

Although the discourse of global economic imbalances is often used as descriptive term to describe the recent patterns of global payments (i.e., capital flows) the argument here is that the 'national' unit of analysis is a poor guide to understanding contemporary international finance, production and trade. As such, it is a mistake to benchmark contemporary patterns of globally integrated capital accumulation to national accounting identities and concepts, which were developed in the 1950s and 1960s under very different material and institutional circumstances. National accounting deficits and surpluses are no longer automatic indicators of imbalances in need of policy rectification because, in the main, states are no longer central to mediating international payments in the way they were. In fact the evidence from the recent global financial crisis suggests that the consolidated balance sheets of international banks are a more relevant unit of analysis for understanding the systemic risks within international finance than measures of traditional balance of payments cross-border accounting identities.

2.3 **An alternative approach to understanding global capital accumulation**

The global economic imbalances discourse is rooted in the assumption that the proper unit of analysis for understanding global payments patterns is the nation-state. By contrast, this section develops some initial conceptual propositions about how to understand contemporary processes of international capital accumulation, which are not nationally-centred. The rise of global value-chain studies across the social sciences, for instance, has entailed an analytical focus on specific global or cross-border production or commodity value-chains as the relevant units (or objects) of analysis. However, a problem common in this literature is that the category of 'value' — i.e., what is common to these value-chains, remains under-conceptualised and therefore poorly articulated within wider processes of capital accumulation. In contrast to common misunderstandings, the proposition here is that the categories of 'value' and 'capital accumulation' — understood not as general abstractions but as socially and historically determined categories — are helpful for explaining the historical development of specific globally integrated capital accumulation processes and their institutional forms in production, trade and finance.

2.3.1 **Global value-chains as alternative units of analysis**

It is possible to analyse the internationalisation of accumulation through a range of categories, including firms, companies, and even classes (Bryan 1995, 10), however a common unit of analysis across the social sciences has been the rise of global value-chains. A production value-chain for instance, is constituted by the separate stages of the manufacturing production process, from design, to the sourcing and production of intermediate goods (parts and components), final assembly and export, to sales and

marketing. Whereas, the production value-chain stages tended to be vertically-integrated within a single firm or company in earlier periods, there has been a process of horizontal 'production fragmentation' in global manufacturing since the 1970s (Athukorala and Yamishita 2006, 234). The rise of horizontally-integrated or fragmented production networks has entailed the further geographic break-up and re-configuration of distinct production stages across countries and regions alongside the process of fragmentation into different institutional units of capital within the overall value-chain.

Two analytical points flow from this. First, the relevant unit of analysis for understanding the rise of specific processes of globally-integrated accumulation is the overall value-chain, and not the geographical or national location of any single stage or fragment in isolation from the overall 'value-chain', such as the final assembly and export stage. Thus an analysis of global value-chains provides an alternative frame for understanding the recent patterns of national current accounting deficits and surplus, which have been integral to the so-called global imbalances debate about recent international financial flows. Thus, while the US-China trade policy debate has assumed a focus on the horizontal production of final goods within individual countries, and has assumed a problem with Chinese trade, it has ignored the reality of global production based on geographically separate stages across countries (Athukorala and Yamishita 2008). Thus, China’s recent current account surpluses, and the growth of the US bilateral trade deficit with China since the late 1990s, should be located as the result of a geographic shift in the final location of production assembly and export from other East Asian countries to China (see for instance, Athukorala and Yamishita 2008; Feenstra et.al. 2008; Breslin 2007; Woo 2007). Moreover, to understand the rise of a sustained manufacturing 'trade surplus' on China's 'national accounts' we must seek to understand why firms in mainland China emerged in the late 1990s as the final assembly export-processing platforms of choice within these reorganised regionally and globally integrated production value-chain networks.

Further, the changing pattern of global value-chain production sharing or fragmentation suggests that it is a mistake to benchmark regional and globally integrated processes of capital accumulation to any individual national accounting balance. In the 1980s and early 1990s, for instance, the majority of final assembly and export within these production value-chains was centred in Japan and the emerging East Asian countries, which together and centred on Japan ran an overall trade surplus with the United States. At this time, US political pressure for international macroeconomic 'adjustment' was focused on Japan and other emerging East Asian countries and culminated in the Plaza Accords and Japan's revaluation of the yen. Since the late 1990s, the geographical shift of the final production assembly and export to China within East Asia has led to a shift in US political pressure from the threat of 'Japanese manufacturing' to calls for China to 'adjust' in the 2000s. However, what this suggests is that an analytical path that focuses on national imbalances (in need of policy action) is mistaken, and that a better path of analysis is seek to explain the shifts in production value-chains.

These regionalised and globalised production value-chains do not comply with a nationally-viewed order. But while a focus on value-chains clearly counters that nationally-view, and nominates a value-theoretic approach, this approach does not suggest that nation states do not 'matter', and do not order transactions. Clearly they do, and the way in which value-chains are linked are themselves heavily modified by state policies. The point is not about states and value-chains, but about how to understand where and how the state mediates these processes. The primary objective in this initial critique has been to make sure that we do not start from the premise that these processes simply complying with a state-centred order.

The second analytical point is that value-chains can be conceptualised as integrated processes that are institutionally mediated but which entail the movement (and

augmenting) of capitalist value through various concrete value-forms e.g., as commodities, capital-goods, money and finance. The category of ‘value’, however, is rarely conceptualised in the value-chain literature and it remains a source of contention within the social sciences. Nevertheless, this thesis proposes that a conception of value is necessary for understanding the conceptual debates in contemporary international finance and that it remains an analytically useful category for understanding real-world international financial relations and the process of capital accumulation more broadly, for reasons which are outlined below.

2.3.2 **Integrating a ‘value-form’ analysis**

The understanding of the category of value here — as a social and historically determinate category — owes much to the conceptualisation of value by Marx, and without entering into 150 years of controversy about the topic, a few broad conceptual and methodological propositions can be usefully clarified as a basis for analysis. To start with, although the category of value was common coin for the classical political economists, Marx’s critique of their conception of value deserves to be better understood, because — despite views to the contrary — it prefigured the methodological and political criticisms made within more critical contemporary IPE of mainstream economics today. The proposition here is that the concrete analysis of contemporary value-forms and its internally related concepts of ‘capital’ and ‘capital accumulation’, provide a compelling basis for an alternative conceptual framework for understanding recent global payments, including the development of China’s recent foreign exchange accumulation.

Marx’s criticism of his classical political economy contemporaries was based on his methodological critique of their empirical-dualism. Empirical-dualism entails a method of empirical analyses that treats the existence of the categories that are used to describe

the world, such as value, as already-apparent and pre-given. Marx's methodological critique of the empirical-dualism in classical political economy then, was that it treated categories, such as 'value', 'capital', and 'capitalism' as general abstractions that were stripped of historically and socially specific origins and meanings, and thus its effect was to 'naturalise historically determinant forms' (Murray 1998, 30-31, 107). In other words, Marx's critique of classical political economists was that they failed to make the necessary careful conceptual distinctions between general abstractions, and historically and socially determinant abstractions (ibid).

By contrast, Marx's epistemological approach to questions of ontology was radically social and historical — an approach that was manifested in, for instance, his analysis of the historical specificity of the capitalist relations, including his use of categories such as value and capital. In contrast to the classical political economies, Marx argued that 'value' was a social concept, and its meaning (and concrete forms), were specific to the historical development of capitalist relations (Marx [1867] 2004, 174). As such, for Marx, the category of value was an abstract, but determinant, conceptualisation of what is common to the more concrete 'value-forms', such as 'commodities', 'capital' and 'money' i.e., their capacity as 'value-forms' to be 'exchanged' or to be commensurate for one another as forms of social value — within historically specific capitalist relations. As Marx (ibid) explained:

> The value-form of the product of labour is the most abstract, but also the most general form of the bourgeois mode of production, which is hereby characterised as a specific type of social mode of production, and accordingly, likewise historical. Thus if one mistakes it for the external natural form of social production, one thereby necessarily also overlooks that which is specific to the value-form, thus, the commodity-form, further developed, the money-form, capital-form etc.

Marx's conceptualisation of the value-from need not be based on his argument about the substance of value as the crystallised 'product of labour' (Itoh and Lapivitsas 1999, 38).[10] Nevertheless, the point made here is not merely a negative critique of the view that the value-form is 'the external natural form of social production' — but rather two positive arguments. The concept of value is internal to the historical development of specific social relations, i.e., capitalist productive relations and that the specificity of the capitalist value-form implies an analysis of its more concrete forms i.e., its commodity, money, and capital-forms.

To take the first point, that the category of value is internal to the historical development of specific social relations, i.e., capitalist relations. For Marx ([1867] 2004, 932), 'capital is not a thing, but a social relation between persons which is mediated through things.' Capitalist relations can be broadly defined as a system in which overall productive relations (understood as a broad socio-economic category) are geared towards the competitive accumulation of capital-value. Capitalist relations are understood as entailing internal relations of competitive accumulation between 'many capitals' at different levels of aggregation, and the internal social organisation and general subordination of human productive capacities to the production and realisation of capitalist 'values' within relations of competitive accumulation between capitals. Capitalist relations are compatible with a wide range of specific institutional and socio-historical forms. Thus a definition of capitalist relations as productive relations that are geared towards the process of competitive accumulation of capital-value is compatible with distinctive institutional forms of resource allocation, from bureaucratic 'central planning' to 'market

[10] There is a conceptual tension in Marx's explanation of substance of value as the abstract expression of the crystallised 'product of labour' and his explanation of the money-form of value and the credit-system. Marxists would understand the expansion of the latter as 'claims on future value', and not the creation of new value — but, while new values created and issued by the financial system are also claims on value into an uncertain future, arguably such a distinction between value and 'claims on value' is hard to maintain conceptually and breaks down concretely in the analysis of specific forms of finance, i.e., the expansion of new forms of money-value. Although this tension is worth exploring, and is revisited briefly in chapter five on finance and international financial intermediation, it is not a debate that this thesis seeks to resolve.

relations', to 'public' and 'private' institutional mediation — and everything in between. As such, we can seek to understand the internal socio-economic relations of competitive capital-value accumulation at work, for example, in the 'entrepreneurial spirit' of Chinese local and provincial government authorities manifested in their race to establish their own private equity funds (Huiying et.al. 2010). Further Marx's ([1867] 2004, 920) concrete historical analysis sought to locate the emergence of the international credit-system (the organisation of international finance) within definite social and historical relations:

With the national debt arose an international credit system, which often conceals one of the sources of primitive accumulation in this or that people...A great deal of capital, which appears today in the United States without any certificate of birth, was yesterday, in England, the capitalised blood of children.[11]

The second proposition which guides the analysis developed in this thesis is that the historical specificity of the capitalist value-form entails a process of movement and 'self-expansion' of capitalist value through analytically distinct, commodity, capital and money-forms. 'Capital as self-expanding value...is a movement, a circuit describing process going through various stages, which itself comprises three different forms of circuit describing process. Therefore it can be understood only as motion, not as a thing at rest' (Marx [1885] 2006, 108). The claim that 'capital is self-expanding' value is a conceptual proposition that competitive relations within capital entail a movement of 'capital-value' as internal relations geared towards the ceaseless quest to maintain, augment and 'realise' current value into an uncertain future.

[11] The passage from Marx's chapter on 'The secret of so-called primitive accumulation' is as follows: 'Thus the villainies of the Venetian thieving system formed one of the secret bases of the capital-wealth of Holland to whom Venice in her decadence lent large sums of money. So also was it with Holland and England. By the beginning of the 18th century the Dutch manufactures were far outstripped. Holland had ceased to be the nation preponderant in commerce and industry. One of its main lines of business, therefore, from 1701-1776, was the lending out of enormous amounts of capital, especially to its great rival England. The same thing is going on today between England and the United States. A great deal of capital, which appears today in the United States without any certificate of birth, was yesterday, in England, the capitalised blood of children' (Marx [1867] 2004, 920).

Taken as a whole, capital is considered to encompass a process of movement and self-expansion through analytically distinct value-forms, of commodities, capital and money-forms, and the processes of movement of these forms (indeed the institutional configuration of these forms) are mediated in institutionally and historically specific ways. The circulation of capital value through its commodity, money forms and the stages of production, entails distinct analytical and historically specific logics, rather than a single logic as is sometimes claimed by critics. Although commodities have existed for millennia, what distinguishes capitalist commodity forms from pre-capitalist commodity-forms is that capitalism entails a system in which productive and resource allocation decisions are increasingly geared towards the generalised production of commodities for exchange and 'realisation'. Similarly, in Marx's analysis of the money-form, the generalised use of the money-from of capital-value emerged historically out of this need to provide a general unit of equivalence for the production and realisation of generalised commodity production, and therefore money also mediates prices. However, for Marx money also sets itself off from the circulation of commodities, and thus introduces new possibilities beyond simply exchange (Murray 1988, 163-68), such as the development of a (private) credit-system and finance, which facilitates the accumulation and expansion of financial-claims into an uncertain future. The institutional forms through which these forms of value are mediated, and indeed the very institutional forms of value — such as the value relations of specific financial instruments (the money-form) — are historically and institutionally specific, and therefore their further analysis must be developed through concrete historical and institutional analysis, which is undertaken in subsequent chapters of this thesis.

Finally, the self-expansion of capital value through its circulation as commodity-values and capital-values, and its stages of production, is not a single process, but entails proliferation of many capital-form related processes, each with their distinctive analytical logics over space and time. Accordingly, the self-expansion of capital-value forms tend to

specific geographical locations across time, including particular national identities and national regulatory institutional arrangements and spaces. This suggests a path of analysis for explaining the rise of international production value-chain fragmentation. Indeed, this suggests a path of analysis that is in contrast to the neo-classical theory which suggests that international capital should flow from rich to poor countries, or that developing countries should be capital importers not capital exporters, and therefore they should run overall deficits on the balance of payments (Dooley et.al. 2007; Ma and Zhou 2009). If the capital-relation is understood as a movement of capital-value forms through circuits of commodities, money and stages of production, there is no reason to accept that either the constitution of economic reality or specific patterns (circuits) of capital accumulation and development are reducible to national political and regulatory forms. As such, a central proposition in this thesis is that China's recent foreign official reserve accumulation of US dollar assets may be better understood not as an international 'payments imbalance' but as a relatively stable circuit in the circulation of international money and finance.

Conclusion

The core proposition that has been developed here is that the historically and socially determinant categories of 'value' and 'capital accumulation' provide the conceptual basis for an alternative analytical framework for understanding the recent pattern of 'global payments'. The fragmentation of value-chains in global manufacturing production, for instance, suggests that contemporary processes of international capital accumulation are not reducible to the political or regulatory logic of individual nation-states, but also have their own international organising logics. If capital accumulation is understood to entail distinctive circuits of circulation and production, of commodities, money and capital forms of value, this suggests an alternative analytical path for seeking to understand China's recent accumulation of US dollar assets.

2.4 **A strategic relational approach to 'the state'**

Methodological nationalism is central to the standard view of international finance. However, if we reject those methodological assumptions, the question arises of how to explain the expressed policy concerns of key state actors to 'rebalance' the recent so-called global payments imbalances, and even their individual national economies. The bigger problem remains that explaining the salience of the global imbalance discourse, requires a conceptualisation of the role of states within international finance. The approach taken here incorporates Jessop's (1990; 2008) mid-range 'strategic relational approach' to the state, which includes the concept of the 'strategic selectivity' of state policy, and provides a basis for understanding why states might articulate specific accumulation strategies or growth models. This approach, however, needs to be augmented with a domain specific approach to understanding states' ongoing strategic interventions within production and (international) circuits of money and finance.

Jessop's (1990; 2008) mid-range 'strategic relational approach' to the state is a relational, rather than a reductive approach to states and state power. States do not exists as finished products, such as the 'unitary' state in realist international relations theory, but are instead constituted through distinctive strategic relational institutional forms. According to Jessop (2008, 59):

> [the] state is an ensemble of institutions that has a specific, differential impact on the ability of various political forces to pursue particular interests and strategies through access to and control over given state capacities themselves dependent for their effects on links to forces and powers beyond the state…

Thus, while given state capacities may be a vehicle for various political forces to pursue particular interests and strategies, the constitution of states through distinctive strategic relational institutional forms is defined in relation to their wider social formations,

powers and geo-historical contexts beyond the state (Jessop 1982, 252; 2008, 29, 59). States have a ‘strategic selectivity’ which predispose, but do not predetermine, those state institutions to the selection and non-selection of specific policies, practices and discourses in relation to their particular geo-historical contexts and wider social relations (ibid 2008).

There is tension within this definition over how states are conceptualised in relation to their wider social relations and geo-historical context. The proposition here is that states are determined in relation to — but not reducible to — their wider social relations and geo-historical context. As such, and given the subject of international finance in this thesis, states here are conceived not simply as states within capitalism, but as *capitalist states*. The proposition here is not that capitalist relations of value production and realisation under competitive accumulation are the only relations at work within any given socio-historical formation that entails capitalist relations, or that capitalist states only enact policies or practices in the interests of capital. Rather, it is that the ‘strategic selectivity’ of capitalist state institutions predisposes them to the selection and non-selection of specific policies, practices and discourses which seek to facilitate stable processes of capital accumulation while furthering particular accumulation strategies or growth models.

Thus the strategic relational approach provides an analytical bridge between analysis of value-chain process of capital accumulation, and the mediating role of state institutions, policies and actors, as they seek to facilitate, articulate or shift policies in relation to particular growth models (Jessop 1990, 199). The concept of a growth model or accumulation strategy implies a structural coherence to particular configurations of capital accumulation processes, which are not always warranted given these are inherently uneven and differentiated processes. Nevertheless, capital accumulation processes do comprise relatively consistent structural conjunctures of those processes in

particular geo-historical contexts. Further, the strategic relational approach entails an analysis of the strategic selectivity of state institutional policies, discourses and practices in relation to those conjunctures. It is in this sense, for instance, that the policy shifts by the Chinese party-state leadership from an import-substitution industrialisation strategy to an export-oriented growth model during the 1980s, as well as recent debates over the current growth model in mainland China are analysed in chapter seven of this thesis.

Conclusion to chapter 2

The strategic relational approach also provides a bridge to analyse the ongoing interventions of specific state institutions within circuits of money — and within the credit and wider financial systems — in an ongoing attempt to secure monetary and financial values, through for instance, the pursuit of forms of price stability (Itoh and Lapivitsas 1999; De Brunhoff 1978). However, rather than developing this course of analysis further here, the theoretical and historical analysis of key questions in international money and finance are developed more concretely in chapters three to five of this thesis. Chapter three develops a critique of the assumptions of the recent debates over the international value of China's currency, the renminbi, which has been a central feature of the recent global imbalances discourse, and puts forward an alternative analysis of the international monetary and financial rationale for China's recent exchange rate policies. Chapter four develops a critique of key IPE approaches to international finance, and chapter five develops a theoretical analysis of international financial intermediation to provide the basis for an alternative framework for understanding China's recent official reserve accumulation. These more theoretical chapters then provide the basis for a deeper empirical analysis of China's recent official foreign exchange accumulation as a problem in international finance in chapters six to eight.

Chapter 3

The illusive search for ‘equilibrium exchange rates'

'At the heart of the story of the imbalances is official action to intervene in the foreign-currency market, to keep the currency down. A consequence of this policy has been the huge accumulation of reserves, which are also, by definition, huge official capital outflows' (Wolf 2009, 95-97). The conventional view about global imbalances also has a diagnosis about the cause of those imbalances — that key currencies have departed from their real ‘equilibrium’ exchange rate values. At the heart of the story about the recent ‘imbalances’ is the claim that China’s official foreign exchange intervention has kept the Chinese currency, the renminbi, ‘undervalued’, leading to persistent current account surpluses and official reserve accumulation (USSC 2008). The flipside of this view is that US national current account deficits have failed to ‘adjust’ because the US dollar has been ‘overvalued’ (IMF 2007, Wade 2009). Supposedly, if currencies were allowed or encouraged to achieve their real ‘equilibrium’ values this would remove a major cause of the recent ‘imbalances’.

However, the history of the post-war economic orthodoxies on currency prices and the exchange rate ‘adjustment mechanism’ is a history of intellectual and policy failure. Despite the widespread shift to floating exchange rates by key states from the 1970s, the key international currencies have not gravitated to any long run ‘equilibrium’ and have become more volatile. Crucially, floating exchange rates have not prevented or mitigated recurrent payments imbalances. The deeper problem with the currency adjustment mechanism concept is the lack of any convincing intellectual basis in international economics for the belief that currency prices should conform to some measure of fundamental or ‘equilibrium’ value.

This chapter extends the explanatory critique of the standard economic approach to international finance, by critiquing the exchange rate adjustment mechanism and the related concept of equilibrium exchange rates values. A key part of this explanatory critique is developing an alternative conceptual framework for understanding the phenomena under investigation. As such, this chapter seeks to extend the 'value-form' conceptual framework from general propositions about the international production and circulation of 'value' to the specific circuits of international money and finance. This basic value-form approach is augmented with contemporary approaches to understanding foreign exchange markets, such as a vehicle currency (Hartmann 1998) and an asset-based approach to foreign exchange markets. This alternative conceptual approach to foreign exchange markets suggests a path of analysis in contrast to conventional rationalisations for China's recent exchange rate policies. Once outside a discourse of exchange rates generating national external equilibrium, new possible rationales for foreign exchange accumulation open up. Rather than casting China's policies as irrational or inefficient, as the conventional wisdom would have it, in this chapter an alternative policy rationale is engaged. Using the value-form approach it is possible to identify China's policy rationale — based the Chinese state's use of the on-going role of the US dollar as a global unit of measure. This chapter is organised as follows: section 3.1 critiques the orthodox economic concept of the exchange rate adjustment mechanism; section 3.2 extends this critique to the three main contemporary equilibrium exchange rates theories and section 3.3 augments the value-form approach with currency vehicle and asset-based approaches for understanding foreign exchange markets, before considering recent minority approaches to China's recent exchange rate policies.

3.1 **The failure of the exchange rate adjustment orthodoxy**

According to the conventional wisdom — at least, the populist version of it — key global payments surplus countries like China should appreciate their currencies to resolve the recent imbalances. The belief that exchange rate adjustment can eradicate both the US current account deficit and China's current account surplus finds its intellectual justification in the post-war international economic orthodoxies. However, neither fixed-adjustable, nor floating exchange rates have succeeded in resolving the 'problem' of long-run payments imbalances — indeed, there has been no stable relationship between the international currency price movements and the pattern of global payments imbalances since the 1970s. A deeper conceptual problem with these theories is the assumption that current account balances should respond predictably to changes in the relative price elasticities of traded goods. Following the argument in chapter two, there is the additional problem that these trade balances have to be understood as relations between discrete and distinct national economic units, where the only currencies in use are those of the exporting and importing countries. Where trade has more complex arrangements than direct transactions between national units, and where third country currencies are in use for borrowing, lending, investing and trading, then there are no clear mechanisms which will drive exchange rates to levels which balance trade.

The conventional view that exchange rate adjustment — meaning 'Chinese' currency appreciation, but also US dollar depreciation, should be the central mechanisms for resolving recent global imbalances — is accepted across the international economic policy spectrum. According to Fred Bergsten[12] (2005, 33), 'China's exchange rate and related policies are playing a central role in the adjustment (or lack thereof) in the world's

[12] Fred Bergsten was a former US foreign economic policy advisor under various administrations and is director of the Peterson Institute for International Economics, a US international economic policy think tank that has long campaigned for foreign currency appreciation in the 1980s as the solution to ongoing US current account deficits. http://www.iie.com/staff/author_bio.cfm?author_id=33

major international economic imbalances centred on the US currency account deficit'. But it is not just US foreign economic policy advocates saying this. Similarly, for a long time 'Washington Consensus' critic Robert Wade (2009, 551):

> Again and again countries' exchange rates have been driven in the opposite direction from that needed to reduce global imbalances: deficit countries have often experienced real exchange rate appreciation and surplus countries, real exchange rate depreciation or no change.

Therefore, at issue is not just China's alleged currency 'undervaluation' or the US dollar's alleged lack of depreciation, but the very notion that exchange rate adjustments should be working to reduce global imbalances.

This commonly accepted view about exchange rates is intellectually rooted in the early and post-war economic orthodoxies — which share the theory that exchange rate adjustment is the central mechanism for achieving 'external balance'. Indeed, this view of the exchange rate adjustment mechanism has been central to classical, Keynesian, Monetarist, and contemporary 'open-economy' macro approaches to international economics (Qiao 2007, 766; Makin 2000, 55). The exchange rate adjustment mechanism is based on the notion that relative international price changes are the central mechanism for maintaining the appropriate international trade balance. This view had early intellectual antecedents, especially in Hume's *specie flow* mechanism (Eichengreen 2008, 24-25) but it was common to so-called trade 'elasticities' approaches in the 1920s and it became central to the Keynesian macro-policy framework in the 1950s and 1960s (Makin, ibid).

According to the Keynesian macro-policy framework, the strategic policy target of 'internal balance' (understood as full employment and stable prices) was to be achieved through fiscal policy, while the exchange rate adjustment mechanism was assigned to the strategic policy target of external balance or 'balance of payments stability' (Corden

1996, 282). This core Keynesian macro-policy framework was institutionalised in the 1944 Bretton Woods Agreement and became the ostensible framework for managing the international monetary system in the post-war decades. Indeed, in language familiar today the exchange rate 'adjustment mechanism' should be part of the:

> arrangements under which both members in surplus and members in deficit in the balance of payments take prompt, effective, and symmetrical action to achieve adjustment, as well as to arrangements for intervention and treatment of imbalances (IMF 1944, Article IV, Section 4).

However, in theory, the effectiveness of the Keynesian exchange rate 'adjustment mechanism' — which operated through centrally (i.e., government) fixed-adjustable exchange rates, rested on the assumption of a world economy made up of discrete nations. Crucially, the framework assumed limited international financial markets, which became increasingly difficult to maintain in the late 1960s, and strict national (i.e., state) controls on cross-border financial markets, albeit with the US, as provider of the global unit of money, as an exception. Only by this limitation could we conceive of nations as discrete economic units in practice, in which the rest of the world could reasonably thought of as 'external'. So when these capital controls came under challenge, as they did form the 1950s (Eichengreen 2008) we need to recognise that there were significant consequences for the discourse of discrete national economies as enshrined in Bretton Woods. This did not manifest as an instant dissolution of the Bretton Woods processes or institutions, but it presented a tension and source of conflict that would manifest in various ways throughout the life of the Agreement. Accordingly, it became increasingly difficult to control large-scale financial movements against key international currencies, such as the US dollar and the British Pound in the late 1960s and early 1970s. These movements were a clear sign that international finance was increasingly active outside of national controls. In the immediate post-war decades before the rise of the Euro-currency markets, large-scale and persistent current account deficits and 'balance of payments

instability' in the form of official financing problems and erratic pressure on exchange rates was endemic (Helliener 1994, 45-71).

Indeed, a central argument in the intellectual shift from fixed to floating exchange rates was that the fixed-adjustable exchange rate system was failing to maintain 'balance of payments stability' because rates were difficult to adjust in practice before it was too late.[13] Where individual states — such as the UK in the post-war decades — were forced into currency devaluation, this magnified the cost of international debt obligations (to the IMF) and — accompanied by recession (and falls in investment and spending) — may have restored the 'trade balance' temporarily, but it did not prevent the return of current account deficits. Crucially, the act of official currency devaluation was an admission of a *lack* of balance of payments stability and this led to further international financial pressure. Thus, few governments were prepared to devalue before it was too late. A key argument in favour of floating exchange rates was that fixed, not easily adjustable, exchange rate regimes were at the core of persistent balance of payments instability — because they prevented the price adjustment mechanism from operating.

In contrast, the case for floating exchange rates, made by Freidman (1953) and Johnson (1958), was that external balance and balance of payments stability would be automatic, if 'speculators' could buy and sell foreign currency to restore equilibrium in the exchanges, this would allow governments to focus on other policy targets. According to Johnson (1969, 12):

> The fundamental argument for flexible exchange rates is that they would allow countries autonomy with respect to their use of monetary, fiscal and other policy instruments, consistent with the maintenance of whatever degree of freedom in international transactions they chose to allow their citizens, by automatically ensuring the preservation of external equilibrium.

[13] This theoretical and policy debate preceded the US president Nixon's decision to unilaterally abandon the post-war gold-dollar standard and effectively floated the US dollar in 1971.

But of course the presumption was that speculators would be rational (more specifically only rational speculators would survive in the market) and that exchange rates have a fundamental or true value, based in the 'real' economy. Speculation, then, is simply about taking positions on there the current exchange rate is relative to the true value, and the effect of rational speculators is simply to return the exchange quickly to that true value. According to Friedman (1953, 162), if central banks stopped intervening in exchange rate markets, 'speculators' (financial agents) would bid up or down exchange rates to their 'equilibrium' price and bring 'equilibrium' to national 'trade balance', which he defined as effectively equality i.e., neither deficit nor surplus.

However, floating exchange rates, in terms of achieving that stated goal, proved disappointing. They did not bring about automatic equilibrium (stability) to foreign exchange markets, which became more volatile, nor did they prevent persistent international current account 'imbalances' (Obstfeld 1998, 902). Indeed, twenty years after the introduction of floating exchange rates, economists had not found any consistent empirical relationship between exchange rate prices changes and any particular balance of payments outcome (Krugman 1993). This failure rests on two key theoretical problems — over how exchange rate prices are determined under floating rates, and over the relationship between exchange rate prices and any balance of payments outcome. The problematic concept of exchange rate equilibrium is discussed in the next section (3.2), and the assumption about trade balances and exchange rates is discussed below.

As with the earlier Keynesian and elasticities models, the exchange rate adjustment mechanism is expected to maintain external balance through changes in relative price structures of domestic and foreign traded goods (Friedman 1953, 62). Thus, for national payments deficits, devaluing the domestic currency is expected to make the relative price of domestically produced, but internationally traded goods cheaper, and the price of imported goods more expensive, and thus is expected to restore the national current

account to a sustainable ‘equilibrium’. However, this price relationship assumes a world economy constituted by finished goods trade between discrete nations (McKinnon 1996, 299; Qiao 2007, 766). To the extent this assumption ever held, it has been undermined by the rapid international growth of intermediate goods trade, which has outstripped the growth of final goods trade. The growth in trade in intermediated goods, primarily parts and components, is rooted in the development of much more highly integrated production processes, rather than discrete national production from start to finish. Thus, the prescription of currency appreciation, to reduce, for instance, the global manufacturing trade surplus in China, could just as well lead to a rise in the trade surplus — precisely the opposite effect of what is sought by currency appreciation — because of the high import value of intermediated goods in the final value of processing exports. Thus the theoretical relationship between exchange rate price changes and trade balances is ambiguous at best, and the exchange rate adjustment mechanism is marked by empirical and policy failure in practice.

National current account balances and other balance of payments outcomes do not respond to exchange rates price changes in any predictable fashion. A key reason for the intellectual and policy failure of the exchange rate price adjustment mechanism, under both Keynesian and monetarist approaches, rests on the assumption of a world economy made up of discrete national economies that trade in discretely produced finished goods. However, as with the problem of methodological nationalism inherent in the concept of national ‘external balance’, there is also a fundamental conceptual problem with the orthodoxy’s view of foreign exchange price determination. This is the view, critiqued in section 3.2 below, that currency prices should conform to a nationally-determined measure of economic ‘fundamentals’, and therefore currency prices should gravitate to some ‘true’ national value.

3.2 **The fallacies of equilibrium exchange rate theories**

The claim that China's recent payments surpluses are explained by currency undervaluation has been central to the global imbalances discourse. Supposedly, if China's currency were allowed to adjust to its real value then this would reduce China's recent payments surpluses. There is however, no agreed methodology for calculating equilibrium exchange rates (Dunaway and Li 2005; Cheng, Chinn and Fujii 2007; Green 2006). There is also a major conceptual problem with the assumption that exchange rate prices *should* accord to some nationally-determined 'equilibrium' measure of fundamental value. This section develops a critique of the concept of equilibrium exchange rate value through a critique of the market-determined, the macro-balance, and the purchaser power parity 'equilibrium' approaches, and hence recent attempts to apply those approaches to determine China's 'real' currency value. Rather than there being any given level of 'external balance', the current value of currencies in foreign exchange markets is driven by investors' expectations of the future price and returns on foreign currency assets.

3.2.1 **A critique of market-determined equilibrium approaches**

It is often claimed that if China's exchange rate was allowed to float and the market was allowed to work unhindered by the 'manipulation' of China's monetary authorities, then China's currency would move towards its 'real' value, clearing payments imbalances on the way (e.g., Schumer and Graham 2006). A key problem with this assumption, however, is that it is circular by definition — any market-determined currency price stability is an 'equilibrium' value. There is no logical reason why any external account should conform to any given level of market-determined equilibrium value. Rather than any particular level of 'external balance', the current value of currencies in foreign

exchange markets is driven by investors' expectations of the future price and overall returns on foreign currency assets.

The belief that market-determined exchange rate prices should automatically correct trade imbalances is central to popular economic thinking, and yet economists' definition of market-determined exchange rate equilibrium points elsewhere. According to the US senators Schumer and Graham (2006), who have threatened multiple US Congressional bills calling for tougher US government action over China's alleged currency undervaluation, if allowed to work, market forces should correct trade imbalances:

One of the fundamental tenets of free trade is that currencies should float — or at the very least move along with market forces. The reason for this is that a free-floating currency allows large trade imbalances to self-correct, as the country with a large trade deficit sees its imports become more expensive and its exports become less expensive. Unfortunately, the Chinese government intervenes in the market to artificially inflate its exports and reduce its imports. Their continued manipulation is a form of protectionism, and it throws the whole global trading system out of balance.

Although the belief that exchange rate adjustment could effectively target external balances was central to earlier monetarist and Keynesian macro-policy models, there is actually no logical reason why market-determined exchange rate 'equilibrium' prices should 'correct' trade imbalances. Indeed, Krugman and Obstfeld (2006, 323) define an equilibrium exchange rate as 'the exchange rate at which the market settles' i.e., when 'market participants willingly hold the existing supplies of all deposits of all currencies, we say that the foreign exchange market is in equilibrium'. There is nothing in this definition of an equilibrium exchange rate that suggests any level of current account, trade balance or official reserve level. Indeed, there is no mention of nations: it is a microeconomic notion based on supply and demand by market participants.

Despite their often stated beliefs, it is commonly accepted by economists in practice, that it is investors' expectations of future exchange rate prices — in turn a product of expected future returns on currency assets — which drives the actual price behaviour, and therefore the future value of market-determined currencies. Again, for Krugman and Obstfeld (2006, 32), exchange rate prices are based on 'how participants in the foreign exchange market form their expectations about exchange rates they expect to prevail in the future'. In this respect, under floating exchange rates, real interest rate differentials on specific currency assets are the key variables in forming expectations of future current returns and therefore currency prices (ibid). Indeed, foreign exchange markets are dominated by financial asset trades, which have driven the expansion of foreign exchange turnover, and therefore the demand and supply of foreign exchange instruments since the 1970s (Frankel 2008).[14]

Despite this empirical conclusion about the actual behaviour of market-determined exchange rate prices, and its empirical basis in financial asset trading, for Krugman (1993) this meant that currency prices failed to reflect 'any reasonable valuation', as should be given by 'traditional' macroeconomic 'fundamentals' — such as 'payments imbalances'. Accordingly, for Krugman (ibid), the explanation for currency price departures from their 'long-run equilibrium' as determined by macroeconomic fundamentals, lay not with the underlying theoretical and normative assumptions of his economic framework, but with the irrational behaviour of market-participants, and the manipulation of states through foreign exchange market intervention. Thus Krugman held that the US dollar's price was overvalued during the 1980s (and presumably the 2000s) because of persistent US current account deficits and this was explained through the irrational expectations of market participants on the one hand, and foreign central bank intervention on the other. But perhaps the problem is that the analysis of currency

[14] Between the early 1970s and 1995, the average daily value of foreign exchange trades exceeded the average daily global value of merchandise trade by seventy times to one (Eatwell and Taylor 2001, 4).

overvaluation has been driven by theoretical assumption that currency prices should accord to underlying national macroeconomic balances.

3.2.2 **The problem with macro-balance equilibrium approaches**

Although there is no clear empirical relationship between the actual behaviour of floating exchange rates and any particular macroeconomic balance outcome, the belief that exchange rates prices should conform to their equilibrium as defined by some measure of macroeconomic balance, has remained central to standard international economic models and policy frameworks (e.g., IMF 2007b) as well as recent claims that China's exchange rate has been significantly undervalued. However, there is no agreed definition of what the appropriate macro-balance equilibrium exchange rate benchmark is, because different methodologies for calculation make different normative assumptions about what macro-balance variable to target and by how much. More fundamentally, if the national accounting balance of payments definitions of macroeconomic balance are flawed, then the attempt to derive an equilibrium exchange rate from those accounts is also suspect. The critique here examines the IMF's macroeconomic balance equilibrium exchange rate methodology, as well as recent attempts to calculate China's equilibrium exchange rate, and these are found to rest on normative international economic assumptions which do not, logically or empirically, hold.

The definition of an equilibrium exchange rate used by the IMF, and which is widely used as a basis for the claim that China's recent exchange rate has been undervalued, is driven by the assumption that exchange rates should accord to a value that maintains national macroeconomic balance. According to the IMF's recently updated exchange rate surveillance framework (2007b, para.4), '(w)hen the underlying current account differs from the equilibrium [current] account, the exchange rate is "fundamentally misaligned".' Moreover, the equilibrium current account is defined as a national current account that is

basically stable, considered to be an overall balance of payments level with little or no change in net foreign assets (which includes official reserves). Alternatively, the internal national accounting identity can be used as the benchmark, with equilibrium similarly defined as the internal 'savings-investment norm' that stabilises the 'overall balance of payments' (ibid). Thus, a country with surplus on the financial account, should run a deficit on the current account to stabilise its 'overall balance of payments' and prevent any sustained net foreign asset accumulation, and the equilibrium exchange rate is determined as the exchange rate that would bring about that equilibrium current account deficit. Indeed, this equilibrium exchange rate methodology has been central to the claims that China's exchange rate has been significantly undervalued (e.g. Goldstein and Lardy 2008, 3).

However, estimates of whether, and by how much, China's exchange rate is undervalued vary widely depending on the normative, and arbitrary, assumptions of the analyst. Table 3-1 below shows estimates of China's RMB 'undervaluation' based on the macroeconomic balance approach.

	Underlying Current Account	Balance of Payments Norm	Estimated Undervaluation
Goldstein (2004)	2.5 percent of GDP	-1.5 percent of GDP (based on "normal" capital inflows)	15-30 percent
Wang (2004)	2.1 percent of GDP (average 2000-02)	3.1 percent of GDP (savings-investment balance from panel data estimates)	Small overvaluation
Wang (2004)	2.1 percent of GDP (average 2000-02)	0.98 percent of GDP (stabilizes NFA/GDP at 2001 level)	Small undervaluation
Coudert and Couharde (2005)	2.5 percent of GDP (model based)	-1.5 percent of GDP (savings-investment balance from panel data estimates)	23 percent

Table 3-1. Macro-balance estimates of Reminbi 'undervaluation'.
Source: Dunaway and Li (2005, 6).

According to the studies shown here, the estimated ‘undervaluation’ for the years 2000-2002, when China’s current accounting surplus and official reserve accumulation would be considered modest, range from thirty percent undervalued (Goldstein 2004), to a small overvaluation (Wang 2004). What is revealing about these studies is that the different ‘methodologies’ used to derive the departure of the Chinese renminbi from its equilibrium exchange rate rest on a relatively arbitrary choice of balance of payments norms, which yield substantially different conclusions about whether and how much the renminbi is undervalued. The estimates of renminbi undervaluation are based on a balance of payments norm in which net capital flows are benchmarked to negative to equilibriate the current account balance. Thus the equilibrium exchange rate is given by the normative macroeconomic balance assumption that China must remain a net importer of capital, and there is no net change in official reserves. By contrast, studies which assume balance is compatible with a limited accumulation of official reserves (and a small net capital outflow), find the renminbi is not undervalued.

However, the deeper problem is why we should accept any of these national accounting definitions of ‘overall balance of payments equilibrium’ at all. The notion that a net capital outflow, that is, a cross-border capital flow, of zero to two percent of GDP (or higher), is a sign of balance of payments disequilibrium, and therefore a problem of currency undervaluation as well, involves two major normative assumptions that are dubious. Given the existence of globally integrated processes of capital accumulation, there is no reason to accept that net cross-border financial flows must be benchmarked to equilibriate any current account balance near zero for any individual nation. In addition, there is no reason to accept that an equilibrium currency price can be derived from any particular balance of payments outcome.

3.2.3 **A critique of Purchasing Power Parity equilibrium exchange rate approaches**

The final approach to calculating equilibrium exchange rate values, which also underpins the IMF's surveillance methodology (2007a, 2006) as well as recent claims that China's currency has been undervalued (see the survey in Dunaway and Li 2006), is based on the assumption that purchaser power parity (PPP) holds for traded goods between individual nations. The assumption that PPP should hold for traded goods says that goods prices across countries should be equal after adjusting for the rate of exchange, and thus, the equilibrium exchange rate is the estimated exchange rate that should bring about price equality for trade goods across countries (Eatwell and Taylor 2000, 67; Pakko and Pollard 1996, 1; Rogoff 1996, 647). Empirically however, there are good reasons to expect that prices across countries for equivalent traded goods will depart from a common price level, even after adjusting for estimated equilibrium exchange rates. A deeper problem is that PPP assumes that wages costs, especially between less developed and developed countries, should be equal between countries after adjusting for exchange rates. But this 'assumption' further assumes that full employment is a general condition. As such, the PPP derived equilibrium exchange rate approach is, like other approaches, a functional approach that says exchange rate values *should* be determined by the function which is assigned to them by normative international economic theory — as an adjustment mechanism which ensures price equivalence between individual countries.

The PPP equilibrium exchange rate approach is a 'reduced form of the macroeconomic balance approach' (Dunaway and Li 2006, 4) based on the role of goods trade arbitrage, rather than net foreign asset changes. PPP assumes that international goods arbitrage works to maintain common international price levels. Thus if prices in country A were higher than prices in country B after adjusting for the exchange rate, than goods arbitrage would ensure that the country A is flooded with traded goods from country B until the price level in country A fell or its exchange rate rose to 'restore market balance' (Eatwell

and Taylor 2000, 67). Thus the equilibrium exchange rate is the estimated exchange rate that would restore a common price level (Pakko and Pollard 1996, 1; Rogoff 1996, 647), and the actual exchange rate value's departure from its imputed real equilibrium value determines the degree of overvaluation or undervaluation.

However, PPP generally does not hold in practice, in either the short- or long-run. Apart from a small number of highly traded international goods, such as gold, the exchange rate adjusted prices of the majority of internationally traded goods (or their equivalents) do not equilibriate — even across closely located and highly integrated economies such as the US and Canada. Further, exchange rate changes do not automatically lead to an 'immediate proportional response in relative domestic prices' (Rogoff 1996, 665) — prices (and wages) tend to be 'sticky'. In addition to sticky prices, 'pricing to market' by firms, the difficulty of separating out 'traded goods' prices from 'non-traded goods' (and services), and trade and non-trade barriers also undermine PPP (Pakko and Pollard 1996, 10-6, Rogoff 1996, 647-55).

Finally, a key variable that undermines PPP is wage differences, especially the lower wage costs for equivalent labour in less developed countries relative to wage costs in developed countries. The critical issue is not wage costs per se, but wage costs relative to productivity. But it would be a mistake to conclude that relative wage cost differences, and therefore relative price differences, are a sign of currency undervaluation or overvaluation which the PPP approach does. According to *The Economists'* Big Mac PPP index, the price of a Big Mac (an equivalent traded good) is much lower in China than in the US. The key difference is wages. When McDonald's opened in Beijing in 1992 the average full time starting worker earned an equivalent of US$90 a month, whereas the equivalent worker in the US earned $737 a month. According to Pakko and Pollard (1996, 12) differences in 'wage costs may partly explain why the yuan is consistently undervalued against the dollar as measured by Big Mac prices'.

However it is hard to sustain a case that these differential wage costs (and therefore price differences) are sign of real currency undervaluation — but that is precisely what the PPP approach does. It would suggest that the equilibrium exchange rate is one in which China's currency value is appreciated until price costs for equivalent goods are at parity. Thus appreciation would entail, for instance, driving up real international manufacturing wage costs of workers in China — by raising the international purchasing power of the average manufacturing wage in China — until they reached the level of equivalent wage costs in the United States. But there is a major problem with this approach. It assumes that differences in prices and wages are explained by the exchange rate, which could only hold if there is 'full employment' in China (and other less developed countries). By contrast, as is discussed in detail in chapter seven of this thesis, the high level of unemployment and underemployment in less developed countries, particularly those with large rural or agricultural labour forces, represses 'subsistence wage costs' and thus the wages of new entrants into the manufacturing workforce. As such, the prescription of exchange rate appreciation would not have the desired effect of raising real international wages, but is likely to have adverse macroeconomic and developmental consequences.

Conclusion

The various 'equilibrium' exchange rate theories, upon which claims of currency undervaluation or overvaluation in international finance are based, assign a normative and functional role to exchange rate values as adjustment mechanisms that should equilibriate individual national economies. However, different equilibrium exchange rate theories result in wide differences in the estimations of currency undervaluation or overvaluation depending on their normative assumptions. The actual behaviour of real exchange rates values, whether floating or fixed, do not function to clear international macro-imbalances. Rather real exchange rates depart considerably from their imputed

normative values, and the strategic policy roles assigned to them. The values of market-determined exchange rates, for instance, track expectations of their future value, rather than any particular level of external balance. What this suggests is that an international asset-based approach is a better guide for understanding the development of foreign exchange markets in international finance, and therefore is a better guide for understanding the recent exchange rate policy rationales — including exchange rate policies that have been recently pursued by China's monetary authorities. Section 3.3 below turns to these questions.

3.3 **An alternative approach to international money and finance**

The conventional understanding of foreign exchange within international finance rests on the national equilibrating role assigned to exchange rates by the post-war economic orthodoxies. However, an explanatory critique requires a theoretical redefinition of the objects under study. This section further develops the alternative conceptual approach, begun in chapter two, to China's recent official foreign exchange accumulation as a problem in understanding international finance. This is done by extending the initial propositions regarding the production and circulation of value in the processes of capital accumulation to questions of understanding international money and finance. This general approach is necessarily augmented with recent understandings of international money, especially the understanding of the vehicle role of key international currencies in 'private' use (Hartmann 1998). In contrast to the conventional focus on equilibrium exchange rates, this alternative conceptual approach is broadly compatible with recent novel monetary explanations for China's authorities' recent exchange rate policies.

3.3.1 **A value-form approach to international money and finance**

This sub-section develops an alternative starting point for understanding contemporary international monetary and financial relations by locating the development of international money (and finance) as distinctive forms and circuits of value within wider processes of capital accumulation. Although it may be accepted that money emerged as a distinctive universal form of social value in the process of commodity exchange, with the development of capitalist money, money also set itself off from the processes of circulation of commodities, and thus enabled the development of new money-forms and processes beyond immediate exchange (Murray 1988, 163-68), such as credit and finance — various forms of inter-temporal funding. However, while the historical development of international money and finance has been internally related to the historical emergence of key political-economic state powers, such as the British Empire or the US 'empire' , international money and financial forms also entail distinctive properties and processes which are not reducible to their particular national (or state) ties. An understanding of the breadth and depth of international money-form properties and processes is therefore crucial for understanding contemporary problems in international finance.

The analysis of money and finance, here, flows from an understanding of the historical specificity of the capitalist form of social value, which entails a process of movement and 'self-expansion' of value through analytically distinct, commodity, capital and money-forms. The money-form emerged historically as a general unit of equivalence in commodity circulation, and acts to commensurate different exchange values. As such, the money form of social value predates capitalism, and its origins are independent of the modern nation-state (De Brunhoff 1978, 38). However, the development of the capitalist money form and its generalised use as the most universal form of value, presupposed the historical development of a system of social organisation increasingly geared towards generalised commodity production for exchange and realisation in the market. The

development of the capitalist money form emerged, including the development of credit and finance.

As money could be set off from the direct circulation of commodities, the money-form developed distinctive circuits — initially through the emergence of forms of private credit. With the accumulation of money through the expansion of commodity circulation, money could either be kept as an individual horde, or could be aggregated in private stores (nascent private banks), and this later means of storing value enabled the issue of credit money. The aggregation of money in private stores, and the issue of receipts for deposits of money, enabled private stores to keep a portion of total deposits in reserve to meet possible claims by depositors while lending out a portion of the deposits as credit for a period of time at some rate of interest, hence the concept of fractional banking. The emergence of forms of credit (as with money) can be traced to early pre-capitalist social formations, and developments in the practices and thinking, including mathematical thinking, about credit systems as early as the 13th century (Goetzmann 2004). The point here, however, is that the *generalised* emergence of private credit was integral to the historical development of capitalism in the European city-states of Florence, Amsterdam (and later in London) from about the 15th century (see for instance, Goldwaithe 1987, 3-31).

The proposition that the social relation of 'capital is self-expanding value' (Marx [1867] 2006, 108) is not just an empirical observation, but is also a conceptual proposition that the social relations of capital, especially its money-form, are internally geared towards the ceaseless quest to augment, and realise present value into an uncertain future. The configuration of capital relations and therefore the configuration of competitive relations between capitals has been institutionalised in a wide variety of historically specific forms. Historically these institutional forms have encompassed differing configuration of units of capital, from corporations, to greater or lesser institutional integration with political

forces of inter-state competition. However, while different institutional forms, including the historically specific credit systems, may condition the nature of competitive processes to some extent, the money-form of capital-value, nevertheless entails distinctive properties and common generative pressures. Key here is the concept of the time value of money (Fabozzi 2010, 15-20) — defined as the opportunity to realise and augment present social value into an uncertain future, and implying its opposite — the opportunity cost to present value of not investing at some rate of interest. The concept and the mathematical calculation of the time value of money, including the concept of present value, were developed as early as the 13th century in relation to emerging private credit practices (Goetzmann 2004). However as private credit systems were generalised, so too was the concept of the time value of money and its use in calculations of money-value and credit, and this supports the empirical and conceptual proposition that 'capital is self-expanding value'.

Although private credit money emerged historically out of the relationships between private merchants, business and banks, and thus emerged independently of states, state institutions became directly and strategically engaged in the reproduction of circuits of money and finance, principally through central banking, but also through taxation and other policies. The development of central banking institutions, as institutions which also attempt to ensure the quality and convertibility of private money (including credit money) in circulation (De Brunhoff 1978, 38-40) is historically specific. The Bank of England in Britain and the early Federal Reserve System in the US for instance, were originally privately constituted, and the development of state control of these institutions, particularly in the US, was not automatic, but came after a drawn out political struggle. Nevertheless, the way in which contemporary state-based central banking institutions (and other state-based financial institutions) intervene within particular money and credit systems, is similarly aimed at ensuring the quality of money and the convertibility of its different forms. Thus, state monetary institutions intervene strategically within circuits of

money and finance by attempting to influence the price of money (forms of credit money as well as cash) — the principal object of monetary policy, but also a potential object of exchange rate policy — while financial policies are geared to a range of financial objectives, from forms of credit and other financial regulation, to taxation and public expenditures.

However, a key problem arises of how to understand the emergence of international money and finance. It is commonly accepted that the historical emergence of key international monies has been closely tied to the rise of the international credit systems of the key political-economic powers, such as the British Empire or the US in the post-war period (see, for instance, Itoh and Lapavitsas 2005, 51). But while the analytical emphasis is often on the link between the dominance of key currencies and the dominance of key political-economic powers, what is less often appreciated are the specific properties of international money — an understanding which is crucial to understanding contemporary international finance. In this respect, it is worth recalling that gold emerged as the key form of international money under the classical gold standard by serving as a common unit of account for the convertibility of different national currencies as well as a store of value. Thus, as international money, gold was used as the general unit of equivalence to verify and measure the quality of the various national currencies in circulation (De Brunhoff 1978, 41) between different territorial areas. Because gold was used in common as international money, it also mediated international prices. Gold was also used as the means of payment for international credit and debt transactions, and therefore, states sought the backing of reserves of gold for their international borrowing as the primary store of international monetary value. This conception, as we will see shortly, has significance for the way we understand current issues of the US deficit and Chinese foreign exchange reserves. Specifically, the attachment of money to the state and the state's supervision of money is, in fact a historically specific development. It is not innate in the definition of money itself.

Accordingly, forms of international finance may be dissociated from the designated nation of particular currencies. Thus international money roles have been performed by key international currencies, and their importance for understanding contemporary international money and finance is discussed below.

3.3.2 **An international monetary approach to exchange rate policies**

In the early period of the international monetary system, gold was the key form of international money which was used to mediate prices and provide a store value for credit transactions. However the displacement of gold by key international currencies has posed a problem for understanding contemporary international money and finance — namely that key international currencies have distinctive properties as forms of *international money*. Understanding these international money properties, such as the vehicle role of key international currencies (Hartmann 1998), is crucial to understanding how the patterns of international currency use constitute monetary and currency zones, which condition the exchange rate and monetary choices of particular monetary authorities. This international monetary approach provides an alternative basis for interpreting China's authorities' recent foreign exchange policies. In this respect, it is the dominant international money role of the US currency within regional trade and financial circuits in East Asia, and not the direction of exports from China (McKinnon 2005), that is key to understanding China's authorities' recent US dollar ties.

A key conceptual problem in understanding international finance is the dimensions of *international currency* usage. In order to commensurate the exchange of different values, such as commodity forms of value, between different territorial areas, localised, national or regional currencies must be convertible — and thus forms of international money, such as gold, have emerged historically (De Brunhoff 1978, 41). As with the properties of the

money form of value in general, forms of international money have provided a centralising mechanism for mediating prices and mediating exchange internationally i.e., between and within different currency defined areas. International money-forms that have served as a medium of international exchange have also tended to be the dominant means of international payments and thus the major store of international value. Although gold served as the major form of international money in the early capitalist period, the internationalised currencies of the dominant capitalist powers, such as Britain and the US, came to assume many of these international money roles (Itoh and Lapivitsas 2005, 51). As with gold, these currencies served as international money by providing the unit of account and medium of international exchange. However, international government bonds denominated in currencies, such as US dollar government bonds, became used as the key means of international payment and thus the key store of international value.

Although this broad typology of international money roles is more or less formally accepted, there is less of an understanding of how the international monetary dimensions of key international currencies actually structure the patterns of contemporary international currency usage. Foreign currencies dominate global private and official trade and financial transactions to a much larger extent than their shares of country-of-origin trade or GDP would indicate. For instance, US dollar foreign exchange instruments account for one side of 86.3 percent of global daily foreign exchange turnover in 2007 (BIS 2007, 11), yet the US share of world trade is closer to 10 percent. A major reason for private transactions being predominantly internationally denominated is because particular international forms of money serve as an effective centralising mechanism for prices and therefore as a medium of exchange in a multi-currency world. Thus key international currencies, such as the US dollar, serve as vehicle currencies in international private financial and trade transactions (Hartmann 1998, 4). The reasons for the dominance of key international currencies is not the focus of analysis at this stage, however there are clearly mutually conditioning patterns of international money usage

which are necessary to understand in order to adequately explain international financial relations.

The patterns of international currency use by private and official financial institutions can be usefully understood through the conventional typology of money 'functions' presented in table 3-2 below — but his does mean that patterns of international money use need accord to any particular 'function'.

Money role	Private use	Official Use
Medium of exchange	Vehicle currency (i) In goods exchange: - foreign trade vehicle - domestic trade vehicle (direct currency substitution) (ii) In currency exchange: - forex vehicle	Intervention currency
Unit of account	Quotation currency	Pegging currency
Store of value	Investment currency (including indirect currency substitution)	Reserve currency

Table 3-2. International money in private and official use.
Source: Hartman (1998, 14).

The overwhelming bulk of international currency transactions are vehicle currency transactions conducted by private financial institutions. Thus key international currencies

serve as the primary medium of exchange in international goods and currency exchange. In private use, key international currencies are also used as quotation currencies, or units of account, for measuring the relative value of other currencies. Key international currencies are also the key investment currencies through providing international currency instruments, such as Euro or US dollar government-issued bonds.

The actual patterns of international money use, measured by daily global foreign exchange turnover, are dominated by the vehicle currency trades of private financial institutions. Thus contemporary patterns of international currency use are substantially different from the post-war period in which international financial transactions were mainly officially mediated. With the growth of private international money markets, such as foreign exchange futures contracts, since 1971 (Melamed 1988), and more recently, other forms of derivative contracts, the vast bulk of foreign exchange turnover — and the demand and supply of foreign exchange — has taken the form of financial trades based on the future value of currency assets (Frankel 2008). Until the early 1970s, daily foreign exchange turnover was comparable with world trade, but by 1995 average daily foreign exchange turnover outstripped world trade by seventy times to one (Eatwell and Taylor 2001, 4). Average daily foreign exchange turnover in traditional foreign exchange instruments was valued at US $716 billion in April 1989, $1.6 trillion by April 2004, and grew another 69 percent to $3.2 trillion by April 2007 (BIS 2007, 4). According to the Bank for International Settlements (ibid, 5), between April 2004 and April 2007 more than half of the aggregate turnover can be ‘attributed to an increase in transactions between reporting dealers and other non-reporting financial institutions such as non-reporting banks, hedge funds, pension funds and insurance companies’. Thus, the financial trading activities, conducted through decentralised ‘over-the-counter’ transactions between private financial institutions (Fabozzi 2010, 8-9), has been central to the recent growth in international finance.

The dominance of key international currencies in private vehicle trades is also reflected in the use of these currencies by the official sector — as an intervention currency, pegging currency and reserve currency. Thus as a medium of exchange, key currencies are used by monetary authorities as the primary intervention currencies in foreign exchange markets. Thus the Japanese central bank seeks to influence the exchange rate (price) of the Japanese yen in privately dominated international foreign exchange markets, by buying or selling US dollars in exchange for yen. Monetary authorities also peg their domestic currency prices to key international currencies, thus using the international currency as a unit of account, in order to provide an international currency anchor for local currency prices. Finally, there is a close link between the choice of intervention currency and pegging currency, and the reserve currency choices of monetary authorities (Hartmann 1998, ibid). Although there are a range of reasons why monetary authorities may accumulate stocks of particular foreign international currency instruments, one reason is that monetary authorities require stocks of liquid foreign currency assets, such as government issued bonds in the key international currencies, in order to intervene in foreign exchange markets.

What this analysis does suggest is that the ‘moneyness’ of international money i.e., its use as medium for prices and financial asset trades, provides a powerful impetus towards currency centralisation and the dominance of key currencies. Vehicle currencies are also key investment currencies and are therefore bound up with the issue of currency denominated financial instruments, such as bonds, by institutions within key international financial centres — a point developed more fully in chapters four and five of this thesis.

It is worth looking briefly here at the relative dominance of US dollar currency instruments against other key international currencies. Table 3-3 shows selected reported currency shares of foreign exchange turnover for April 2001, 2004, and 2007.

Currency distribution of reported foreign exchange market turnover [1] Percentage shares of average daily turnover in April 2007			
	2001	2004 [2]	2007
US dollar	90.3	88.7	86.3
Euro	37.6	36.9	37
Yen	22.7	20.2	16.5
Australian dollar	4.2	5.9	6.7
New Zealand dollar	0.6	1	1.9
Indian rupee	0.2	0.3	0.7
Renminbi	0	0.1	0.5
Emerging market currencies [3]	16.9	15.4	19.8
1 Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%. Adjusted for local and cross-border double-counting. 2 Data for 2004 have been revised. 3 Defined as the residual after accounting for the top eight currencies, the Norwegian krone, the New Zealand dollar and the Danish krone. Table B.6			

Table 3-3. Currency distribution of reported foreign exchange market turnover.
Percentage shares of average daily turnover in April 2007. Source: Selected data from BIS (2007a, 11).

The US dollar remains by far the dominant currency in international transactions. In 2007, 86 percent of daily average foreign exchange turnover was denominated in US dollars on one side of foreign exchange transactions. A slight fall in the US dollar share of global foreign exchange transactions between 2001 and 2007 was offset by a rise in Australian dollar and emerging market currencies. The euro is party to the next biggest share of international foreign exchange turnover at 37 percent of daily turnover, while the yen accounted for 16.5 percent of daily turnover in 2007. The vast bulk of international money transactions are dominated by these three key international currencies, the US dollar, the euro and the yen. The Chinese renminbi by contrast, is not traded outside of Chinese foreign exchange markets and accounted for only 0.5 percent of global daily foreign exchange transactions in 2007.

This exposition of how international money and financial markets are constituted matters because the structures of international currency use conform to broad regional monetary and currency zones or areas that condition (not determine) the foreign exchange and

monetary policies of state authorities. The international monetary and financial system is basically a dollar-euro system, with minor regionalisation of the yen. From 1973 until the euro was introduced in 1999, the pattern of international currency use was effectively tri-polar. The dollar was dominant, and there was some regionalisation of the German deutschmark but much less regionalisation of the yen. Since the introduction of the euro, the international system has become much more a dollar-euro based system — with the dollar still dominant overall and the main counterparty in the zones of US-Europe and US-Asia (Dooley, Folkerts-Garbau, Landau 2007, 7-11). Despite the de jure prevalence of floating exchange rate regimes and soft currency pegs to a 'basket of currencies', in practice, exchange rates and monetary policies in most of the world tend to track either the US dollar or the euro. According to a recent Deutsch Bank survey (2007, 3), some forty countries in Europe, Africa and the Mediterranean align their exchange rate policies to the euro and some sixty countries in the rest of the world, especially East Asia and Latin America, align their exchange rate to the US dollar. Further, central banks of countries that align their exchange rate to a key currency also hold most of their international reserves in that currency, as a by-product of attempts to influence their currency and the structure of cross-border foreign currency inflows through financial and trade circuits.

The way in which patterns of international currency use tend to conform to broad regional monetary areas provides an alternative basis for understanding China's authorities' recent exchange rate policy rationales. China's authorities have maintained a de facto peg to the US dollar since 1995 (Green 2006). Technically, between 2005 and 2007, and again from June 2010, China's currency has been effectively managed against a basket of currencies along a crawling band against the US dollar, that is, an effective currency peg with modest appreciation over time. There are three basic policy rationales that are used to explain this — currency mercantilism, a claimed export orientation to US markets and regional currency rationales. However, the analysis of international money

here, suggests it is not currency mercantilism, nor the direction of exports, but the dominance of US dollar currency invoicing within East Asia production networks that is the most convincing rationale for China's authorities effective exchange rate pegging to the US dollar.

The most popular explanation, especially in US policy circles, is simply that China's authorities decision to peg against the US dollar is a form of currency mercantilism aimed at securing an undervalued exchange rate with the objective of boosting export competitiveness. But currency pegging need not imply currency undervaluation, and indeed there is no theoretically sustainable basis to the claims of currency undervaluation. More cautiously, the prevalence of exchange rate pegging by authorities in East Asia and China is considered to be explained by a regional export orientation to US markets. Thus according to Cohen's (2008b, 34) recent survey of East Asian exchange rate arrangements, a key reason for regional dollar pegging: was the central importance of the United States as the biggest market for most exporters in the region. A stable link to the greenback not only facilitated sales to US consumers, in parallel, dollar pegs also served indirectly to harmonise nominal currency values, thus removing exchange rate variation within the region as a possible threat to relative competitive positions.

The claim that the US is the biggest market for most exporters in East Asia, including China, is an empirical question, but the relevant policy rationale is 'invoicing to market' — that is, the practice of denominating exports in the currency of the main export destination. Although there is evidence of invoicing to market, especially in Japan in the post-war decades, Cohen's second policy rationale here — harmonising nominal currency values in the region — is closer to the mark.

However it is not the direction of exports, but the dominance of the US dollar as the key vehicle currency for trade and financial flows within regional East Asia that is the most

convincing policy rationale for China's authorities' de-facto currency pegging to the US dollar. Although the latest data for East Asia and China's trade shares is not currently available,[15] the evidence up to 2005 suggests that the EU as a whole is comparable with the US as a trade partner with China (Lum and Nanto 2006, 6), while the largest single share of exports from countries within East Asia, and especially China, were actually intra-regional (Athukorala and Yamishita 2005, 38-40). According to Lum and Nanto (2006, 7), in 2005, the US dollar value of EU-China trade was $217 billion, while US dollar value of US-China trade was $216 billion, which suggests the bilateral trade between China and the EU and China and the US was comparable at this time — bearing in mind that the potential valuation effects of the US dollar-euro exchange rate qualify this evidence with changes in relative exchange rates. However, what is often missed in accounts of East Asian exchange rate policies is the development of a high level of intra-regional trade shares, which suggests, that the largest regional share of exports from East Asia were intra-regional and comparable to NAFTA and the EU as a whole, at least until 2003.

	Total Manufacturing exports (X)				Parts & components exports (M)		
Exports		EA	NAFTA	EU	EA	NAFTA	EU
East Asia	1992	36.6	30.3	19.6	44.4	34.1	15.7
	1996	43.8	27.6	16.6	52.3	29.1	14.3
	2003	45.6	25.8	15.7	64.9	17.0	12.1
Greater China	1992	56.4	19.1	14.7	80.5	14.6	14.8
	1996	46.2	25.9	18.8	83.0	14.7	13.7
	2003	39.1	27.7	20.9	95.6	8.6	11.0

Table 3-4. Direction of parts & components trade shares, East Asia1, Greater China2, 1992, 1996, 2003.
(1) East Asia comprises Japan, Rep. of. Korea, Rep. of, China, Hong Kong (China), Taiwan, Indonesia, Philippines, Malaysia, Singapore, Thailand, Vietnam. (2) Greater China includes Mainland China and Hong Kong (SAR). Source: selected figures table 4, Athukorala (2005, 38-40) compiled from UN Comtrade Database.

[15] Bilateral trade statistics for individual national accounts are available for recent years, but these do not necessarily show the country destination of exports and imports. Trade share data is available from the UN COMTRADE database—but with a time lag of a few years. The intra-regional trade share data here is based on the most recent COMTRADE data published in 2005, but reporting for the years 2003. The COMTRADE data presented here was compiled and originally presented by Athukorala and Yamishita (2005, 38-40).
http://comtrade.un.org/db/help/ServiceMessage.aspx?rowID=525

Table 3-4 shows the trade shares of total exports, and parts and components from East Asia and Greater China (including mainland China and Hong Kong SAR) in 1992, 1996, and 2003. The shares of total manufacturing exports from East Asia in 2003 were 45.6 percent to East Asia, 25.8 percent to NAFTA and 16.6 percent to the EU. For Greater China, the 2003 export shares were 39.1 percent to East Asia, 27.7 percent to NAFTA and 20.9 percent to the EU. The high intra-regional trade shares within East Asia reported here understate the extra-regional dynamic of final manufacturing exports from East Asia and China, because they count parts and components trade in total exports (Athukorala and Yamashita 2005, 15). However, the data for parts and components trade within East Asia reveals the extent of intra-regional integration of trade and production circuits, and the central role of greater China as the final manufacturing platform within East Asia. The destination of parts and components exports from East Asia countries in 2003 were 64.9 percent to East Asia, 17 percent to NAFTA, and 14.3 percent to the EU. Moreover, in 2003 greater China accounted for 95.6 percent of parts and components imports from other East Asian countries — confirming greater China, and especially mainland China's role as the key export-processing platform in intra-regional production. Thus while the US may be the single largest export market for Chinese goods, most exports from China have not been destined for the US, but have been roughly split between East Asia, the US and the EU. This undermines the export-destination, or 'pricing to market' rationale for China's recent de-facto peg to the US dollar. However, the pattern of intra-regional trade integration suggests an alternative rationale, based on the practice of intra-regional currency usage.

The practice of US dollar invoicing by firms in East Asia and China (McKinnon and Schnable 2005, 19) suggests an alternative international monetary rationale for China's de facto exchange rate pegging — based on the vehicle currency role of the US dollar as the dominant medium of exchange within East Asia. More recent surveys of currency

invoicing practices in East Asia are not available. However, what data is available suggests the practice of US dollar invoicing within East Asia has been entrenched. In 2003, 84 percent of South Korean exports were invoiced in US dollars, 5.3 percent in yen, 7.6 percent in euro's and 0.9 percent in other currencies (Yun 2005, 84-85). Export invoicing in US dollars has been found in over 90 percent of exports from Indonesia and over 80 percent from Thailand (Parsons and Sato 2006). Despite the weight of Japanese-originated capital, the use of the yen has been much lower than the US dollar. In 2002, 86.4 percent of exports from Japan to the US were invoiced in US dollars, while 44.7 percent of exports from Japan to the rest of East Asia were invoiced in US dollars and 53.5 percent in yen. For imports to Japan, 80 percent of imports from the US were invoiced in US dollars, as were 71 percent of imports from other East Asia, while only 27.8 percent of imports from East Asia were invoiced in yen (McKinnon and Schnable 2005, 19).

While firm trade level and capital flow currency data is not available for China, foreign exchange market data suggests US dollar invoicing has remained dominant there as well.[16] The most recent survey data, shows that 99 percent of Chinese renminbis traded in April 2007, were traded with the US dollar, while less than 1 per were trades with the euro, the yen, or the pound sterling — as shown in table 3-5 below.

	Total[1]	US dollar	Euro	Yen	Pound sterling	Swiss franc
China	9,288	9,153	68	62	103	12
Percent	100%	98.55%	0.73%	0.67%	1.11%	0.13%

Table 3-5 Renminbi turnover by currency in April 2007.

[16] Recent attempts by Chinese authorities to encourage diversification of currency invoicing by firms in mainland China to the Euro and regional currencies have been marginal, but are evaluated in chapter eight.

Notes: 1. Daily averages, in millions of US dollars. Original data was not adjusted for cross-border double counting or reporting gaps, therefore there is a discrepancy between currency amounts and total sum of 110. Source: BIS (2007a, Table E.4, 66). Percentages are author's calculations.

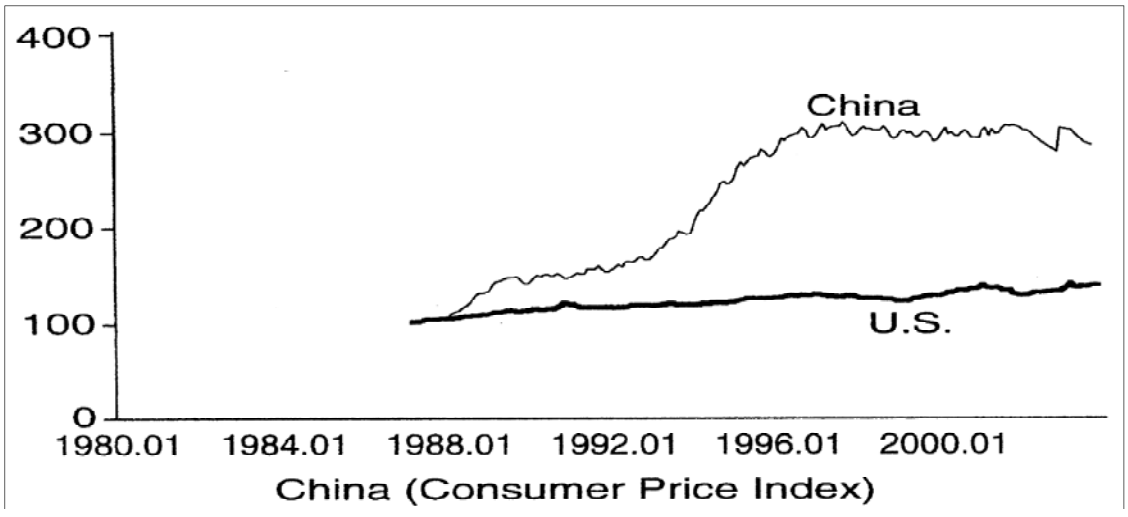
Because of China's official foreign exchange controls, as of mid-2010 the RMB has not been traded in offshore (international) foreign exchange markets[17], and the currency shares here are onshore trades with reporting local dealers in mainland China (BIS 2007, 76). These currency shares strongly suggest that the US dollar has been the dominant vehicle currency for transactions between firms located in mainland China and those in the rest of the world.

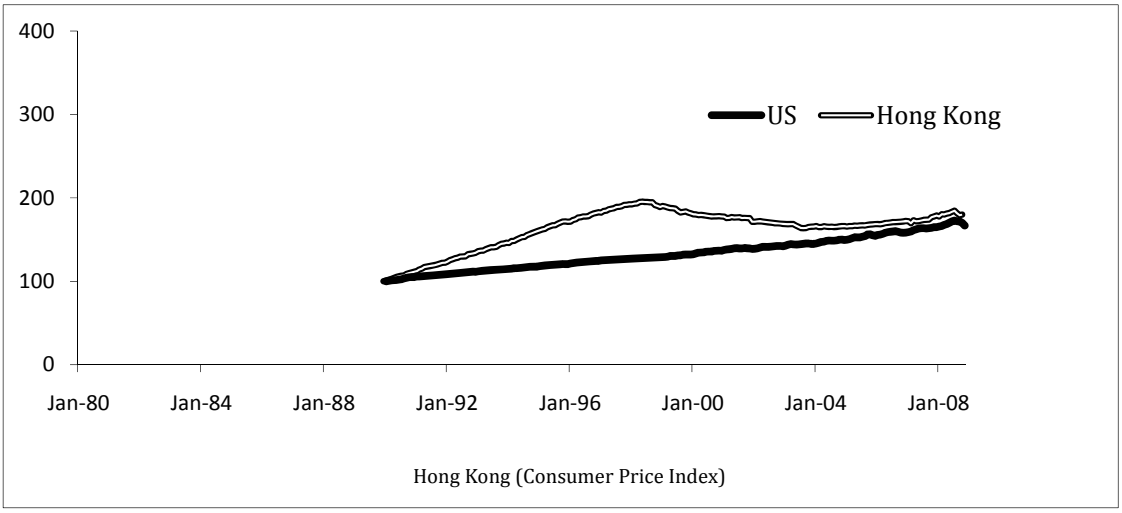
A fuller explanation of the recent historical development of China's authorities' exchange rate and monetary policy decisions is undertaken in chapter seven of this thesis. For now, the proposition here is that the dominant vehicle currency role of the US dollar within production networks located in East Asia and mainland China conditions, but does not determine, China's authorities' choice of exchange rate and monetary policies. In the context of the dominant vehicle role of the US dollar within East Asia, the policy of currency pegging or targeting the local exchange rate to an external international currency, has a number of reasons. These include providing relatively stable prices in the most widely used international currency for exports to international markets, as well as providing relatively stable prices and a common invoice currency with highly integrated regional markets. The dollar provides a medium of exchange, and the de facto peg provides relative trade price stability. Therefore a key rationale for the de facto dollar peg is that it facilitates highly integrated intra-regional and extra-regional production processes, including internal capital accumulation in mainland China.

Alongside common and stable trade invoicing, there are related monetary and asset based rationales for currency pegging. Currency pegging can provide a nominal anchor for

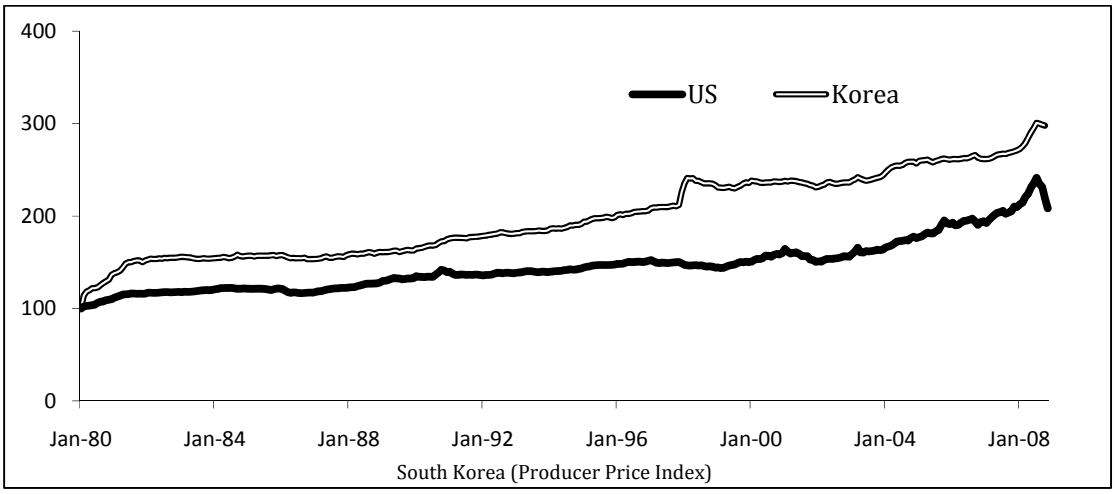
[17] Recent attempts by Chinese authorities to establish a pilot 'offshore' foreign exchange market for the renminbi in Hong Kong (SAR) are discussed in chapter eight.

domestic prices, and there is good reason to suggest this rationale has been also key to China's recent exchange rate policies (McKinnon and Schnable 2005, 15; Shi and Xu 2008, 2). The monetary rationale for pegging is that because nominal exchange rates can be volatile, especially for developing countries, which tend to experience relatively sharp changes in the direction of cross-border capital flows, inflation (and deflation) is easily passed through to domestic prices levels. Nominal currency pegging to a key international currency can help anchor the domestic price level (Shi and Xu 2008, 2), especially where the majority of cross-border trade and financial transactions are conducted with the target currency. Thus the policy objective of price stability has been put forward as a rationale for mainland China's authorities' exchange rate policy of maintaining a de facto anchor to the US dollar (McKinnon and Schnable 2005, 15; Genberg et.al 2005). There has been a clear link between the exchange rate, monetary policies and levels of price inflation within East Asia and mainland China, which supports this monetary rationale for pegging. Figure 3-1 shows some of the recent history of price levels in key East Asian countries, and it shows a clear stabilisation of prices with the return to dollar pegging and soft dollar targeting after the 1997-1998 financial crisis in East Asia.

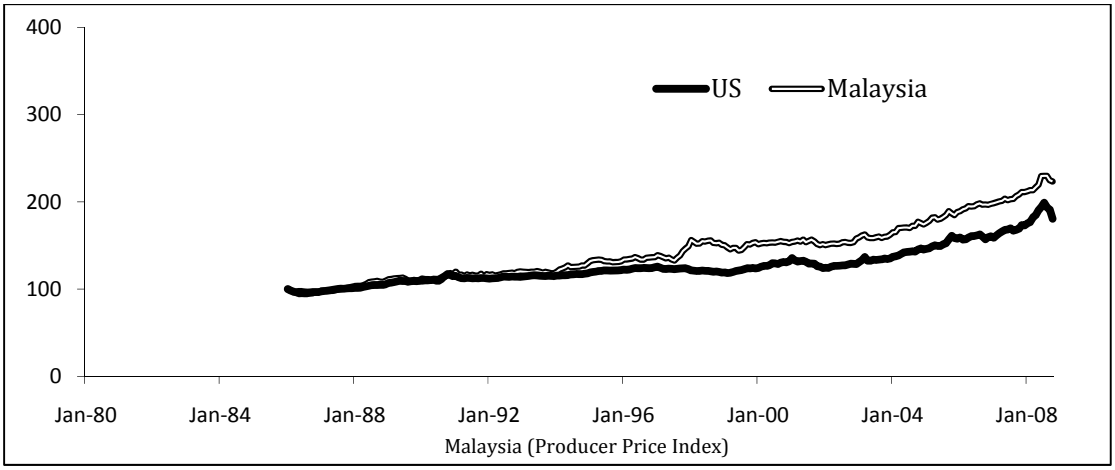




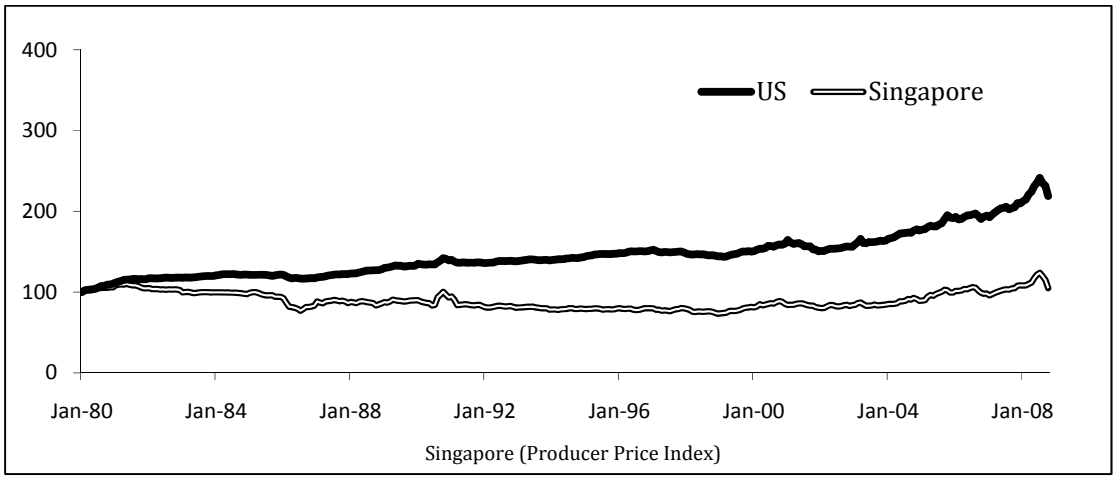
Hong Kong (Consumer Price Index)



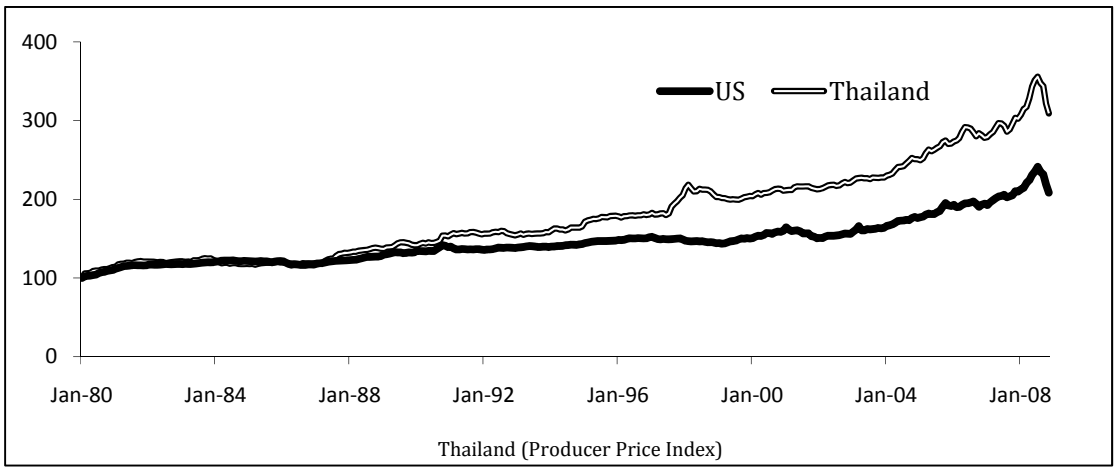
South Korea (Producer Price Index)



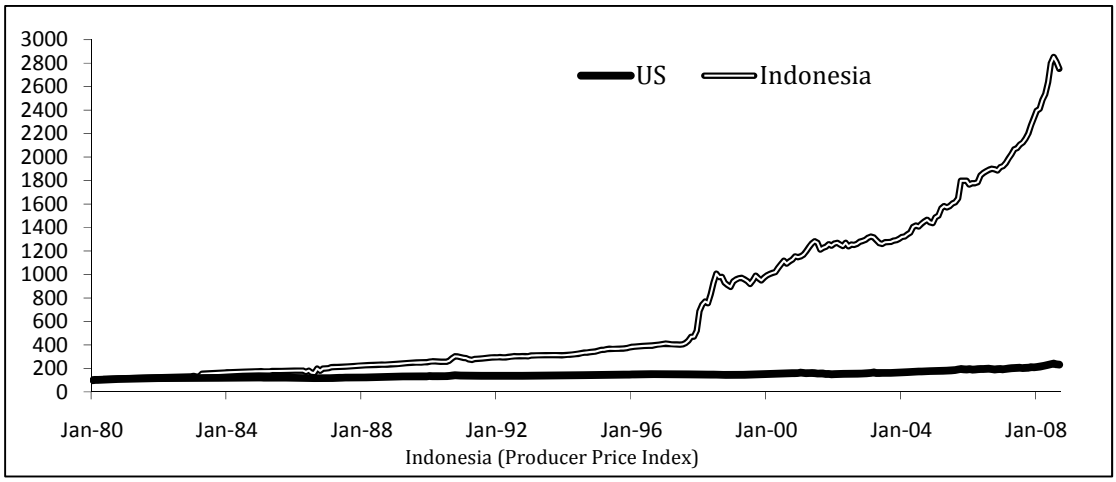
Malaysia (Producer Price Index)



Singapore (Producer Price Index)



Thailand (Producer Price Index)



Indonesia (Producer Price Index)

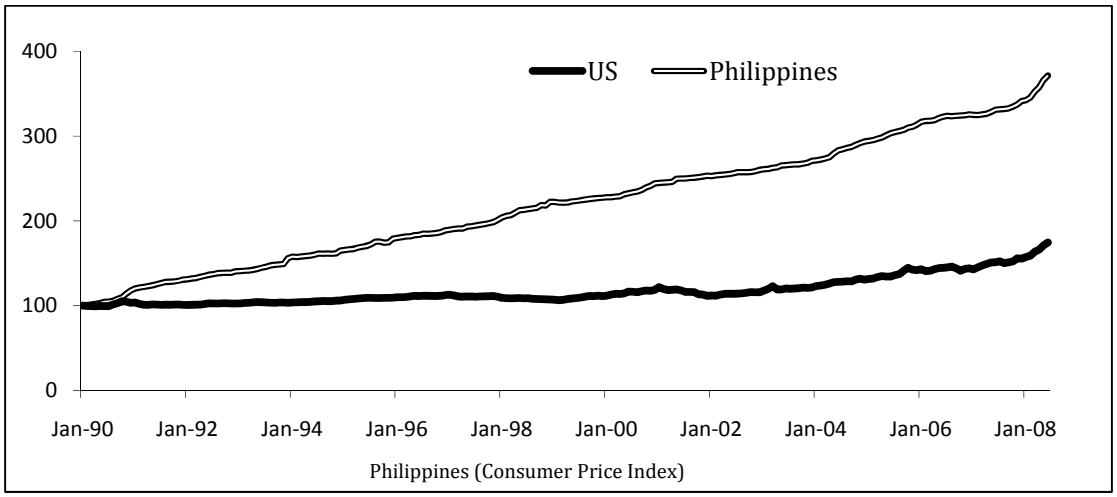


Figure 3-1 East Asian and US price indexes, 1980-2008
Notes: Wholesale (Producer) Price Indexes of South Korea, Malaysia, Singapore, Thailand, and Indonesia. Consumer Price Indexes for China, Hong Kong, and the Philippines. January 1980 to November 2008 (Monthly). Hong Kong, January 1990 = 100, Malaysia, January 1986 = 100, Philippines, January 1990 = 100. Data: Author's calculations based on International Monetary Fund, International Financial Statistics, and CEIC Data. Update data based on original in McKinnon and Schnabel (2005, fig. 1.2. 22-23).

A final rationale for exchange rate pegging in mainland China, and other developing East Asian countries, is an asset-based rationale, especially 'to mitigate short term domestic payments risk' (McKinnon and Schnable 2005, 15). A key problem for developing country governments, firms and financial institutions, is that of 'original sin', where local entities are unable to borrow internationally in their own currency (Eichengreen and Hausman 2004). Thus a 'currency mismatch' arises when any sharp local currency price changes have a substantial impact on the local currency value of foreign currency denominated debt. This problem is exacerbated by 'maturity mismatch' problems where short-term borrowing, usually at a higher rate of interest, is needed to finance long-term projects. This problem can be acute in developing countries because of the relative lack of developed local capital markets — by which is meant a relative lack of depth value of accumulated financial assets and limited breadth of available financial instruments and institutions — which limit the capacity of local entities to raise local currency denominated debt. Internationally this problem of 'maturity mismatch' is the basis for the huge currency swaps market — a form of derivative contract — where counter-parties

agree to a stream of future payments on the present value of the principle at an agreed rate of interest. However, where local entities lack the capacity to effectively hedge risks through such derivative contracts, authorities may seek to socialise the risk for local banks and enterprises through currency pegging to the dominant external currency (McKinnon and Schnable 2005, 20-23).

Conclusion

The conceptual approach put forward here suggests that the distinctive properties of the money form of value and medium of exchange provides a powerful centralising mechanism in the patterns of international currency usage, which condition, but do not determine, official exchange rate and monetary policy choices. Although a fuller historical examination of China's recent exchange rate policies choices is undertaken in chapter seven of this thesis, the understanding of the key vehicle currency role of the US dollar as the dominant medium of exchange in production and financial circuits within East Asia suggests a very different path of analysis to the prevailing accounts of Chinese exchange rate policy mercantilism. In contrast to mercantile accounts, it is not China's direction of exports, but the dominance of the dollar as the key vehicle currency in intra-regional production circuits, which is a key rationale for China's de facto dollar pegging (McKinnon and Schnable 2005, 15). There are also linked international monetary and financial rationales for effective dollar pegging, including providing a common price anchor (ibid), and socialising financial risk.

Conclusion to chapter 3

This chapter has sought to develop an alternative explanatory framework for understanding China's recent exchange rate and monetary policies in international

finance. The key problem with the prevailing international economic theories and policy frameworks is that they assign a normative adjustment mechanism role to exchange rates for equilibrating individual national economies current accounts, which is unwarranted. The alternative framework, developed here for understanding exchange rate policy choices, augments a classical understanding of the distinctive properties of money as form of social value, which owes much to Marx ([1867] 2004), with more contemporary international monetary approaches to international finance, such as Hartmann's (1998) explanation of international money. This general framework is compatible with recent international monetary and financial rationales for China's authorities' de facto exchange rate peg to the US dollar. Yet, however compelling this international monetary approach, it begs an examination of China's authorities' official reserve accumulation. Chapter four of this thesis moves on to consider what the conceptual frameworks in conventional IPE might offer in understanding China's recent official foreign exchange accumulation as a problem in international finance.

Chapter 4

An evaluation of IPE theories of international finance

This chapter shifts the focus from the mainstream economic debate to consider how China's foreign exchange accumulation might be understood within the field of International Political Economy (IPE). Specifically this chapter asks: how might the main IPE theories of international finance understand the development and implications of China's foreign exchange accumulation? Although there are a range of IPE approaches to international finance, the critique here centres on the mainstream approach — which defines international finance as all aspects of payments relations between states (Cohen 2008a, 158).[18] The reason for focusing on mainstream IPE theories in the main is not only because these earlier theories of the international financial and monetary system remain influential, but they do so because the issues and objects of their inquiry lie at the heart of mainstream policy assumptions and debates about how to manage real world material developments in the international political economy.

Indeed, recent financial payments relations between China and the United States have been interpreted within IPE by scholars such as Kirshner (2008) and Bowles and Wang (2006; 2008) as a problem of understanding 'the politics' of inter-state bargaining. However, this chapter suggests that the consensus approach to international finance within IPE has not made any major advances in its understanding of payments relations between states beyond the international economic discourse of the 1970s and 1980s. In particular the 'politics of adjustment' framework tends to assume that uneven patterns of international liquidity and payments positions represent a departure from an idealised equilibrium in the international financial system, which beg macro-policy 'adjustment'.

[18] As such, the term international finance incorporates the earlier focus on the international monetary system. although in the mainstream definition international finance remains centred on payments relations between states (Cohen 2008a, 158).

Therefore mainstream IPE approaches tend to uncritically conflate the relationships between adjustment politics, state strategy, and international financial relations — and this suggests an inadequate basis for understanding China's recent official reserve accumulation.

The second stage of evaluation in this chapter considers Susan Strange's (1988; 2002) 'relational' conception of 'structural power' and Konings (2008) recent constructivist-institutional explanation for US 'structural power', as a way of understanding of international financial relations. The case made here is that, however useful, these approaches do not effectively challenge the core macro theoretical framework within which mainstream IPE studies of international finance operate, in part because these 'structural power' approaches lack explanatory depth about the financial-content of international financial relations. As with mainstream approaches, at issue here are the objects of analysis as well as the overall problematic in more critical IPE approaches to international finance. The explanatory critique of these existing mainstream and more critical IPE approaches to international finance is the primary focus of this chapter (four), and the attempt to redefine the problematic and broaden the objects of analysis is the focus of the following chapter (five).

4.1 **The problem of international finance in IPE**

The break-up and reconfiguration of the post-war international monetary system was a key impetus for the emergence of IPE as an academic discipline in the early 1970s. However, despite IPE's early inter-disciplinary origins, in practice, variants of IPE have largely developed as a sub-field of international relations, i.e., broadly as a politics or political science sub-discipline (Cohen 2008a). This disciplinary history has had particular intellectual consequences for how international financial relations are

understood by mainstream and more critical IPE approaches. A key problem in the mainstream IPE problematic of international finance, the substantive analysis of international finance as whole, has largely been secondary to 'the political' study of payments relations between states. Yet, although subsequent generations of IPE scholars have broadened the range of objects of inquiry within IPE studies of international finance (see the call for this by Germain 1997) — a fundamental problem remains that the conventional international economic approach to understanding international finance within IPE has remained effectively unchallenged—and this has implications for how contemporary international financial relations are understood across IPE.

Questions of international finance defined the emergence of IPE as an academic field of inquiry in the early 1970s (Cohen 2002). These questions were not altogether new. Britain had been wracked by recurrent balance of payments crises and successive British governments came under profound financial pressure to devalue the Pound Sterling in the post-war decades. Thus the gradual displacement of the Stirling by the US dollar during the 1960s as the dominant international currency was a key focus of the early work of Susan Strange (1971), who is widely heralded as a founder of the British school of IPE. According to Cohen (2008a, 53), a key early US founder of IPE, original interest in IPE in the US was stimulated by the US's payments crises, the termination of US dollar convertibility, the collapse of the Bretton Woods system of fixed exchange rates, the first oil shock, and the 'unprecedented payments imbalances and financing problems around the world'.

Despite the ostensibly inter-disciplinary academic origins of IPE, in practice IPE became a sub-field field within International Relations (IR). As the story goes, the development of IPE as a distinctive field of inquiry was motivated by the realisation of scholars working within the academic disciplines of IR and International Economics during the early 1970s of the limits of their respective disciplines in understanding and explaining

the real world problems that beset the global political economy in that period (Cohen 2008a, 53). However, many of the key early founders of IPE in the US were actually mainstream international economists — such as Kindleberger who is credited with developing 'hegemonic stability theory', but also Cohen and others. Strange was an international financial journalist before moving to academia. And yet, as Cohen's intellectual history of IPE (2008a) makes clear, IPE never found a home in mainstream economics departments in the US or elsewhere, and instead became an International Relations sub-field within political science — or politics and IR departments as is preferred elsewhere.

This disciplinary history has had intellectual consequences for the development of the understanding of international financial relations. Orthodox international economics, for instance, conceives of international finance within a microeconomic discourse of spatial arbitrage and market equilibration or as a domain constituted by the interaction of separate but inter-dependent nationally equilibrating economies. Within this nationally-centred ontological framework, issues of balance-of-payments outcomes, exchange rates, liquidity, and inter-national macroeconomic adjustment are evaluated in terms of a particular conception of the path to economic efficiency, optimality, and stability of the phenomena under study (Germain 1997, 11). The case made in this chapter is that the understanding of these international financial questions and relationships within IPE has largely been uncritically accepted from the international economic orthodoxy of the 1970s and 1980s.

One reason the mainstream IPE approaches have had to renovate their thinking about real-world problems in understanding international finance is that IPE became a field of inquiry within mainstream International Relations, i.e., within political science or politics broadly understood. Thus IR/IPE approaches have tended to have subjected the study of international financial relations to a political logic of analysis. For the early generation of

IPE scholarship therefore, 'the principle focus of scholarship is the way in which the monetary policies of major states contribute to the achievement of stable monetary order' (ibid). Scholars working within different IR/IPE paradigms may have approached this problematic differently, the problematic and core objects of inquiry may have broadened slightly, but they have not changed radically. Indeed, Cohen's (2008a, 158) view of the basic problematic within international finance as the questions of actor behaviour and system governance — or questions of who has authority, and how — encapsulates much mainstream as well as 'critical' IPE scholarship. The process of innovation within IR/IPE has tended to centre on internal paradigmatic competition over this form of politically-centric problematic. A limiting consequence of this analytical focus within IPE, however, is that there has been much less innovation in thinking on real-world problems in international financial relations from a broader social science perspective.

The argument for incorporating a more inter-disciplinary social science approach to the study of international financial relations within IPE is that there are domain or field specific problems — the understanding of which is not reducible to individual disciplinary approaches. Indeed, while we might quibble about the details of Cohen (2002) and Strange's (1988, 88) definition of the field, what they usefully capture is the potential breadth of objects (relations) which should occupy scholarship in the domain of international finance. Thus according to Cohen (2002);

> …international finance is understood to encompass all the main features of monetary relations between states — the processes and institutions of financial intermediation (mobilization of savings and allocation of credit) as well as the creation and management of money itself.

Although Cohen gives primacy to monetary relations between states, the processes and institutions of financial intermediation, as well as 'the creation and management of money itself' are nevertheless considered real objects, and presumably must be part of

any adequate explanation of international finance. Strange's (1988, 88) earlier definition of the 'financial structure' is almost conceptually identical:

> It comprises not just the structures of the political economy through which credit is created but also the monetary system or systems which determine the relative values of different moneys in which credit is denominated ... A financial structure, therefore, can be defined as the sum of all the arrangements governing the availability of credit plus all the factors determining the terms on which currencies are exchanged for one another.

Here, we have a definition of the financial structure that not only includes 'the political economy through which credit is created' but also the monetary systems, arrangements and so on. Indeed both Strange and Cohen define the scope of the field in ontologically realist terms. The point here is not that IPE scholars should uniformly accept the principles of ontological realism, but that the potential scope for scholarship and inter-disciplinary learning in the field could benefit from being broader than it generally is — especially because — as is argued in this thesis, there are problems in understanding international financial relations that are domain specific.

A core problem in understanding international finance identified in this thesis is the uncritical acceptance of the international economic orthodoxy within IPE about macro-structural relationships, especially international financial payments relations, within international finance. This is the subject of the next section of this chapter. This treatment is important because whether explicitly theorised or not, the conventional view of these macro-structural relationships has tended to be embedded in the majority of IPE approaches to understanding international finance. This is clearer if we look at how these approaches have conditioned recent IPE scholarship on 'China's rise in international finance'.

4.2 **The problem with the ‘politics of adjustment’ approach**

This section develops an explanatory critique of the ‘politics of adjustment’ and ‘exchange rate politics’ approaches to understanding international financial relations within IPE. A key problem with the recent IPE literature on China’s payments surpluses surveyed here is that there is a tendency to take the standard economic assumptions about ‘payments imbalances’ and ‘exchange rate manipulation’ as pre-analytical givens, rather than as assumptions that should be problematised in international finance. The deeper problem with this sort of IPE approach is that its core macro-theoretical framework about for understanding international financial relations has been uncritically inherited from the standard international economic framework. Indeed, the evaluation here suggests that this sort of IPE approach, rather than providing a useful framework for understanding international financial relations, instead, uncritically reflects the official international ‘exchange rate’ policy discourse that emerged in the US during the 1970s. The bigger problem is that such an approach remains trapped within methodological nationalism.

4.2.1 **An uncritical approach to the discourse of ‘adjustment politics’**

There is a standard discourse about China’s recent current account surpluses and exchange rate policies that consider these phenomena to be ‘excessive’ trade surpluses and reserve accumulation, and thus ‘global imbalances’, which have been generated in large part by mercantile currency manipulation policies by China’s monetary authorities. However, this discourse has been uncritically incorporated in recent IPE scholarship on China’s rise in international finance. The deeper problem is that this conceptual framework accepts the standard international economic problematic, while restricting the objects of substantive analysis to ‘the politics’ of inter-state bargaining within those terms. By contrast, when analysis focuses on the detail of financial transactions, posed within a value chain discourse, the focus shifts from a macro (national) logic to a micro

one. It is not that nations disappear from analysis, but that transfers of finance across national boundaries are not presumed to comply with a national 'logic' nor to have any engagement with notions of financial relations between nations. Those financial relations and associated processes of adjustment may occur via political processes, but they are not part of the organic operation of international financial markets.

The conventional discourse about the financial policies of East Asian states is deeply ingrained, even among more ostensibly critical IPE scholars. Recent work by Baker (2005, 108-23) for instance, who is primarily concerned with how 'elite' financial institutions 'construct' their legitimacy in the market, considers the question of exchange rate policy. Baker (108) identifies the process of exchange rate policy management as 'an elite social practice' by monetary policy elites who construct 'technical arguments on the basis of analysis of a range of economic data'. Yet when it comes to the substantive claims by these elite social institutions and actors about what might be considered economic phenomena, such as 'currency misalignment', Baker has little to contribute in terms of critical analysis. Instead, Baker (123) claims that, 'Asian countries have followed a strategy of exchange rate protectionism managing an undervalued exchange rate through sizeable exchange market interventions, accumulating reserves and encouraging export led growth'. Now this might be a legitimate enough analysis, if there was critical reflection on the category of currency 'undervaluation', but instead the elite discourse is uncritically retailed as a description of reality.

More substantially, the problem of understanding the recent prominence of China and international financial relations, has generally been analysed by IPE scholars as a problem of interstate bargaining over 'adjustment' to macro-'imbalances'. Bowles and Wang's (2006; 2008), analysis of 'the political-economy' of the recent debates over China's exchange rate, trade surpluses and foreign exchange reserve, reflects these conventional inter-state terms. In particular, they focus on assessing the limited ability of

the US to exercise ‘monetary power’ over China. Following Cohen they define ‘monetary power’ as ‘a capacity to avoid adjustment costs, either by delaying adjustment or deflecting the adjustment burden onto others’ (2008, 350). Thus according to Bowles and Wang (2006, 250) the recent debate over China’s currency, the renminbi (RMB), ‘has been in large part about how much of the adjustment to this “problem” will be undertaken by a change in US policies and how much by a change in politics in China and other countries’, and the ‘impasse can be seen as a game of “problem assignment”…’

Similarly, Kirshner’s (2008, 23) analysis of 'the [international] political implications of economic changes accompanying China's development' reflects his treatment of the substantive international financial issues within the terms of the standard international economic discourse. Thus on the relevance of exchange rate theory to the recent US-China trade deficits, he says: 'Large and sustained deficits suggest that a currency is overvalued, since depreciation would make its exports cheaper and its imports more expensive; surpluses suggest the opposite’ (ibid, 244). Indeed, this is not a statement of analysis, but a tautology. Nevertheless, Kirshner does recognise the negative experience of the US’s successful pressure for Japanese yen appreciation in the decade from 1984 as showing 'the failure of exchange rate movements to resolve trade imbalances' (ibid, 246). In the end however, Kirshner’s recognition of the ‘ambiguity’ and ‘inherent difficulty’ of orthodox economic theory on international monetary and financial issues, is similarly resolved by appeals to the politics of inter-state bargaining.

The critical problem with this sort of analysis is that it accepts the economic categories within which the ‘political game’ takes place, as pre-analytical givens. So Bowles and Wang (2008, 336) argue that recent ‘problems’ in managing the US-Chinese bilateral relationship are due to the ‘current [economic] imbalances’, a problematic that is taken as given, but which they suggest are rooted in ‘the policy history which lies behind them’. While Bowles and Wang (ibid, 251), can acknowledge that the economics of whether the

RMB is undervalued is, following Jonathon Kirshner, 'ambiguous', they nevertheless seem to accept that these 'current imbalances' are meaningful economic phenomena that entail an 'adjustment burden' to be borne by nation-states.

According to the 'international monetary power' framework advocated by the mainstream IPE scholars in Andrews (et.al. 2006), international financial relations are to be understood through the logic of political bargaining between states over 'who should bear the cost of adjustment to payments disequilibrium'. However, this framework rests on an uncritical acceptance of the standard approach to understanding international finance, that is, which understands international finance (patterns of cross-border capital flows) as an outcome of 'payments disequilibrium' between individual nation-states. A deeper problem with this framework is that its restricted political logic of analysis reduces international financial outcomes to the outcomes of power relations between nation-states. The result is a reductionist approach to understanding international finance.

Conventional economic assumptions about macroeconomic adjustment are central to the organising framework for the theory of 'international monetary power' put forward by US IPE scholars such as Andrews, Cohen, Kirshner, and Henning in a recent (2006) volume. The Andrews' volume (2006) accords a central analytical place to Cohen's early work as an orthodox international economist, in particular his 1966 essay, 'Adjustment Costs and the Distribution of New Reserves' (Cohen 2006, 31). The core proposition about the material basis or system level ontology of the international financial system is that 'international monetary power', at 'the macro-level' is about the struggle between states over 'the problem of adjustment to balance-of-payment's disequilibrium' (Andrews 2006, 10). And according to Cohen (2006, 31) 'the central issue at the macro-level is the distribution of the burden of adjustment to external imbalance'. Further, the 'macro-level dimension of monetary power consists, first and foremost, of a capacity to *avoid* payments adjustment costs, either by delaying adjustment or by deflecting the burden of

adjustment on to others' (ibid). In other words, with the problematisation of macroeconomic relations between states defined by the imperatives of inter-national macroeconomic adjustment processes, 'international monetary power' or 'international financial power' is therefore conceived as the ability to avoid, delay, or to deflect 'adjustment costs'.

As such, power relations between states are central to the 'resolution' of inter-national balance of payments disequilibrium. The analytical agenda of the 'international monetary power' framework arises because 'neither standard economic theory nor modern political economy makes strong claims about how the interstate adjustment process actually occurs — in other words, about the path for return to payments equilibrium' (Andrews 2006, 10-11). Here, Andrews' use of the term, 'interstate adjustment process', demonstrates an ontological conflation of nation-states, which are politically defined and territorial entities, with the structure and processes that constitute the international economic system within which they exist, and therefore the reduction of the latter system, structures and processes into the former, that is, the state-system. In addition, the macroeconomic assumption that the 'interstate adjustment process' is defined by a 'return to payments equilibrium' is taken as a pre-analytical given. Outcomes then are conceived as a product of the power relations between states and their macro-policy choices. 'To put it bluntly', says Andrews (ibid, 11) 'will payments balance be restored by inflating surplus economies or by disinflating deficit economies? Questions like these are intensely political, and power relations play a central role in their resolution.'

The result is a reductionist analytical framework, in which international financial outcomes are understood to stem from a form of multi-level game, of horizontal power relations between states at the international, as well as domestic macro-policy bargaining. According to Webb's (1995) mainstream IPE classic work on the politics of macro-policy adjustment, the domestic level of analysis can also play a role as causal explanation for

payments' 'imbalances' between states, by determining their domestic macro-policy choices and therefore international bargaining preferences. According to Webb (1995, 4), (T)he domestic political importance of macroeconomic policy generates international differences in macroeconomic policies that create payments imbalances and creates powerful obstacles to international coordination of monetary and fiscal policies.

Now it is one thing to understand how domestic level political forces should be considered as *a variable* in macro-policy choices as well as international payments outcomes at some level of determination, but the claim that domestic macro-policy generates international differences in macroeconomic policies that 'create payments imbalances' is a form of reductionism. It is a form of reductionism that is predicated on a normative understanding of international economic and financial relations, where 'normal' is understood to be a state in which international payments equilibriate individually for each individual nation-state.

4.2.2 **Understanding 'exchange rate politics' as a strategic policy discourse**

Mainstream IPE approaches to understanding international financial relations, particularly in the US academy, effectively mirror the US official exchange rate policy discourse. The close link between the development of theories of 'international monetary power', and the official discourse of US state strategy and policy activism can be seen in Kirshner's (1995; 2006) and Henning's (2006) related notions of 'currency manipulation' and 'the exchange rate weapon'. The uncritical use of these categories suggests that, rather than providing a viable critical framework, the 'international monetary power' approach should be understood as part of the US centred strategic international financial policy discourse that emerged in the 1970s, and which has continued to be used, with diminishing returns, in subsequent decades. The need to distinguish between substantive

theories of international finance, strategic policy discourse and state strategy suggests the need for a more critical approach to understanding international financial relations than has been offered by mainstream IPE approaches.

The Andrews (2006, 17) volume on 'international monetary power' attempts to resurrect the concept of 'monetary statecraft', understood as 'influence attempts that rely primarily on the manipulation of monetary relations between states'. International power is the relational concept (real power), and monetary statecraft is the actualisation of that power, that is, its attempted use to influence monetary relations between states. Attempts at influence may be exercised by states for internal or external reasons. The key instruments that may be 'manipulated' in the exercise of 'monetary statecraft' are identified as exchange rates and international liquidity provision, both of which are understood to be linked to a state's actual or potential access to liquidity, whether that be official reserves or access to credit.[19] The focus here is on the notion of 'currency manipulation'.

Andrews (2006, 21) identifies 'currency manipulation' as the most widely used element of 'monetary statecraft', which was defined by Kirshner (1995) as any 'actions taken to affect the stability of target currencies'. According to Andrews (2006, 21) '…the most direct mechanism for exchange-rate manipulation is foreign-exchange market intervention using national reserves...' Further, Andrews (ibid) rejects the idea that 'manipulation' only applies to hostile intent, and prefers a definition of manipulation as any foreign exchange intervention designed to target exchange rate values, whether a state is targeting its own domestically-tied currency or the value of an external currency.

[19] A framework for understanding international liquidity is presented in chapter five of this thesis, while an empirical evaluation of implications of China's recent official reserve accumulation, especially as it bears on debates about US official and private access to international liquidity, is the subject of chapter eight.

Two problems arise with the use of currency ‘manipulation’ here. First, it assumes political intent in targeting exchange rate values when there may be none. According to such a ‘political’ logic of analysis all forms of foreign exchange intervention, such as maintaining a fixed exchange rate, can be interpreted as a political power play between states. As such, the use of the term currency ‘manipulation’, rather than foreign exchange intervention conflates all intervention by monetary authorities in foreign exchange or capital markets with some form of political intentionality, especially at the inter-state level, when their objectives may be understood, or at least open to investigation, with more economic terms. The analytical implications of this sort of IPE framework is that it closes off critical investigation of the phenomena it supposedly has as its subject matter. Thus when it comes to understanding the developments and implications of China’s ongoing foreign exchange intervention and recent official reserve accumulation, for instance, these phenomena are interpreted as forms of currency manipulation.

The equating of all forms of exchange rate intervention and official foreign reserve accumulation with currency manipulation has been precisely the interpretation used in the US exchange rate strategic policy discourse since the 1970s. This is clear in Henning (2006, 118):

> At critical moments over the last four decades, the United States has exploited the vulnerability of countries in Europe and East Asia to changes in their currencies' exchange rates vis-a-vis the dollar in an effort to extract policy adjustments from their governments and central banks.

Further, the use of the ‘exchange rate weapon’ appears to be closely linked to concerns about domestic protectionist sentiment, so that:

> By deflecting and deferring adjustment costs, deployment of the exchange rate weapon has helped to sustain political support for open trade and investment policy in the United States at junctures when the support has been in jeopardy (ibid, 124).

Indeed, Henning is a long standing policy activist for the use of the ‘exchange rate weapon’ by US governments, first against the Japanese yen in the 1980s and now against China’s alleged currency manipulation. In a recent paper (2007, 3), Henning claims that, Chinese authorities’ intervention in the foreign exchange market has kept the renminbi substantially undervalued, prevented a desirable adjustment of current account imbalances, and constitutes 'manipulation'.

In the same paper Henning called for the US Congress to pass legislation to reform the 1998 US Trade Act to make the US Treasury more accountable to Congress over exchange rate policy, especially over the naming of foreign countries as currency manipulators which requires punitive trade policies to be enacted by Congress. This strongly suggests that the ‘international monetary power’ approach and the analysis of ‘exchange rate politics’ that is current in mainstream IPE, especially in the US, should be understood as a strategic policy discourse.

Conclusion

The mainstream IPE ‘international monetary power’ framework should be understood as part of the state-strategic exchange rate policy discourse that emerged in the US during the 1970s.[20] The key problem with this mainstream IPE framework, is that it takes the strategic policy discourse of ‘currency manipulation’ and the need for macro-policy ‘adjustment’ as pre-analytical givens, rather than as analytical descriptors about international financial relations that should be problematised. Indeed, the core macro-theoretical framework of this IPE approach is taken directly from the standard

[20] The reasons for the emergence of that discourse in the US at the time are not the primary focus of analysis here. Suffice to say, that the pattern of response to sustained US current account and trade deficits, and increased international competitive pressures in key industries, combined with domestic economic insecurity for US workers for these and other reasons, had generated sustained political attempts by US policy makers to pressure ‘surplus’ countries to ‘adjust’ — with focus on Germany and Japan in the late 1970s, to Japan in the 1980s and 1990s, and now China from the 2000s.

international economic approach to understanding international finance as a failure of individual national economies to adjust towards 'payments equilibrium'. This suggests that we need to look elsewhere within IPE for more critical approaches to understanding international financial relations. The next section considers the broad 'structural power' approach developed by Susan Strange (1988).

4.3 **The limits of 'financial power relations' approaches to international finance**

The question of who or what has 'power' in international finance has been the central object of study for most IPE scholars in the area — this has been true for most mainstream approaches, as more critical scholarship following Strange's conception of 'structural power'. And although the early scholarship focussed on the financial power relations between states, more contemporary scholarship has broadened the basis of inquiry to include the financial power relations exercised by a wider range of financial actors. However, a key problematic that has arisen within this IPE scholarship has been the theorisation of how and why particular financial actors have come to exercise financial power, and this problem has provide a rich path of inquiry (see for instance, Germain 1997; Seabrooke 2001; 2006; and Konings 2008). Nevertheless, a deeper question is posed by this problematic of how to explain the development of historically specific financial power relations: is an inquiry into financial power relations sufficient for understanding either the historical development of, or contemporary problems in, international finance? The proposition advanced here, is that the study of international finance in terms of financial power relations, although necessary, is nevertheless insufficient for understanding its historical development and contemporary relations.

The central problematic in mainstream IPE and many critical IPE studies in international finance is over questions of political power, as Cohen (2002) says, over the question of

who has authority and how. It is commonly accepted that access to forms of international financial liquidity is a crucial determinant of a state's relative international financial power (see for instance, Cohen 2006, 49-50, and Seabrooke 2006). For Cohen (2006, 49-50) 'international liquidity' is defined as readily convertible and usable pools of financial assets, such as official foreign exchange reserves. Other 'financial variables' can also contribute to international liquidity, for instance capital inflows, such as the cross-border purchases of particular government-issued financial securities by foreign financial actors. For Cohen (ibid, 50), international liquidity is determined by a country's position within the international currency hierarchy or financial 'pyramid', with key international currencies having the most developed financial markets, and thus the greatest access to liquidity and therefore the greatest relative international financial power. Liquidity, essentially a market criterion (ease and speed of convertibility to cash) has been transformed into a state-political concept.

The key distinction between these IPE approaches has been over how power relations are understood. Although mainstream IR/IPE (realist and liberal) approaches, adhere to respective notions of absolute and relative power, within IPE, access to international liquidity and therefore international financial power has generally been understood as a form of 'relational' power, that is the capacity of state X to get state Y to do Z, in the domain of international money or finance (Andrews 2006, 8). Within this context, a 'critical' point of departure for the analysis of international financial power within IPE, has usually followed Strange's (1988, 24-5; [1990] 2002, 78-85) concept of 'structural power' — which Strange (ibid) defined as the capacity to shape the 'rules of the game' and 'set the agenda of discussion or design' over the structures, regulations and practices of the international financial system as a whole. Thus, Strange's 'structural' conception of international financial power, understands power, not just as a question of power over resources, but as a question of state-centred *systemic power* which has been developed and maintained by particular financial actors. While the concept of a social 'structure' is

not as palatable as it once was, Strange's basic conception of structural power as form of systemic power that shapes preferences (Seabrooke 2006, 17) is widely accepted as a basis for analysis by more critical scholars.

4.3.1 **The limits of 'structural power' approaches**

Strange applied this distinction between 'structural power' and 'relational power' to understand Japan's financial relationship with the US in the 1980s and 1990s, an approach applied by Chin and Helliener (2008) to understand 'China's rise as an international creditor'. This approach is evaluated here in terms of how it might help us understand the development and implications of China's recent official reserve accumulation in international finance. A legitimate criticism of Strange's approach is that it is a taxonomic framework (Cohen 2002) rather than an explanatory theory — indeed it is the problem of explanation that critical IPE scholars after Strange have sought to address (see for instance, Helliener 1994, Germain 1997, Seabrooke 2001, 2006 and Konings 2008). However, there is a deeper question posed by the 'international financial power' problematic: whether an analysis of international finance in terms of 'power relations', and actors' decisions and preferences is sufficient for understanding international finance. The proposition here is that it is not, and that the basis for analysis should be widened to incorporate a crucial analysis of the value-chain relations internal to the processes of financial accumulation and development.

US 'structural power', for Strange ([1990] 2002, 80), was centred on the US dollar's dominant reserve currency position, as it was for Britain and the Pound Stirling at the start of the 20th century. As such Strange (ibid) assigned a key role,

> …to the US budget deficit as an indicator of structural power exercised through the financial structure. The damage which the build-up of this deficit has done must not obscure the fact that no other country was in so favourable

> position that it could draw so heavily on other people's savings to finance its own spending.

For Strange (1988, 104-5), the break-up of the Bretton Woods System, especially US president Nixon's decision to unilaterally end the US dollar's fixed rate convertibility with gold, also broke any modest discipline on the US balance of payments. The float of the US dollar after 1971 and paper backing rather than the link to gold, the dollars' role meant not just 'exorbitant privilege', but super-exorbitant privilege for the US (Strange [1994] 2002, 97-98).[21]

By contrast, for Strange (ibid), Japan's prominent role as international financial creditor was an instance of 'relational' rather than 'structural' power. Japan's monetary authorities and banks had relational power as a result of their abundant financial liquidity, enabling them to buy foreign assets and influence regional neighbours through investment and aid. However, according to Strange ([1990] 2002, 78-85), Japan's role as an international creditor was a limited form of power because the Japanese state and financial institutions did not have 'structural power' over the international financial system — the evidence for this position being the continued Japanese funding of 'the US budget deficits'. This framework is applied by Chin and Helliener (2008) to provide an analysis of 'China's rise as an international creditor.' China is accorded more 'relative power' by virtue of its 'political independence' from the US, but the underlying 'financing role' of China remains broadly similar to that of Japan — with money flowing to the US — and thus China's rise is understood in terms of 'relational power'.

However, Strange's structural power approach has been criticised for being a taxonomical framework, rather than a theory (Cohen 2002). Although Cohen's positivist

[21] An alternative approach for understanding the US balance of payments within international finance is primary focus of Chapter five of this thesis, for now, we will proceed with Strange's conventional framework.

criteria for theory — as a predictor of regular empirical occurrences (ibid) is legitimately criticised, his classification of the structural power approach as a taxonomical framework is closer to the mark. The concept of structural power, and indeed the concept of relational power favoured by IR liberal approaches, provides a framework for describing what exists — but as concepts rather than theories. Hence they lack explanatory power and depth, i.e., the capacity to explain how and why, rather than what. Taxonomies aside, Strange did seek to provide an explanation for the development of post-war international finance and US structural power. This explanation is revisited here because it bears on the contemporary international financial problem of how China's recent official reserve accumulation is understood within IPE.

Strange ([1990] 2002, 78-85) explained the rise of post-war international finance by appealing to decisions and non-decisions of successive US governments, and this explanation extended to the exercise of US structural power in international finance over Japan during the 1980s and 1990s. At the core of Strange's explanation for the rise of post-war international finance, and US structural power within that system, was a wider shift from state to market power in international finance. The key agents in this process for Strange were US business and political interests, and these political and economic interests were also central to securing continued Japanese funding for 'the US budget deficits'. Specifically, Strange identified: a US state and business strategy of marketisation and liberalisation domestically and internationally; the pursuit by US officials of a series of US-Japanese international financial agreements and the non-pursuit of Japanese financial initiatives[22], and lastly the interests of Japanese authorities themselves in preventing the devaluation of the US dollar in order to maintain US purchasing power for Japanese exports and to prevent depreciation of Japan's stock of US dollar assets (ibid). The combined market-power effect was that Japanese financial

[22] International financial initiatives by Japanese authorities were given short shrift by US officials, while US officials successfully pressured Japanese authorities for specific international financial reforms (Strange [1990] 2002).

institutions would then seek to 'promote interest rate arbitrage between domestic and foreign [i.e., US] capital markets' (ibid, 81). The result was that capital flowed from Japanese to US financial markets.

There are however, two basic problems with Strange's explanation for the growth of post-war international finance. The first is a problem in understanding the US balance of payments in conventional international economic terms, a problem that is addressed in chapter five of this thesis, and an the answer to which suggests a rather different explanation for why Japanese banks, for example, have tended to invest heavily in US international government and corporate securities. The second, related, problem is with Strange's explanation for the growth and particular configuration of post-war international finance. Strange's explanation centred on the clear preference for 'predominately "capitalist" (i.e., pro-market)' decisions, and non-decisions, by 'successive post-war governments in the United States', to liberalise international capital and financial markets, including international banking practices ([1990] 2002, 75-77).[23] But, even if we accepted, for the sake of argument, that major changes in post-war international finance were caused by, rather than proceeded from, changes in state policies, the problem is explaining *why* successive post-war US governments had a clear preference for 'predominately "capitalist" (i.e., pro-market)' policies. And this poses a deeper problem that remained under-theorised in Strange's work.

[23] Strange identified the following US decisions and non-decisions (Strange [1990] 2002, 76-77): pressure through the IMF on the European states and later Japan and developing countries to liberalise international capital and exchange controls; supporting policy decisions to develop the London based Euro-dollar markets which did not subject those US and other international bank operations to US Federal Reserve regulation; changes in US domestic regulation such as the 'slow erosion of New Deal statutes like the Glass-Steagall Act banning interstate banking'; changes in US stock market dealer fees and a lack of regulation of 'marginal activities' such as 'securitisation'. Together these policies, and non-policies, facilitated the growth of a huge new market-based international financial structure, including banking practices, which led to the dissolution of 'national banking cartels' in the US, the UK, Australia and even European countries and within which the various national financial markets were now integrated. Thus, the 'influence of the American system', including its 'financial innovations' was spread internationally.

4.3.2 **Assessing Konings' 'institutional foundations' approach**

The problem of how to explain the development of international financial relations in the post-war period has been a challenge that more critical IPE scholars after Strange have sought to address (see for instance, Helliener 1994, Germain 1997, Seabrooke 2001, 2006 and Konings 2008). Each of these approaches has sought to account for the transformation in post-war international finance, but each has emphasised different causal elements, from state policies at the top, to changes in the underlying credit relations or 'foundations' which have been attributed to specific historical, social, and institutional dynamics. Here however, the focus is on Konings' (2008) explanation of the institutional dynamics in post-war US financial relations, which offers something of an alternative to conventional social-liberal explanations of institutional 'disembedding'. However, questions posed by this analysis are: does such an institutional explanation bear the weight put on it? And is there anything specific about the properties of money and finance per se, which should inform our understanding of international finance?

Prominent critical IPE explanations for the rise of post-war international finance have understood the shift to market based policies in the US and elsewhere as a process of deregulation and de-institutionalisation. This is true of conventional state-market perspectives such as Helliener (1998), or explicitly ideational and constructivist views (Blyth 2002) based on Ruggie's (1998) conception of institutional 'disembedding'. By contrast, Konings (2008), has argued that the changes in post-war international finance are better characterised as a process of institutional transformation that has been centred on the internationalisation of US private and state financial institutions, and whose effect has been to strengthen, rather than weaken, US 'structural power' in international finance. In contrast to recent accounts of US international financial decline, the continued capacity of the US state to attract international finance to fund US 'deficits' is viewed by Konings (ibid) as evidence of continued US structural power.

Konings' (2008, 45) explanation for this institutional transformation in post war international finance centres on the strategies employed by US financial institutions, especially banks, in response to specific domestic institutional and regulatory pressures, and the counter-responses of US official financial and regulatory institutions such as the Federal Reserve. US banks responded to a squeeze on their deposit base from non-bank financial institutions in the 1950s, in the face of major legal restrictions on how they could operate, by searching for strategies to circumvent regulatory restrictions and to broaden their deposit base. The result was that banks pursued strategies of 'financial innovation' that led to the development of a range of new financial techniques, such as the creation of highly liquid, and therefore marketable, financial instruments, which could be traded in new bank created financial instrument markets such as those for certificates of deposit, corporate paper, and federal funds. In this way credit relations were transformed by US banking strategies into 'a qualitatively new and unique institutional basis for financial intermediation...' (ibid, 47).

Banks now had now developed a virtually unlimited capacity 'to create money and credit', and this led to constant tension between Wall Street and Washington, which in turn provided the impetus for the internationalisation of US finance (ibid, 43). Washington's key financial institutions, such as the Federal Reserve, were worried about inflationary pressures and sought to control the expansion of bank activities and lending. The result of this competitive and co-operative relationship between the US state and US finance is characterised as a process of 'interactive embeddedness' by Seabrooke (2001). According to Konings, 'financial innovation' was a way for the banks exploiting regulatory loopholes, and the ultimate loophole was to go off-shore and internationalise, which US banks did in the 1960s beginning with the Euro dollar market that had emerged in London: 'Thus, it was the specific configuration of domestic institutions that motivated

American intermediaries to go abroad and apply their new financial techniques in the Euromarkets' (2008, 47). The rest, as they say, is history.

There is much to recommend Konings' close reading of the specific institutional dynamics of the re-emergence of international finance in the 1960s, and 1970s, including the key internationalising role of US financial institutions. A question exists though over the explanatory analysis here, specifically, is such an institutional theory capable of bearing the explanatory weight that is put on it to explain what has been a qualitative transformation in the scale of the processes of international financialisation during and since this period? An analysis of the specific institutions and their dynamics are undoubtedly crucial to a concrete historical explanation of the re-emergence of international finance in this period. Konings' explanation for this development backs up key financial studies of the dynamics of the period in the US, and the role of key US financial institutions and regulatory agencies in the process of internationalisation.

The argument is that major US banks in the 1950s and 1960s came under strong competitive pressures from other non-bank financial institutions, and were checked by official regulatory institutions and legislation in their capacity to see off those pressures by conventional means, such as setting up new branches. The institutional response of the major banks was to search for ways around existing regulations on their financial activities, and a strategy emerged in which the banks adopted new techniques, developed and issued new financial instruments, and generated new financial product markets to provide new sources of funds. What this suggests, is that the process of financial innovation and at least the early stages of internationalisation which were unsanctioned by US official financial authorities, was a response to the specific competitive pressures in that particular institutional, regulatory, and economic environment.

Indeed one can extend the largely institutional analysis through the ensuing decades to include a series of positive and cumulative feedback mechanisms that accelerated the linked processes of financial innovation and financial internationalisation. As is emphasised by mainstream financial studies: the number and types of financial innovations were vastly accelerated in subsequent decades by the rapid development of new information and communications technologies (ICT) which were on the cusp by the 1970s, while the application of mathematical techniques to computing power enabled the development of new and more complex financial instruments, products and specialised financial markets on a great scale. The causal role then of technologies, the development of specific applications of technical knowledge, as well as business models and strategies must be incorporated into any overall explanation, including that of institutional change.

Institutional changes also played a role at other levels. The move to current account convertibility across the Western trading countries from 1958, not only facilitated cross-currency transactions, but also set in train process whose effects would not easily be restricted to current account transactions, but also facilitated the emergence of new pools of liquid capital, which in turn could put exchange rate and capital controls under pressure. The move to floating exchange rates and the liberalisations of capital controls by the 1980s between the advanced capitalist countries also generated new exchange rate risks and interest rates risks, which had previously been contained, and which fed back into financial market innovation and development. The point here is that there was a cumulative set of positive feedback mechanisms between the process generation of private financial innovations and the international financial policy changes of key states.

However, the explanation of the competitive institutional dynamics and regulatory pressures on major US financial institutions also suggests a deeper level of causality is at work. The proposition here is that the institutional environment accounted for in great detail by Konings (2008) should be understood as a historically specific set of capitalist

value-chain relations — and that these should be part of the analysis. The proposition put forward here, but developed in the next chapter, is that the properties of money and finance as specific forms of social 'value' must also be taken into account, including their international dimensions. In other words, the task of explanation suggests that a more developed theory of the specific social relation of money and finance as forms of social value should also come into play.

Conclusion

Strange's concept of 'structural power' in international financial relations, however useful as a descriptive framing device, nevertheless remains a taxonomic framework (Cohen 2002), rather than an explanatory theory. Thus, the application of this framework to China's recent official foreign exchange accumulation (e.g., Chin and Helliener 2008), does not really advance our understanding of international financial relations. Following Strange's work critical IPE scholars have also sought to explain the re-emergence and configuration of international finance in the latter half of the 20th century by broadening the objects of analysis. However, the conventional framework of analysis of the US balances of payments has not been sufficiently questioned by scholars working in the US structural power tradition. While understanding financial relations as specific forms of social power relations is a necessary part of analysis, money and finance are also forms of social 'value' that entail distinctive internal processes, dynamics, and relations and, as such, these are objects of analysis which should more explicitly inform our understanding of international financial relations.

Conclusion to chapter 4

This chapter has argued that the existing approaches to understanding international finance in IPE — in terms of power relations — are either insufficiently distinguishable from the existing US strategic policy discourse or are inadequate for understanding contemporary international financial relations. These approaches inform recent IPE

scholarship on the question of China's recent surpluses and official reserve accumulation within international finance, and US-China financial relations more broadly. Some more critical approaches within IPE to the development of post-war international finance have sought to broaden the objects of inquiry to understand the historical, social and institutional foundations of international finance in terms of specific credit dynamics and relations. However, the problem of the conventional conceptualisation of the 'balance of payments', especially the US balance of payments within international finance, remains to be adequately addressed. Nevertheless, the path of inquiry into the specific historical, social and institutional credit dynamics and financial relations suggest an alternative path of analysis, which explicitly conceptualises and theorises the properties and dynamics of money and finance as forms of social 'value'. Such an approach to understanding financial value-chains could also provide a different path of analysis to the existing methodological nationalist and state-centred analyses. A framework for pursuing such an approach is developed in the next chapter (five) of this thesis, which augments a theoretical approach to international financial intermediation to provide an alternative framework for understanding international finance.

Chapter 5

Understanding financial intermediary processes in international finance

This chapter moves from a critique of existing approaches to understanding international financial relations to advancing an alternative explanatory approach — which centres on a theory of international financial intermediation. A common problem with conventional economic views is that they have viewed the empirical patterns of international finance as an aberration to be economically resolved. On the other hand, for more politically concerned approaches, from within IR/IPE especially, the problem of understanding the internal relations of finance has tended to be secondary to the study of power relations. The alternative approach put forward here centres on understanding how and why international financial relations are fundamentally constituted by processes of international financial intermediation.

This chapter is structured as follows. section 5.1 introduces the concept of financial intermediation and puts forward a theoretical explanation for its emergence. Section 5.2 introduces the concept of international financial intermediation (IFI), considers why IFI processes emerge and evaluates some explanations for IFI dynamics between financial ‘peripheries’ and financial ‘centres’. Section 5.3 reveals how a conception of international financial intermediation has been applied historically during the Bretton Woods period to understand the problem of the US balance of payments, as well as official reserve accumulation by Germany and Japan during this period. Although we can’t return to a Bretton Woods-era conception of international finance, this approach to international financial flows is useful for understanding China's recent official foreign exchange accumulation, and the corresponding growth in US official liabilities, and this approach is introduced here as a basis for developing a more substantial empirical analysis in subsequent chapters.

5.1 **A ‘value-chain’ theory of financial intermediation**

The concepts of ‘credit’ and ‘credit relations’ have been usefully incorporated within IPE to understand the historical development of international financial relations (for instance, Germain 1998, Seabrooke 2001; 2006). A key proposition in this chapter, however, is the concept of *financial intermediation*, which incorporates credit relations, but provides a more flexible analytical frame for understanding the breadth of financial processes and relations. The concept of financial intermediation is defined here by its process — which ‘consists of the acquisition of a financial asset, accompanied by the simultaneous creation of a financial liability [or instrument]…’ (Salant 1972) — and not necessarily by a particular institutional form, such as banking. The central conceptual problem, however, is a theoretical problem, and it hinges on the question of what explains financial intermediation, especially its prevalence and scale. Whereas neoclassical theory explains the process of financial intermediation as a form of market imperfection, centred on possibilities for market arbitrage, the theoretical explanation here incorporates Scholtens and Van Wensveen’s (2003) understanding of financial intermediation as a value-chain process of financial transformation that is driven by risk and risk management. Although the identification of risk and risk management as the cause of financial intermediation needs to be further specified, the analytical benefit of this theoretical approach is that provides a relatively open framework for understanding the range of financial intermediary forms, relationships and processes.

As with contemporary financial relations, the processes of financial intermediation may be understood to incorporate and transcend traditional credit processes to encompass the simultaneous processes by which existing financial instruments are acquired and transformed through creating (issuing) new financial instruments (assets), in general.

Such a definition of financial intermediation therefore encompasses the breadth of financial intermediary processes, instruments and institutional forms. These have been usefully captured by Bryant (2003, 23):

> Financial intermediation, broadly conceived, is the entire complex process through which the myriad independent decisions of individual ultimate savers and individual ultimate investors are reconciled. The reconciliation is facilitated financial intermediaries — institutions such as banks, savings and loan companies, finance companies, and insurance companies — and by financial markets, such as stock exchanges and the interbank overnight funds market.

While Bryant's conception of financial intermediation as process of 'reconciliation' between individual savers and individual investors is a traditional functional explanation, as is discussed below, it nevertheless captures the myriad of financial intermediary processes as well as the potential diversity of financial intermediary institutional forms.

However, while a definition of financial intermediation as process of financial transformation by financial intermediary institutions is broadly accepted, there is a major theoretical problem with the dominant neo-classical explanations for why financial intermediation occurs, especially on the scale that it does. Broadly, neo-classical theory holds that the process of financial intermediation arises because of market failure to 'equilibriate' the decisions of individual investors and savers. The assumption, therefore, is that a perfectly functioning market — understood as market in which all decisions of individual savers and investors could be directly reconciled — would obviate the demand for financial intermediary activities by removing the need for savers and investors to transform existing financial assets by risk or maturity. Within this broad neoclassical framework, different theories seek to explain why markets fail to 'clear' in practice — these include distortions due to state policy interference, the irrational behaviour of market participants and information asymmetries (e.g., Rothschild and Stiglitz 1976).

Indeed, with the exception of information asymmetries, recent prominent international financial intermediary processes — such as the development of official foreign exchange accumulation by China's monetary authorities and the sustained capital 'inflows' into US international securities markets, are often explained as financial 'distortions' which arise because of state policy interference (e.g., China's exchange rate arrangements) and the irrational behaviour of market participants (e.g., continuing to invest in US dollar assets).

However, an alternative theory, developed Scholtens and van Wensveen (2003), seeks to explain the emergence of financial intermediation as a 'value-chain' and 'value-creating economic process' that is driven by risk and risk management. Scholtens and van Wensveen's terminology of 'value-creating economic process[es]', risk and risk management, and the claims based on these terms, is explicitly taken from the discourse used by contemporary financial intermediary institutions to explain their practices (ibid), and is therefore problematic. For instance, the discursive claim that financial intermediary activity is necessarily a 'value-creating economic process' that is driven by risk and risk management is historically specific to the implementation of the Basel Accords (risk and risk management) in banking and finance and their use to justify recent extensive processes of financial commoditisation ('value-creation').[24] Nevertheless, the proposition here is that value and risk, as well as the practice of 'risk management', if understood as theoretical concepts, are concepts that usefully signify real social objects (relations) and thus can form the basis of an explanatory theory of financial intermediation.

The theoretical claim that financial intermediation is a value-chain process, driven by risk and risk management, fits with the understanding advanced in this thesis of the internal relationship between the dynamics of the money-form of value as a capitalist social

24 I would like to thank Chris Jeffries for this insight into the mutually conditioning relationship between the discourse of risk management and processes of extensive financial commoditisation.

relation. Key to this is the concept of the time value of money (Fabozzi 2010, 15-20) defined as the opportunity to realise and augment present value into an uncertain future, and its opposite — the opportunity cost to present value of not investing at some rate of interest. Decisions of financial agents and intermediary institutions, to undertake further financial intermediation (transformation of existing assets along the dimensions of risk, maturity and instrument), are better understood in terms of some calculation of 'risk-adjusted return' on present value, rather than absolute return; a point that is explored more fully in the empirical analysis in chapters seven and eight of the strategic choices made by China's monetary authorities. Again, the claim is not that there is a single 'logic' at work, but rather the proposition is that capitalist relations are geared towards the accumulation of capital-value in general, and that the money-form of value, which is set off from processes of direct commodity exchange, also sets in motion a myriad of financial intermediary processes — processes that are driven by the concrete calculations of financial agents and financial intermediaries over how to a secure and augment present value, discounted into an uncertain future.

The development of financial intermediary processes is accompanied by the development of financial systems and particular financial outcomes, including the development of financial transactions and payments systems, the pooling or aggregation of funds and expanding liquidity (which may facilitate the undertaking of projects), a means of managing risk and uncertainty and the provision of price information (Scholtens and van Wensveen 2003, 26). Financial intermediation is therefore a dynamic process. As well as pooling and channelling existing funds it is a process that can generate liquidity, including new forms of liquidity. The process of financial intermediation transforms existing financial assets by type of instrument, by maturity through maturity transformation, and by risk exposure. These transformations may be more or less complex, but the tendency has been for the process of financial transformation along these dimensions of instrument, maturity and risk exposure to become more complex

over time. This process is driven in part by competitive and/or regulatory pressures on existing intermediaries and their activities depending on the particular context in which they operate. Here, the development of new technologies, including communications, has facilitated the development of new financial product lines has been crucial to the creation of new instruments and markets for those instruments. As such, the process of financial intermediation has tended to generate new claims to value and therefore rising liquidity within and across financial systems. Each single act of financial intermediation is also a two way process between ‘savers’ and ‘borrowers’, or between investors.

Because financial intermediation is defined by the process, financial intermediaries can take a wide variety of institutional forms. Financial intermediaries include therefore, not just banks, but also securities houses, insurance companies and other financial institutions — including national and international payments systems and their linked official government or quasi-official financial intermediary institutions (Scholtens 1992, 474). Government and quasi-government intermediaries may be understood as strategic actors within domestic and international financial systems — through ongoing intervention within national and international money markets (monetary and exchange rate policy), and strategic attempts to exert ‘collective leadership in times of crisis, especially through the lender of last resort institution’ (Bryant 2003, 66-67). Government intermediaries may also seek to reallocate finance towards various industrial, social or public goals, for instance through loan guarantees and the direct subsidisation of credit access at ‘below-market’ interest rates (ibid). Further, in relation to official financial intermediation by China’s monetary authorities, ‘the particular institutional regulatory environment structures intermediary types as well as their activities’ (Stiglitz 1991, 472) As such, particular financial institutions and financial markets exist in a dynamic relationship with existing government financial intermediaries and regulatory agencies. The regulatory system includes the legal system, accounting standards, auditing procedures, the provision of information about the financial sector, monitoring and enforcement through

prudential oversight of financial activity, as well as direct government financial intermediary roles (Bryant 2003, 66-67).

This theoretical understanding of financial intermediation as a value-chain process, which is driven by the pressure to transform existing financial assets to secure and augment present value, provides a flexible approach for understanding financial process, dynamics and financial intermediary activities. It suggests that rather than finance and financial intermediation being an aberration or departure from a the perfectly working market, processes of financial intermediation, mediated in various ways, are better understood as particular social relations that act as leading generative mechanisms in processes of accumulation directly. This is directly accomplished by calculating, pooling and allocating present value and providing new liquidity, and indirectly through the provision of price information. The next section of this chapter extends this theory and analysis of financial intermediation to the question of why international financial intermediary processes have developed in the way they have within international finance.

5.2 **Explaining international financial intermediation**

While financial intermediation within nationally-defined spaces, say between Boston and New York, is not considered a problem, the prevalence of international financial intermediation, i.e., financial intermediation with a cross-border or cross-currency dimension, attracts political and theoretical controversy. An even bigger controversy is over the direction of international financial intermediation between developing countries on the international financial periphery — such as China — and major international financial centres, such as the US. However, the explanation for international financial intermediation here, is similar to the explanation for ‘domestic’ financial intermediation: both are understood as value-chain processes driven by the compulsion to secure and

augment present value. This approach suggests that the accepted view that financial development in developing countries will reduce the level of international financial intermediation is mistaken — what is likely to change is the composition of the intermediaries and the forms of international intermediation.

5.2.1 **A definition of international financial intermediation**

International financial intermediation is defined as 'any financial transformation that involves a cross-currency or cross-country dimension' (Scholtens 1992, 471). Financial intermediation denotes a two-way process in which there is a simultaneous and corresponding increase in financial assets and financial liabilities between two intermediary organisations located in different countries. According to Salant (1972): Financial intermediation is performed when, and to the degree that, financial assets and liabilities increase simultaneously ... countries acquiring liquid assets and less liquid liabilities, as those acquiring liquid liabilities and less-liquid assets, act as international financial intermediaries.

> Thus the saver or investor, and the acquirer and issuer of liabilities are international financial intermediaries. As with financial intermediation: The transformation can be undertaken through various organisational forms. All types of financial assets and claims (tangible, intangible, contingent) are transformed by financial intermediaries with respect to maturity, risk, scale and place between countries and currencies through their international operations (Scholtens 1992, 476).

However, there is no reason why we must understand these international financial intermediary roles in terms of 'countries', as the effect is to give the role of intermediation the appearance of relations between nations. Although there is a spatial or geographical dimension to international financial intermediation because the place where funds were collected, be they cities, states or countries, where not always the area where

they were invested (Kindleberger 1974, 474), the intermediary institutions are not countries. While official government financial intermediaries still intermediate large amounts of capital internationally — not least the two-way process of international financial intermediation between China's official financial sector and their US official and quasi-official financial markets — with the general removal of capital controls between the key international financial centres, international financial intermediation has been predominately performed between multinational banks, and wholesale banks in particular provide the major network for international capital flows (Scholtens 1992, 475). In this respect, despite the odd prominent exception, the bulk of international financial intermediation is privately mediated and decentralised, and so should not be presumed to express national attributes.

A key problem however, is explaining the prevalence of international financial intermediation. This conceptual problem arises in part because of the prevailing assumptions about how finance should conform to idealised nationally-centred processes of accumulation. The view that financial processes should primarily be national was central to Keynes' framework — let finance be homespun wherever possible — but it also fits the full spectrum of nationalist, including developmental and social democratic, politics. International financial intermediation is an aberration according to the standard international economic theory, in which large-scale and sustained processes of international financial intermediation are viewed a departure from 'equilibrium' for each individual nation-state, and therefore beg policy 'adjustment'. The standard explanations are either state policy interference (e.g., fixed exchange rates) or the myopic views of private investors (investing in US dollar bonds). However, other theories include differing international 'liquidity preferences', 'information asymmetries' and a lack of domestic 'financial development' in developing countries. These explanations for international financial intermediation are evaluated in light of the theory of financial intermediation advanced in this chapter.

The explanation for international financial intermediation based on differing international 'liquidity preferences' is attributed to Kindleberger (Salant 1972, 633-34). At issue in the notion of liquidity preferences are the risk/return calculations and preparedness of investors to hold less liquid, higher return assets in preference to cash. But there is a problem with the tendency to assign 'national' attributes to liquidity preferences, when it is the preferences of individual investors and investment institutions. The notion of liquidity preferences came into play during the Bretton-Woods era debate about the composition and pattern of international financial intermediation in US international financial markets. In short the problem lay in explaining why non-US international investors preferred to sell long-term financial assets and invest in short-term US financial assets, whereas, US investors preferred to buy long-term financial assets and sell short-term financial assets. But the answer that international investors have different 'liquidity preferences' begs more questions than it answers. One line of inquiry, however, is to consider the supply and demand for international financial assets from both directions. As such, an abundant supply of short-term, relatively low-risk internationally marketable securities, is a common supply-side explanation for why key international financial markets attract international funds. Hence, the oft stated claim that the key international financial centres are those that provide international financial intermediary services on a greater scale, breadth, depth, at a lower cost, and — ideally — with more security than their competitors. Thus the task of explanation must pass to the deeper question of the relative financial development, understood as the breadth (of institutions and instruments) and the depth of financial markets (a measure of accumulated value), of key international financial centres. On the other side, there are a number of reasons for the demand for international financial assets, but one reason is 'as an outlet for funds not easily utilisable within the country...' (Goldsmith 1979, 47). This explanation is discussed below in relation to the demand for international financial intermediation from less developed countries.

5.2.2 **International financial intermediation in developing countries**

An even bigger conceptual problem is explaining the demand for international financial intermediation from investors and institutions within developing countries. Although the phenomenon is typically considered to be perverse from various developmental and geopolitical perspectives, it remains to be understood. The problem lies in explaining why, at any early stage of development, financial sectors in peripheral countries have a high level of financial intermediation through offshore international financial centres, and a relatively low level of domestic financial intermediation (Kindleberger 1976). While such relative measures require empirical investigation, assuming the proposition holds at some level, its corollary is the hypothesis that domestic financial development in the periphery will reduce the level of offshore international financial intermediation as it is replaced by domestic financial intermediation. This hypothesis will be examined in relation to recent Chinese official reserve accumulation (a form of international financial intermediation) and financial development in China in chapter seven of this thesis. For now, we will consider Kindleberger's (1976) explanation for the demand for international financial intermediation from individual asset holders and institutions within developing countries.

International financial intermediation is the primary process through which international capital 'outflows' from developing countries take place. The reasons for capital outflows from developing countries can include 'official' and 'unofficial' causes, and these can be generated by quite different mechanisms, as is discussed in the case of recent capital outflows from Chinese sources in chapters seven and eight of this thesis. One relatively common form of capital outflow problem faced by authorities in developing countries is when local asset holders seek to move local currency funds out of domestic currency and

domestic financial institutions, and even move them offshore — which is a form of domestic financial dis-intermediation. This problem can be so acute that a dollar of local credit creation effectively leads to a dollar of capital outflow, or a dollar of imports, which has the same effect. This was the substance of a report by the head of the IMF 'mission' to India in 1952, who noted that:

> the extent to which domestic money creation result in capital outflows (or increases in imports) is a function of the development of the country, and more generally, its level of income and specifically, the sophistication of its money and capital markets (cited in Kindleberger 1976, 129).

Accordingly, Kindleberger (ibid) held that the scale of international financial intermediation fell with the development of internal capital and domestic bank and financial markets, a proposition which is discussed below. By contrast, at an early stage of financial development, Kindleberger (133) held that 'international intermediation proceeds domestic, rather than the other way around, and one that is followed by some international financial disintegration as a national money and capital market rises'. The trend for developing countries is that international integration takes place through one financial centre, with other connections only developing later. Thus early 'surplus' funds in Ontario in Canada tended to be intermediated through the main North American financial centre in New York in the US rather through Toronto; direct 'national' financial integration followed later (134). It seems reasonable to suggest that a comparable process explains the intermediation of a surplus from China's SAFE branches in Guangzhou, Shanghai and Beijing to the US treasury markets.

The reasons why international financial intermediation takes the form of capital flows from the periphery to the centre are similar to the wider reasons for international financial intermediation, but there are also particular features of financial systems in developing countries. Whereas the key international financial centres have 'economies of scale'— that is, larger financial markets that provide 'greater specialisation in instruments and

techniques, and the spread of risk through the insurance principle' — by contrast, local and developing country financial markets have dis-economies of scale (Kindleberger 1976, 133-34). Thus, there is a demand from 'savers' in developing countries for international financial intermediation with the key financial centres. The pattern of developing country savers lending to developed country firms or governments could be readily explained, according to Salant (1972, 620), by the preferences of developing country savers,

> where highly sophisticated savers in less-developed countries prefer to lend directly to business firms in a developed country, rather than to any borrowers in their own; or where some sophisticated savers (non profit foundations, for example) in a developed country lend directly to finance purchases of goods and services by a borrower in another country.

A crucial category of 'highly sophisticated savers' in less developed countries, especially within 'emerging markets' are the central official financial authorities, for whom integration with key international financial centres might provide the benefit of securing the present value of locally held financial assets when further local investment is either not viable or not wanted.

However plausible these rationales for the direction of international financial intermediation, the assumption that financial market development in the periphery will reduce the level international financial intermediation from more advanced financial centres, is questionable. There is a general and a specific proposition here. The general proposition is that international financial intermediation is driven by holders of financial assets (money-value) to secure (if not augment) the present value of those assets into an uncertain future — in this respect there is no reason why patterns of financial investment from the periphery or even other international financial centres should be expected to be 'internally' resolved. The key issue here is that patterns of international accumulation are fundamentally *uneven processes* that generate *differential rates of financial return*

internationally, and this is just as much the case between ‘advanced’ industrial and financial centres, such as the Euro zone and the US, as it is between ‘developing’ and ‘developed’ regions. The more specific proposition is that financial development in the periphery, through the accumulation of financial value and the broadening of institutional financial intermediary forms, capacities and financial instruments, is likely to change the composition of international financial intermediation from the more advanced centres, and perhaps even its direction, rather reduce its overall level. As such, to the extent that there is financial development in the periphery on a sufficient scale and depth, it suggests the development of these centres *within* the periphery, with their own internationalised financial markets and a broader range of channels for international financial intermediation. This proposition will be evaluated concretely in Chapter eight of this thesis.

Conclusion

The reasons for international financial intermediation are not fundamentally different to the reasons why financial intermediation arises in general — what is different are the cross-border and cross-currency dimensions of the international financial intermediary processes. The real controversy about patterns of international financial intermediation arises because of the conventionally held view that financial relations should ‘equilibriate’ within national borders on economic, developmental or national political grounds. Nevertheless, there are definite patterns of international financial intermediation; the proposition in this thesis is that these processes are driven by the prevailing relations of capital in which investors (holders of financial assets) seek to secure the present value of those assets, discounted into some future time horizon. The general pattern of financial intermediation from the periphery to key financial centres fits this explanation. However, while financial development in the periphery may change the composition of international financial intermediation, there is no reason why we should

expect the level of international financial intermediation to be reduced overall. The specific processes, forms and strategic choices of particular international financial intermediaries are a concrete question. As such, the next section of this chapter considers the debates over the patterns of international financial intermediation during the Bretton Woods period, before briefly applying the framework to understand the recent pattern of official China-US international financial intermediation.

5.3 **International Financial Intermediation during the Bretton Woods era**

There is striking parallel between recent debates over the sustainability of so-called 'global economic imbalances' and the Bretton Woods era debates about US international liquidity. Although such a conceptual framework for understanding the international financial intermediary role of US international financial markets, and its counterpart in official US dollar reserve accumulation, was put forward during the Bretton Woods era, it is an approach that has been missing in recent debates. In 1966, 'The Dollar and World Liquidity: A Minority View' was published in *The Economist*, in which the economists Emile Despres, Charles Kindleberger and Walter Salant set out to challenge the prevailing consensus about dollar liquidity and the US balance of payments. This 'minority view' is examined below. A conceptual framework based on international financial intermediation offers an alternative approach for understanding the debates over the US balance of payments then and now. The pattern of official reserve accumulation by Germany and Japan in the Bretton Woods era, can also be understood as a form of official international financial intermediation. This international financial intermediary framework is then applied to understand China's recent official reserve accumulation, and the growth in US dollar private and official international liabilities in subsequent chapters.

5.3.1 **A minority view on the US balance of payments**

While there are differences in the period, the consensus international financial view about the lack of sustainability of international US dollar liquidity is remarkably similar to the Bretton Woods era. The alternative conceptual framework put forward however in: 'The Dollar and World Liquidity: A Minority view', by Depres, Kindleberger and Salant (1966), was that the growth of US liabilities on the balance of payments, was driven by the international financial intermediary demand for US dollar assets, and therefore its effect on international financial stability was benign, rather than a sign of international financial 'disequibilirum'. However, the application of this conceptual framework to understanding contemporary problems in international finance has been largely missing from analyses of the so-called global imbalances, including within recent IPE studies.

The Bretton Woods era debates over US dollar and international liquidity centred the problem of whether the expansion of US dollar liquidity was sustainable. A key difference between the debates under Bretton Woods and the recent debates of the sustainability of the US dollar was that in the early period the dollar was nominally fixed to gold. Therefore with the growth in US dollar denominated international liabilities in the 1960s, the sustainability of the supply of US dollar assets was called into question because of the relatively fixed stock of gold backing for the dollar. Nevertheless, the standard view at the time about the causes of the growth in dollar liabilities and its sustainability was strikingly similar to more recent claims about the growth of US dollar denominated international liabilities. Depres, Kindleberger and Salant (1966, 1) summarised the standard view as follows: 1. The international rise in liquid dollar assets (mostly in the form of international reserve assets at the time) was 'generated by US balance of payments deficits'; 2. 'These deficits are no longer available as a generator of liquidity because the accumulation of dollars has gone so far that it has undermined

confidence in the dollar'; and 3. To forestall any flight from the dollar 'it is necessary above all else to correct the United States deficit'.

Depres, Kindleberger and Salant's (1966) minority view of the US dollar and international liquidity rested on an alternative conceptual framework for understanding international money and international payments questions (international finance) as questions of international financial intermediation. They argued that the growth in US dollar denominated international liabilities at the time was benign rather than a sign of either US national or international payments 'disequilibrium'. As Salant (1972, 622-23) put it in a defence of the minority view,

> If the reserve-currency countries allow the supplies of their money to grow enough to meet growing foreign demand for reserves, they will have a growth in liabilities and, since these will be liabilities to foreign monetary authorities, they will have deficits on the official-settlements definition.

The point is that the issue of a US official dollar debt-instrument on the official-settlements, which is the result of an international purchase of a US official debt instrument, also creates by definition a simultaneous liability (the definition of international financial intermediation), but this does not mean there is 'disequilibrium' in either the foreign exchange market or in the balance of international payments settlements in the US or elsewhere. Thus the apparent paradox that 'the dollar could be strong in the foreign-exchange markets when the United States has a deficit in its balance of payments' (Kindleberger (1963) cited in Salant 1972, 618) simply reflected the positive net demand for US dollar assets internationally. Technically of course, the 'balance of payments' remains in accounting balance by definition. Therefore, when it comes to considering the sustainability of the US dollar's role internationally, what matters is the dollar's foreign exchange value, rather than the US balance of payments position, which tells us nothing about the sustainability or otherwise of the underlying relationships.

This conceptual framework here centres on understanding the processes, causes, and forms of international financial intermediation, rather than reading off national accounting identities. In this respect, international capital flows should be understood as being processes and forms of international financial intermediation. As such, changes on the capital (financial) account of the balance of payments could be caused by the 'autonomous' role of international capital movements and thus are not restricted to 'accommodating' current account deficits. Salant (1972) noted that such an approach to understanding international capital flows was entirely absent from the conventional approaches at time, which as is the often the case today, understood cross-border financial transactions as the 'accommodating' counterpart to trade and current account 'balances'. Thus 'capital flows are, wrongly, seen in this literature as a strictly passive accompaniment of current account imbalances' (Scholten's 1992, 478). Therefore, the problem of explanation should centre on an explanation for processes of international financial intermediation, including why there remains a positive international demand for US dollar assets.

Depres, Kindleberger, and Salant (1966, 8) further asked what benefit there was in focussing on 'correcting the deficit' when it wasn't a sign of disequilibrium, but a product of net demand for liquid US assets, in the context of expanding international growth. Similarly, this thesis argues (in chapter eight) that the recent run up in 'global economic imbalances', especially the official international reserve accumulation in US dollar assets, reflected a positive relationship between liquid capital flows to the US and the total levels of growth in world trade, rather than a sign of disequilibrium in need of correction. This is not to argue that financial stability is inherent in the process of international accumulation, it isn't, rather that the diagnosis of 'payments deficits' (or surpluses for that matter) as a necessary sign of disequilibrium is misplaced.

Finally, this conceptual framework for understanding international financial relations in terms of the processes and forms of international financial intermediation, has been almost entirely absent from IPE studies of international finance. A recent, albeit minor, exception is the cursory consideration given by Schwartz (2009, 31) to understanding the role of US international financial markets as a form of international financial intermediation — which unfortunately, he dismisses as a 'big bank' analogy that fails to account for the 'political' role of monetary authorities as agents within the international financial system. This objection is not warranted, because it misunderstands the substance of the conceptual framework, which offers an alternative way of understanding the financial processes and relationships entailed in international balance of payments phenomena. It is not a substitute for a many-sided concrete social science inquiry. In this respect the political role of key strategic agents is a separate question, which, although concretely related in the sense that the concrete is made up of many determinants, is a different object of analysis.

5.3.2 **Official reserve accumulation under Bretton Woods**

There are also similarities in the phenomena of official international reserve accumulation during the Bretton Woods era, especially by German and Japanese monetary authorities, and more recent experience of official reserve accumulation — hence the 'Bretton Woods II' analogy made by economists Dooley, Folkerts-Landau and Garber (2003). However, whereas these economists mistakenly rest their case on the claim that there has been a deliberate strategy of 'currency undervaluation' by monetary authorities in the rapidly growing international financial periphery countries, there is no reason why such a claim should be central to a comparison between periods. However, the US dollar was used as the primary international 'unit of account and means of settlement' by authorities in post-war Germany and Japan who maintained fixed

exchange rates to the dollar and accumulated and ran down liquid dollar assets throughout the period (McKinnon 1993, 19). Yet, although the process of international financial intermediation between the US and peripheral authorities in Germany and Japan was similar, different monetary policy requirements in each case generated a different level of demand for US dollar reserves. This experience suggests that official reserve accumulation should be primarily understood as a by-product of fixed exchange rates and monetary policy objectives, rather than as a deliberate policy objective or as a deft political bargain.

The pattern of international financial intermediation between the US as the key international reserve centre, and the rapidly growing, but financially peripheral, Germany and Japan during the Bretton Woods era has similarities with recent international financial patterns. From the 1950s until the late 1970s Germany and Japan experienced not only post-war reconstruction, but also a sustained phase of manufacturing-led industrialisation, characterised by rapid capital accumulation — much as has been the case in China in recent decades. In each case local authorities on the international financial periphery sought to ‘lean against’ the US dollar denominated international financial system to facilitate ‘internal’ capital accumulation. The origins of these arrangements were however, different. The role of the US dollar in the reconstruction of Germany and Japan was the result of major historical-institutional events — the occupation of those countries by the Allied powers under the United States — as well as the strategies pursued to deal with immediate post-war economic problems faced by both the centre and periphery. This is not the place for an overall analysis of that complex political economic situation; rather two points stand out for consideration.

A strategy of dollar based stabilisation, which included the establishment of dollar payments mechanisms was integral to both the Marshall Plan in Europe in 1950, and the Dodge Plan in Japan in 1949-50. In both cases the European countries and Japan adopted

‘fixed dollar exchange rates’ to provide an anchor for both national monetary policies and domestic and export price levels. Within Europe:

> [The] Marshall Plan’s most important progeny, the European Payments Union was established for clearing payments multilaterally within Europe by using the US dollar as both the unit of account and the means of settlement. Thus, each European central bank found it convenient to maintain an [sic] exactly fixed dollar exchange parity without even a narrow band in settling its net EU payments imbalances every month (McKinnon 1993, 19-21).

The Dodge plan in Japan similarly established US dollar fixed rates and payments. Indeed Japan maintained a fixed exchange rate par value at 360 yen to the dollar from 1949 to 1971. A strategy of integrating both areas into the international dollar system was pursued to stabilise local prices and facilitate international payments as part of post-war reconstruction plans (Block 1977).

The relationship between growing US dollar liquidity and official international reserve accumulation by monetary authorities in Europe and Japan can be understood as a two-way process of international financial intermediation. US authorities, at the financial centre, maintained a passive position on the balance of payments — that is, they extended international liquidity on the basis of demand. Meanwhile authorities on the international financial periphery maintained fixed dollar exchange rates against the US dollar, and accumulated or ran down dollar reserves as a consequence of their ‘overall’ balance of payments position and ‘the ease of tightness of their domestic monetary policies’ (McKinnon 1993, 17). As a result of the fixed exchange rates to the US dollar, authorities in Germany and Japan automatically accumulated US dollar reserves in response to ‘overall’ deficits or surpluses on their balance of payments. However, the pattern of official reserve accumulation also differed in response to other domestic monetary policy objectives. In Japan between 1950 and 1967, almost all foreign exchange earnings were converted by Japanese monetary authorities to domestic money and credit expansion to meet the demand for domestic money in a very rapidly growing economy — and thus

official foreign exchange reserves were kept at less than US$2 billion for the entire period. By contrast, the German Bundesbank kept a much tighter rein on domestic credit growth which generated a very rapid build-up of official foreign exchange holdings to over $8 billion dollars (ibid, 18). Authorities allowed either a build-up or draw-down of official foreign exchange reserves in response to an inflow of foreign exchange, accompanying an 'overall' payments surplus or deficit. This suggests, that although official foreign exchange accumulation was a 'swing mechanism' for authorities with fixed exchange rates that different monetary policy objectives also determined the level of official foreign exchange accumulation.

Conclusion

The phenomena of growing international liabilities issued in the international financial centre currencies and official reserve accumulation on the international financial periphery in those currencies can be understood as a two-way process of international financial intermediation. International financial intermediation therefore provides an alternative conceptual framework for understanding the pattern of international payments. Although this approach constituted an important minority view in international financial debates under Bretton Woods, it has been missing in recent debates over the so-called global imbalances. Understood as one side of a process of international financial intermediation, the expansion of US dollar denominated liabilities can also be understood as a product of the demand for those assets internationally, rather than a sign of international payments disequilibrium that beg policies of current account deficit reduction or 'global rebalancing'. The experience of official reserve accumulation by monetary authorities with fixed exchange rates during the Bretton Woods era suggests that official foreign exchange reserve accumulation — a form of international financial intermediation — was largely a by-product of other foreign exchange and monetary policy objectives, rather than a deliberate policy objective of international reserve accumulation.

Conclusion to chapter five

This chapter has sought to develop an alternative framework for understanding international financial relations by drawing on and augmenting a theoretical explanation for the dynamics of international financial intermediation as a value-chain process that is driven by risk and risk management (Scholtens and Van Wensveen 2003). This theoretical understanding of financial intermediation as a value-chain process which is driven by the pressure to transform existing financial assets to secure and augment present value, provides a flexible framework for understanding the phenomena of official international reserve accumulation, as well as the expansion of financial liabilities by international financial centres. A conceptual framework based on international financial intermediation constituted an alternative minority view in the international financial debates during the Bretton Woods period, over the expansion of US dollar liabilities and official international reserve accumulation. The experience of official reserve accumulation by German and Japanese authorities during the Bretton Woods period suggests although there were differences in the level of official reserve accumulation, authorities in these countries accumulated official international reserves — a form of international financial intermediation — as a by-product of fixed exchange rate policy objectives in the context of 'overall' payments surpluses. This theoretical approach to international financial intermediation provides the basis for a more substantive and concrete analysis of the development and implications of China's official reserve accumulation in chapters six, seven and eight of this thesis.

Chapter 6

Components of China's recent payments surpluses and high savings:

The role of rising corporate profits

This chapter is the first of three chapters (part three of this thesis), which together seek to apply the theoretical and conceptual framework developed thus far in this thesis to analyse China's recent official foreign exchange accumulation as a problem in understanding international finance. The analysis starts by asking where China's recent surpluses come from (Chapters six and seven), before looking at why they have taken the form they have (Chapter eight) and what the implications are of China's recent official reserve accumulation (Chapter eight).

This chapter has a restricted scope — to provide a descriptive empirical analysis of the main components of China's recent payments surpluses and high savings. The first challenge in this chapter is accounting for the size and the components of China's recent official foreign exchange accumulation. Section 6.1 begins with a descriptive empirical analysis of recent official reserve growth based on data reported by Chinese monetary authorities, shows the limits of the functional reserve adequacy benchmarks as rationalisations for reserve holding including explanations based on precautionary rationalisations and then breaks down the main components of China's recent official foreign exchange accumulation. In 6.2 the empirical analysis then proceeds to the more substantive task of disaggregating China's balance of payments and national savings-investment data — and evaluates some common explanations for China's recent 'high savings'. This empirical analysis reveals the following: China's recent rapid official reserve accumulation is a relatively recent development, which didn't take off until 2001; foreign exchange inflows were initially dominated by financial inflows but were displaced by trade originated currency inflows from 2005; further the analysis of the

‘national’ savings components (i.e., stocks rather than flows) suggests that a rising share of corporate profits has driven the sharp rise in ‘national’ savings in this period. The rising share of corporate profits in gross national savings challenges the popular assumption that official savings result from a cultural propensity to save by Chinese households or the government sector. This preliminary empirical investigation is then used to guide the analysis of the deeper causes of China’s recent surpluses and official reserve accumulation in the following chapters.

6.1 **Accounting for China’s foreign exchange accumulation**

This section pulls together official data on China’s official reserve holdings before moving to disaggregate the sources of reserve growth from the early 1990s. The analysis here is not to provide false statistical certainty, but to present the main trends and basis reserve data as a guide to deeper investigation of the sources China's recent official reserve accumulation and its underlying causes. Although the balance sheet of the People’s Bank of China (PBC) accounts for most of China’s foreign exchange assets, foreign exchange reserve assets are also held by other Chinese state-owned financial institutions, and therefore also are included here in the estimates of overall foreign exchange accumulation. Further, although the nominal scale of China’s reserve growth gets much attention, measures of relative scale and reserve adequacy measures are better estimates of scale. The empirical analysis then proceeds to disaggregate the shifting components of China’s recent balance of payments surpluses from the early 1990s until 2008. The two primary channels of foreign exchange inflows into the PRC have been trade earnings on the one hand and capital and financial inflows on the other. However, the relative contribution and scale of these sources has varied considerably over the past

decade, with capital inflows playing an important role up until at least 2005 before being dwarfed by foreign exchange inflows from the trade surplus in the subsequent period.[25]

6.1.1 **The size and composition of China's official reserve holdings**

There are problems with measuring China's official reserve holdings. Official data on the stocks of China's foreign exchange reserves are reported by both the PBC and SAFE on a monthly basis. SAFE officially manages China's foreign exchange reserves under the authority of the PBC, and foreign exchange reserves are reported directly by SAFE (2009) as well as in the PBC (2009b) *Balance Sheet of Monetary Authority* monthly releases. Although monetary authorities in industrial countries report the amount and currency composition of their official reserve holdings to the IMF, monetary authorities in many developing countries — including China's — have generally not reported the currency composition of their reserves.[26] Swings in the value of the dollar, and other currency assets in which China's reserves may be held, would have a potentially large valuation effect on China's foreign exchange assets. Despite this limitation, the scale and trends in China's foreign exchange asset accumulation can be ascertained from the official foreign exchange data provided by SAFE and the official balance sheet of the PBC.

There are two reported sources of foreign exchange data provided by Chinese monetary authorities, by the SAFE and the PBC on a monthly basis. The data shown here is compiled from both sources, and the sources and calculations made by the author are detailed in a brief statistical appendix at the end of this thesis. Suffice to say here, there is

[25] Based on capital and trade data in Figure 6-2, p.4 in this chapter
[26] The currency composition of official reserve holdings are reported in the International Monetary Fund's Currency Composition of Official Foreign Exchange Reserves (COFER) database. Available at: http://www.imf.org/external/np/sta/cofer/eng/index.htm

a discrepancy between the SAFE data and the PBC data — US$200 billion at the end of June 2009. This discrepancy seems to be accounted for by the foreign exchange asset holdings of the State-Owned Commercial Banks, which is reported as a separate line item on the PBC's balance sheet (Setser and Pandey 2009). With these limitations in mind, Figure 6-1 shows the rise in China's foreign exchange reserve holdings for the period January 2000 to the end of June 2009.[27]

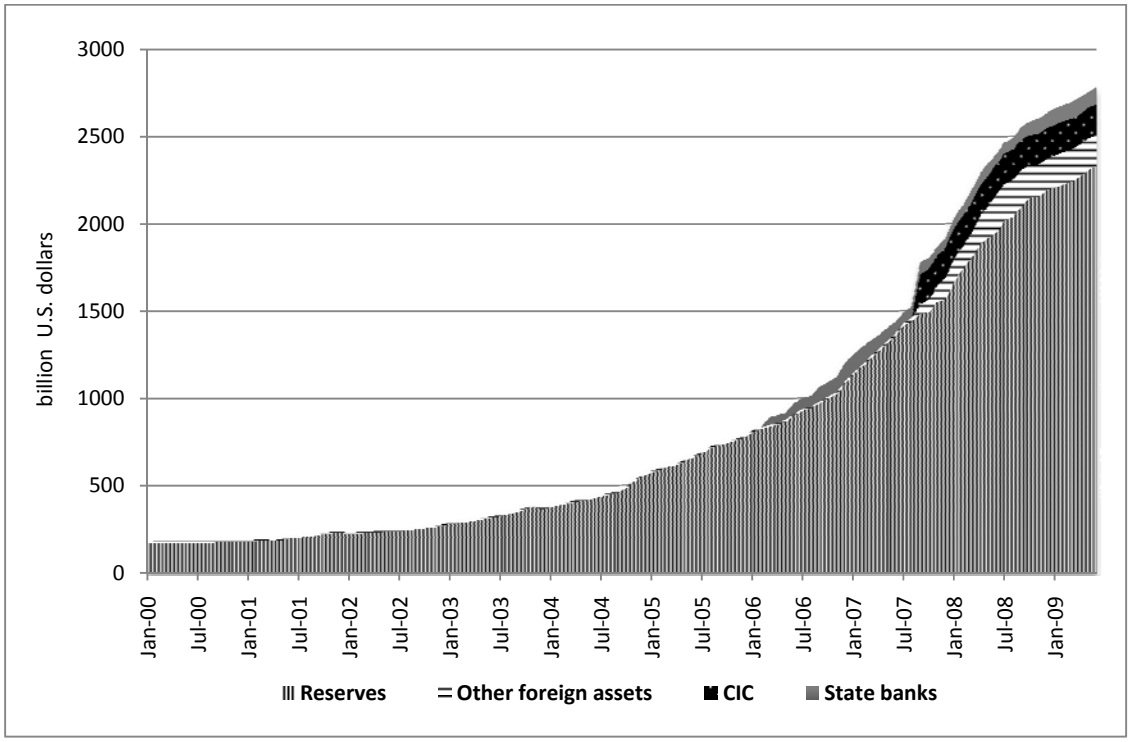


Figure 0-1 China's foreign exchange assets, 2000-2009 (in billion U.S. dollars).
Author's calculations based on monthly data from PBC (2009b, various years) and CIC (2009). Source: Setser and Pandey (2009).

China's monetary authorities reported US$2.35 trillion in foreign exchange reserves on the balance sheet of the PBC at the end of June 2009 (see appendix). Of those foreign

[27] Figure 6-1 applies the method in Setser and Pandey (2009) to account for China's total foreign exchange assets, but uses more recent data compiled by the author as well as independent calculations (see appendix). In-text figures here are for the end of June 2009. Figures given are reported balance sheet data of the SAFE or PBC data. See data appendix for details of Figure 6-1.

exchange reserves $2.13 trillion were reported as managed by the SAFE (2009), which manages the reserves under the authority of the PBC.

However, China's monetary authorities and state-owned financial institutions also hold large amounts of additional foreign exchange assets that are reported by Chinese monetary authorities as foreign assets, but which are not counted as foreign exchange reserves. These additional foreign exchange assets are indicated in Figure 6-1 and shown in table 6-1 below.

Estimated official Chinese foreign exchange assets	3rd Quarter 2009
Foreign Exchange Reserves (managed by SAFE) [1]	$2,529
Other foreign assets of the People's Bank of China [2]	$174
State-owned Commercial Banks [3]	$101
China Investment Corporation (not including state bank holdings) [4]	$260
Total (in billion US dollars)	$3,065

Table 0-1 Estimated official Chinese foreign exchange assets (in billion US dollars).
Data: 1. SAFE (2009), 2-3. PBC (2009b), 4. Bloomberg (2009). Source: updated data based on Setser and Pandey (2009). For details see appendix.

An additional US$174 billion of foreign exchange was held by the State-Owned Commercial Banks (SOCBs), reported on the PBC's balance sheet as 'other foreign assets', while another $100 billion is estimated by the author to have been held by the SOCBs off the PBC's balance sheet (appendix). Further, US$260 billion, or 87 percent of the China Investment Corporations US$298 billion in foreign assets, were held in cash or cash-instruments, that is, foreign exchange. Together, these official foreign exchange holdings totalled an estimated $3.065 trillion at the end of September 2009, half a trillion or $500 billion more than reported as official foreign exchange reserves.

There has been a great deal of interest in the currency composition of China's official reserve assets, not least because of its implications for the institutional anchor provided by China's foreign exchange asset holdings of the US dollar. China's reserves are thought to be mostly held in US currency denominated instruments such as US Treasuries and other agency securities, with the remainder in euros and other currency instruments (Prasad and Wei 2005, 12). The high US dollar composition of China's foreign exchange reserves can be inferred from a number of sources. Firstly, reporting on the currency pairs traded in China's onshore foreign exchange market through the China Foreign Exchange Trading System (CFETS 2009) reporting and the Bank for International Settlements (BIS 2007) triennial foreign exchange survey suggests up to 99 percent of cross border invoicing for trade and capital inflows in the period under examination has been in US dollars. In terms of official holdings of foreign exchange holdings, the composition can be inferred from both the predominance of the US dollar in invoicing and the internationally reported composition of foreign exchange reserves to the IMF and reported in its Currency Composition of Foreign Exchange Reserves database (COFER 2009), as well as US Treasury Capital Inflows data which records the residence of US securities purchases and stocks. There are limitations to both sets of data which are discussed in chapter seven, but for now both of these sources suggest foreign exchange holdings in the region of 60-70 percent (Prasad and Wei, ibid).

6.1.2 **The problems of scale and functional explanations for reserve accumulation**

Based on the calculations in this thesis, the stock of foreign exchange assets held by China's monetary authorities, the state-owned banks, and the China Investment Corporation stood at US$3 trillion at the end of September 2009 (see table 6-1). Of those assets, somewhat less, $2.35 trillion at the end of September 2009 was held on the balance sheet of the People's Bank and is therefore technically considered to be official

foreign exchange reserves — i.e., liquid foreign assets at the disposal of the monetary authority. While this is a big sum, nominal measures do not tell us that much about the scale of China's recent foreign exchange accumulation — and therefore some more appropriate measure of scale is needed. A range of reserve adequacy benchmarks have been developed by economists and monetary policy officials, but these are also problematic for two reasons — the popular tendency to use pre-'financial globalisation' measures, and the tendency to rationalise the causes of reserve accumulation based on some functional measure. This problem of functional rationalisation is evident in the appeal to precautionary policy motives to explain China's recent official foreign exchange accumulation.

China's recent reserve accumulation is often measured against reserve adequacy benchmarks, and while post-financial globalisation measures are more relevant than trade-based measures, there are limits to functional rationalisations based on these reserve adequacy benchmarks. The trade-based reserve adequacy measure, in which the 'optimal' ratio of official reserves is benchmarked to three months of imports, is often employed in empirical studies (e.g., Zheng and Yi 2007) and policy reports (e.g., Green and Torgenson 2007, 6) on China's official reserve accumulation. However, trade-based measures are no longer analytically relevant because they are based on the pre-financial globalisation assumption that monetary authorities must hold enough official reserves to cover any shortfall in international payments arising from a current account deficit (Ben-Bassat and Gottlieb 1992, 1). Financing three months of imports may be a problem for some small developing countries with fixed exchange rates and persistent balance of payments deficits, but the international financial risk faced by authorities in 'emerging markets' is on the capital and financial accounts, not on the trade account.

Rather than financing current account deficits, the risk of large-scale financial reversals has been primary rationalisation of emerging market monetary authorities for reserve

accumulation, including China's authorities. This precautionary explanation for recent official reserve accumulation has been put forward by the PBC governor Zhou Xiaochuan (2009b). The relevant financial 'reserve adequacy' is the ratio of official reserves to external debt and broad money (M2). Many of the crisis hit emerging market countries in 1997-98 in East Asia as well as Latin America had very high ratios of foreign currency denominated debt to official reserves (Wijnholds and Sondergaard 2007, 11). However, the relative lack of official reserve backing for that level of foreign currency debt was central to the crises, and this forced deprecations in the majority of crisis-hit countries. Yet within a few years, authorities in the crisis-hit countries had rapidly rebuilt reserve levels, and reduced international debt. By 2001, emerging market authorities had adopted a new reserve adequacy benchmark — they should hold foreign exchange reserves at least equal to the level of aggregate short-term debt — i.e., debt with a maturity of less than one year (Wijnholds and Kapteyn 2001, 31). Thus the precautionary rationalisation for recent official reserve accumulation by monetary authorities in emerging markets, including China.

However, this precautionary explanation tends to rationalise recent official reserve accumulation as conforming to some functional measure — which also becomes the 'policy'. But there is no reason to accept that recent reserve accumulation is either functional or a policy outcome. As new ratios of external debt to official reserves have been statistically verified in many post-crisis emerging market economies, these new reserve-external debt ratios have been rationalised as a new policy of precautionary reserve accumulation, when other mechanisms may have been at work. This is not to deny that precautionary motives have informed central bank strategy in emerging market economies in the wake of the crises of the early and late 1990s. Rather it is to argue that other non-policy factors, such as 'structural' and 'cyclical' mechanisms must be considered in any explanations for recent patterns of official foreign exchange accumulation. In the case of emerging markets in East Asia, the post-crisis pattern of

rapid falls in corporate debt (external debt), and the collapse in new corporate investment relative to savings (Asian Development Bank 2007, 46-65) — were the primary causes of rising payments surpluses and therefore of post-crisis reserve accumulation.

Nevertheless the 1997-98 financial crisis is widely held to have left a deep psychological impact on central government authorities (Liew and Wu 2007; Nolan and Wang 2007, 107), and authorities enacted stringent policy measures to reduce external borrowing by domestic firms and financial institutions through tighter capital controls. A few points stand out from the data on the aggregate level of total reserves to external debt in mainland China over this period, shown in figure 6-2 below.

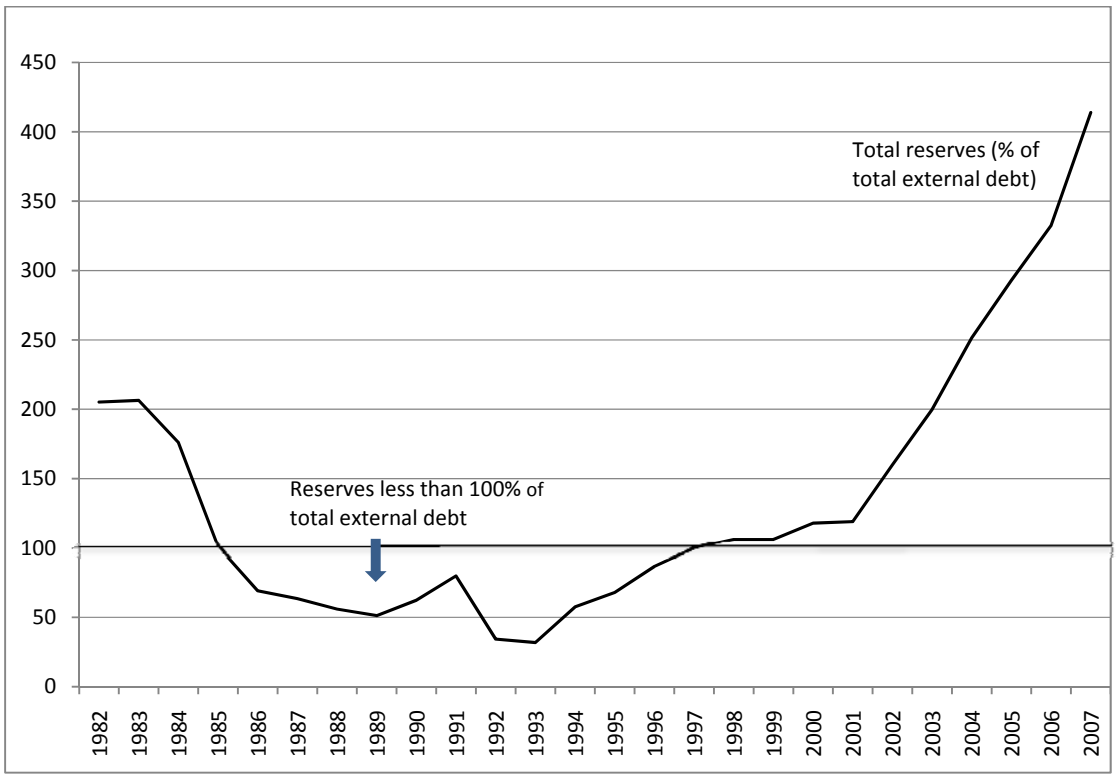


Figure 0-2 China, total reserves (% of total external debt).
Data: World Development Indicators (Online), World Bank.

Between 1985 and 1998 China's monetary authorities' stocks of official reserves were well below the level of external debt i.e., cross-border and mostly cross-currency debt, held by mainland Chinese firms and financial entities. These reported stocks of reserves and debt hit parity in 1998, there was a small increase in the percentage of reserves to external debt between 1999 and 2000, and then a sharp increase from 2001. The impact of the 1997-98 financial crisis and the relationship between these official policy changes and post-crisis official reserve accumulation is discussed more fully in chapter eight. For now however, the proposition is that while the precautionary motive might explain policies that sharply reduced external debt in the wake of the crisis, precautionary policies are not sufficient to explain the sharp rise of reserve accumulation from 2001, an outcome which this thesis suggests is better understood as a by-product of other policy and structural changes.

6.1.3 **Components of China's official reserve growth**

Empirical evidence about the components of China's recent foreign exchange accumulation — and the relative contribution of those components — can be derived from an analysis of China's balance of payments statistics. The data and analysis here does not explain the causes or mechanisms that have generated these balance of payments outcomes, but it does provide a guide to analysing existing propositions and is a starting point for deeper levels of analysis. The analysis below starts with the components of reserve growth in the period from 1995 and 2008, then presents a periodisation of the components of reserve growth-based balance of payments data since 1990, before evaluating issues of causality and explanation.

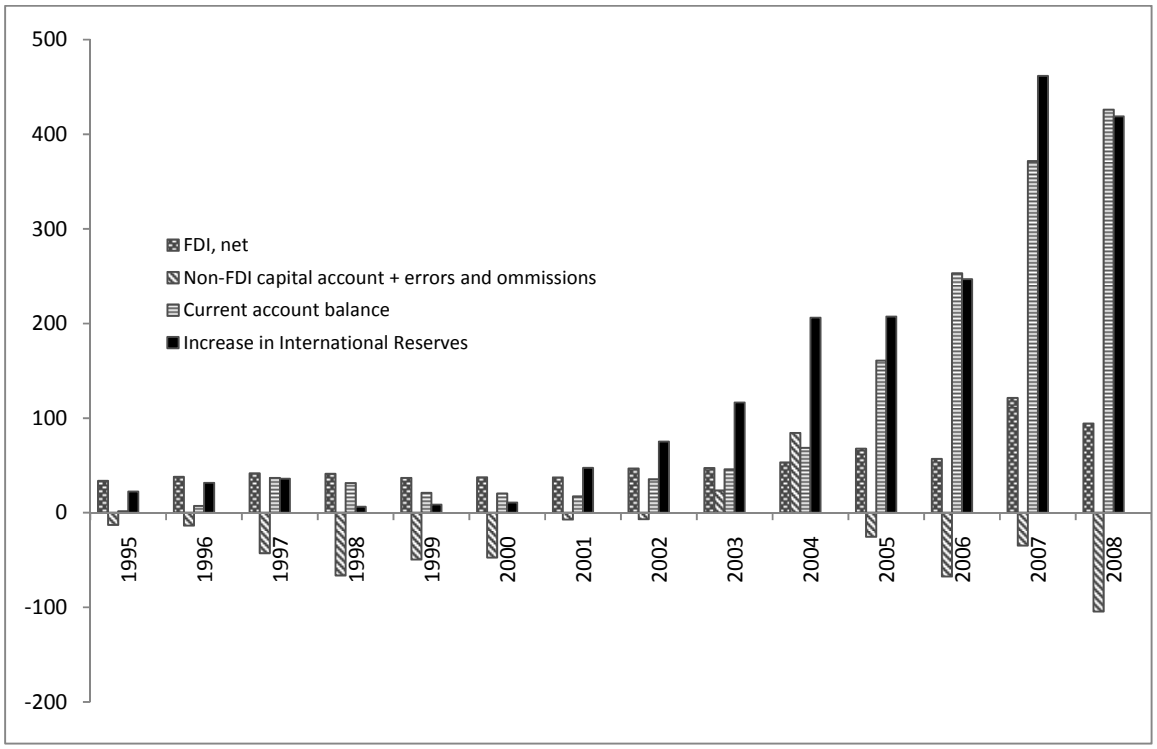


Figure 0-3 Components of reserve growth, 1995-2008 (in billion US dollars).
Data: International Financial Statistics (Online) and author's calculations.

The aggregate components of China's recent reserve growth shown in figure 6-3 (above) are derived from China's balance of payments statistics from 1995 to 2008. The components are presented for each year in the following order: net Foreign Direct Investment (FDI); the non-FDI capital account balance including errors and omissions (taken as proxy for unrecorded capital flows); the current account balance and the last column in each year is the annual increase in China's international reserves. As figure 6-3 reveals, China's official reserve accumulation is a recent phenomena. From 1997-2000, reserve levels did not grow. While FDI was as a source of foreign exchange inflows, both FDI and the current account were heavily outweighed by non-FDI outflows (including net errors and omissions) on the financial accounts. This is consistent with a period of 'capital flight' from China during and after the crisis, which is analysed in chapter

eight.[28] Rapid accumulation did not begin to until 2001. Despite the popular assumption, the contribution of a current account surplus (net exports minus imports) to official reserve growth (from trade-originated foreign exchange inflows) is a recent development since 2005. Between 2001 and 2005, the current account surplus was a modest source of foreign exchange inflows that was outweighed by FDI and non-FDI financial inflows. By contrast, in the year to 2008 China's PBC reported US$880 billion in new foreign exchange reserves,[29] accounted for by $675 billion from the current account surplus, $215 billion in net FDI inflows, and $61 billion in portfolio inflows, and partially offset by $190 billion in non-FDI investment outflows.

A periodisation of China's reserve accumulation, from 1985 to 2008, is presented in table 6-2 (below), based on the author's analysis of China's balance of payments data. Changes in official reserves from 1985 to 1993 were small (prior to the mid-1990s economic boom), and any reserve increase was by a low-level of, but rising FDI inflows, moderated by low-level current account deficits and surpluses.

[28] In the literature on capital flows in developing countries net errors and omissions have often been taken as proxy for unrecorded capital flows or 'hot money'. Although strong rises in net errors and omissions are observable in periods corresponding with widespread reporting of large scale unrecorded capital outflows or inflows, the measure is also problematic because it may include valuation changes in foreign asset holdings (see Ma and McCaughley 2008). In the case of China's balance of payments data, the category 'net errors and omissions' may also include 'valuation' changes on foreign currency reserve holdings (Prasad and Wei 2005).

[29] The figures given here are author's calculations based on annual balance of payments data for Figure 6.3, and are rounded to the nearest $5 US billion. The full balance of payments table is available in the appendix.

Period	Change	Variables
1985-93[1]	Small changes	Low but rising level FDI inflows, low current account deficits and surpluses
1994-97	First rise in accumulation, av. $30 billion a year	Strong capital account inflows, mainly FDI av. $40 billion a year. Significant errors and omissions (ie. unofficial outflows), minus $16 billion a year. Negligible to low current account surplus.
1998-2000	Little change	Sharp rise in non-FDI outflows including errors in omissions (minus av. $54 billion a year) countered FDI inflows and strong current account surplus
2001-2003	Sharp rise in accumulation, av. $80 billion a year	Rising export surplus, continued strong FDI inflows, and swing from non-FDI outflows to strong non-FDI inflows.
2004-2006	Doubling in rate of accumulation, av. $220 billion a year	Explosion of export surplus, strong and rising FDI inflows, shift from strong non-FDI inflows to strong-non FDI outflows
2007-2008	Doubling of rate of accumulation, av. $440 billion a year	Continued explosion of export surplus, rising FDI inflows, and rising portfolio inflows, but other non-FDI outflows incl. Errors and omissions rising

Table 0-2 Periodisation of China's official reserve accumulation.
Source: Author's calculations and analysis of reserve and balance of payments data (see appendix). Note: 1. The period for 1985-1993 is from Prasad and Wei (2005).

The first stage of reserve accumulation — an average rise of $30 billion a year in new reserves — was between 1994 and 1997. The main source of reserve growth in this period was FDI inflows which contributed an average of $40 billion a year, offset by $16 billion in errors and omissions — potentially unofficial capital outflows — while current account surpluses were low. There was little change in China's official reserves from 1998 to 2000. After the 1997-98 financial crisis there were strong deflationary pressures in mainland China and these contributed to a sharp rise in non-FDI outflows (capital flight), but reserves remained steady as outflows were countered by steady FDI inflows and a stronger current account surplus. There was, however, a sharp rise in reserve accumulation between 2001 and 2003 — an average rise of $80 billion a year in new

reserves — from a rising export surplus, strong FDI inflows and a reversal in non-FDI flows. The rate of new reserve accumulation doubled from 2004 to 2006 (averaging $220 billion a year), and doubled again from 2007 to 2008 (averaging $440 billion a year) on the back of an explosive rise in foreign exchange inflows from the trade surplus. FDI inflows remained strong during the 2000s, although there were swings in the direction of non-FDI inflows, from strong inflows to strong outflows.

Conclusion

Based on this empirical analysis of China's recent balance of payments data, the key foreign exchange components of China's reserve accumulation were the rapid growth of the current account surplus from 2001, which doubled again after 2005, followed by strong FDI inflows and the shift from non-FDI capital outflows (after the 1997-98 crisis) to strong non-FDI capital inflows (from the 2000s). This empirical evidence shows that the key source of foreign exchange inflows has been the explosive growth in the trade surplus, accompanied by a surplus on the financial account — called the 'dual surplus' by China's monetary authorities (PBC 2009a). However, the deeper generative causes of these components of foreign exchange inflows remain to be explained, as does the question of why these foreign exchange inflows have resulted in official foreign exchange accumulation. One conceptual problem posed by this analysis of the balance of payments accounts (a measure of cross-border flows), is over the relationship between patterns of savings and investment in mainland China. By definition an overall surplus on the balance of payments (accompanied by net foreign exchange inflows), is identical to net national savings over investment (a stock based measure). While it is difficult to attribute causality to either accounting identity — i.e., the balance of payments or the savings-investment identity — because these identities are always equal by definition, an analysis of the national savings and investment patterns does allow us to further disaggregate the components of China's recent surpluses by key sectors.

6.2 **Savings-based explanations for China's recent surpluses**

This section evaluates the empirical evidence about the sources of China's high national savings to evaluate savings-based explanations for the China's recent official reserve accumulation. According to the national accounting identity, an excess of savings over investment corresponds to either a spatial outflow of capital (or a buildup of a foreign exchange surplus), and an excess of investment over savings must be met by an inflow of capital. However, there has been a pattern of rising net savings over investment in mainland China since the late 1990s. This development is a paradox for neo-classical economic theory because developing countries are actually *capital-poor* countries, that is they have a much lower ratio of capital to investment (including government investment) per capita than industrialised countries, and as such developing countries are not expected to accumulate surpluses or export capital (e.g., Wolf 2009, 115). Before we can return to that conceptual problem, this section seeks to answer empirical question of what accounts for the rising level of savings over investment in mainland China over the past decade. The evidence presented here challenges the popular belief that China's high savings are explained by a cultural propensity to save among mainland Chinese households, or that Chinese authorities have pursued precautionary government saving. Rather, the source of a rising savings over investment ratio in mainland China since the early 2000s has been a sharp rise in corporate profits.

6.2.1 **The rising savings-investment gap in mainland China**

Aggregate national savings and investment rates in mainland China have been very high for the past three decades — characteristics of a period of rapid industrialisation and a high rate of capital accumulation. These high aggregate savings-investment rates can be seen in figure 6-4 below, which shows these aggregates as a percentage of GDP from 1982 to 2008. A persistent surplus of savings over investment emerged in China after the

mid-1990s, followed by a very steep rise in the surplus savings over investment from 2004 onwards, and this corresponds to the balance of payments data.

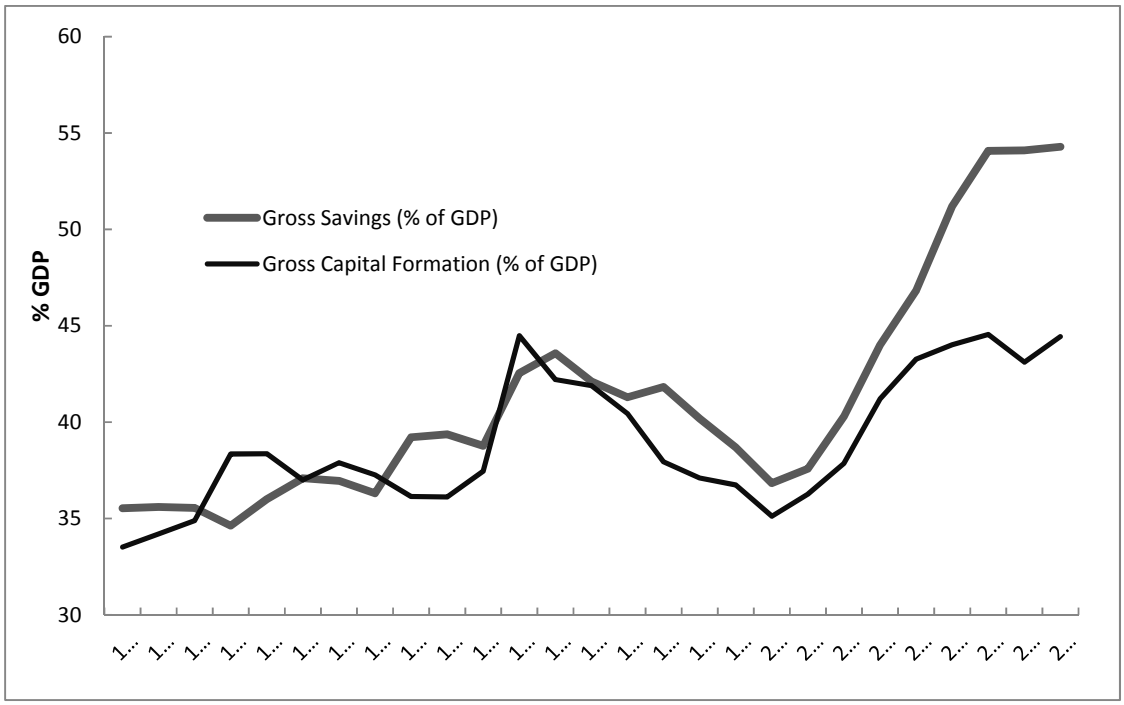


Figure 0-4 China, the growth of savings & investment, 1982-2008 (% of GDP).
Gross savings is calculated as equal to gross capital formation plus the current account. Author's calculations based on CEIC data (various years).

Gross savings has been very high — from an average of 37 percent of GDP in the decade between 1982 and 1991, rising to 44 percent of GDP in the decade between 1992 and 2001 and rising further to 49 percent of GDP between 2002 and 2005. Savings then peaked at 54 percent of GDP between 2006 and 2008. The headline figures, however, must be qualified. The category of 'gross savings' is problematic because it includes 'domestic' savings, the current account surplus and the financial account surplus — distinctions that are not always easy to separate in any calculation of 'gross savings', but which will be drawn out below.

Whatever its sources, high gross savings in China have facilitated a very high rate of fixed-capital investment over the past three decades. Investment in figure 6-4 (above) is measured as fixed-capital formation as a percentage of GDP, and as a broad measure of capital accumulation, it has been extremely high. Fixed capital formation as a percentage of GDP had an annual average of 36 percent in the decade from 1982 to 1991, 39 percent in the decade from 1992-2001 and had reached the 43 percent of GDP a year from 2002 to 2008, with peaks at over 44 percent of GDP in 1993, 2005, 2006 and 2008 (author's calculations based on CEIC data, see appendix). Although very high, such rates of investment and savings are characteristic of earlier phases of rapid manufacturing industrialisation such as those in Japan, South Korea, Taiwan and Singapore during the 1960s (Bauer 2001, 36), and in the United States in the late 19th and early 20th centuries (Sklar 1992), and Britain in the 19th century. Similarly high rates of capital accumulation during these phases mainly took the form of 'factor accumulation' (Bauer, op.cit.) via high rates of fixed capital formation a rapid expansion of employed labour — a point we will return to in more detail in the next chapter. Nevertheless, China's capital share of GDP (measured on a per capita basis) remains very low compared to these earlier phases of rapid manufacturing industrialisation. The recent level of capital spending in mainland China is still only 10 percent of the capital spending level in high income OECD countries (McKay and Song 2009, 266).

6.2.2 **Changing household savings — not a cultural propensity**

The focus now turns more closely to a breakdown of China's high gross savings share of GDP to evaluate popular savings-based explanations China's foreign exchange accumulation and locate the proximate sources of the surplus. According to China's central bank governor, Zhou Xiaochuan (2009a, 1-2) China's high savings rates fit a general pattern of high saving in East Asia and have similar multi-causal reasons,

including: ‘Tradition, cultural, family structure, and demographic structure and stage of economic development…’ However, Zhou also gave special emphasis to ‘cultural’ reasons as an explanation for high savings in mainland China, and contrasted ‘East Asian’ and ‘Confucian values’ of self-discipline to a purported Latin American propensity for consumption. Similarly Zhou held that family ties in Japan, expressed as a concern for the needs of future generations, explained the contrast between high savings in Japan and low savings in the United States.

Contrary to the myth of a Confucian cultural propensity to save, changes in mainland Chinese household savings rates have been historical and material, rather than cultural. According to Naughton (2007, 428), ‘it is clear that Chinese behaviour changed dramatically after 1978: high household saving was a not a “cultural” characteristic before 1978.’ Household savings were very low under the planned economy. One problem for analysis is that ‘household savings’ could have resulted in transfers to the state, indeed the appropriation of private savings during the 1950s suggests this was the case, while the transfer of agricultural surplus through the commune system, which is discussed in the next chapter, renders the whole category of a separate ‘household’ income unit problematic. Nevertheless household savings remained very low, as did ‘household incomes’, while savings transfers, and the overall balance of savings and investment was mediated by the state-sector. Savings, that is, an economic surplus, was accumulated by state-owned enterprises (SOEs) and communal agricultural production through the control of wage payments and state control of prices (Harris 1979). SOE and communal agricultural surpluses were turned over to the relevant bureaucratic government agencies and these planned investment and intermediated funds through the domestic bank system, rather than through taxation (Naughton, op.cit.).

However, according to Naughton (2007, 430), savings relationships in mainland China underwent a major change during the transition period (from the early 1980s), with a

dramatic shift in the locus of savings from SOEs (and the government) to households — and this allowed investment to remain high. Household savings rose dramatically from an extremely low 5 percent of GDP under central planning in 1979 to 25 percent of GDP by 1995 (ibid). Common explanations for the rise in savings include: the acceleration of income growth, the loss of old-age and other support for working households and an explosion of household investment opportunities. Yet while there are no definitive studies of the question, the interaction of these factors with demography, especially falling household dependency ratios and the corresponding rise in labour force participation, seems to be a central part of the answer (Ma and Zhou 2009, 1-21; based on Williamson and Higgins 2001, 123-54). The wider role of demographic changes in explaining the high surplus is discussed more fully in chapter seven. For now however, the proposition here is that despite the changes in household savings, which have recently fallen as a share of GDP, the dramatic rise in China's gross savings since 2004 is not explained by changes in household savings.

Although China's household consumption expenditure as percentage of GDP is also very low compared to other low and middle income economies, and indeed fell between 2000 and 2007, the data indicates a relative, rather than an absolute, fall against rising GDP in the 2000s, and it suggests a sharp rise in the proportion of income going to non-household sectors. China's household consumption expenditure as percentage of GDP is also very low compared to other low and middle income economies,[30] as is shown in figures 6-5 and 6-6 below, which show the relative measure of household consumption as a share of GDP in mainland China alongside selected high, middle and low income countries from 1990 to 2007.

[30] The income definition of economies used here is the World Bank classification based on the 2008 Gross National Income per capita (GNI per capita) and are as follows: 'low income, $975 or less; lower middle income, $976 - $3,855; upper middle income, $3,856 - $11,905; and high income, $11,906 or more.' World Development Indicators (Online), World Bank.

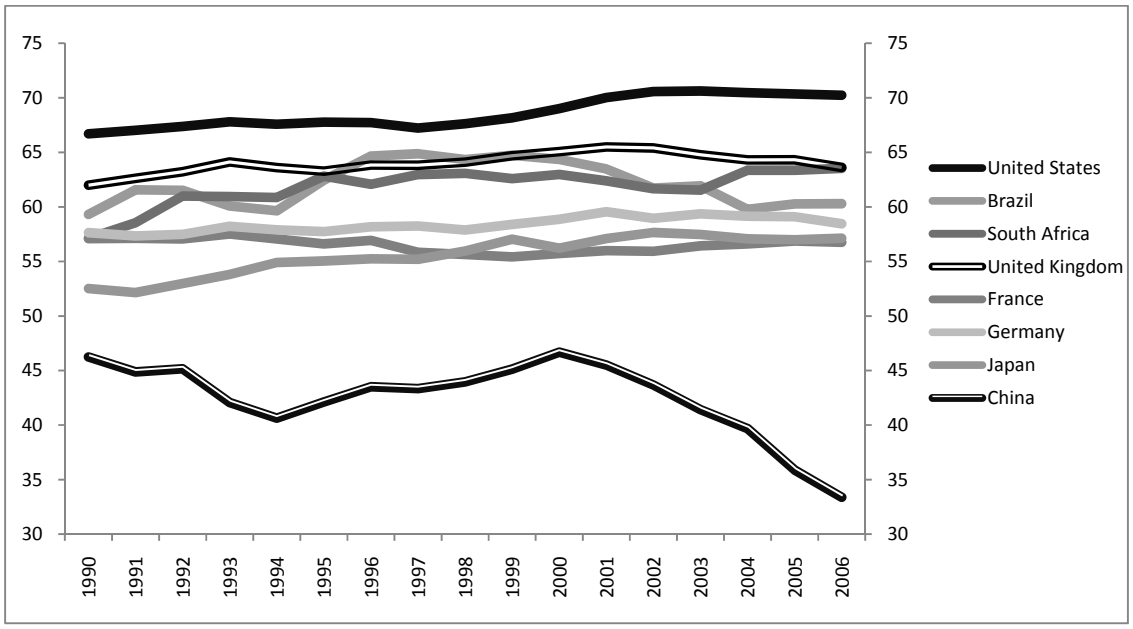


Figure 0-5 Household consumption expenditure as a percentage of GDP.
China & selected middle & high income countries, 1990-2006. Data from WDI (Online), World Bank.

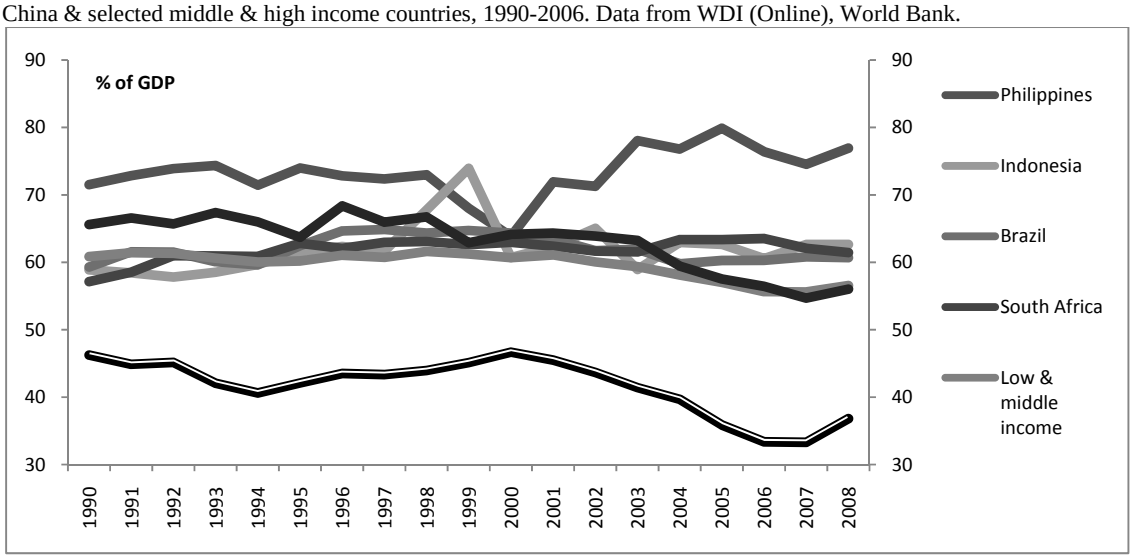


Figure 0-6 Household final consumption expenditure as a percentage of GDP.
China & selected low & high income countries, 1990-2006. Data from WDI (Online), World Bank.

Household consumption expenditure as a percentage of GDP tends to be high — in the range 55 to 60 percent of GDP in France, Germany and Japan, and 70 percent of GDP in the United States — for in the high-income OECD countries as shown in Figure 6-5. In

the upper-middle-income economies Brazil and South Africa, household consumption expenditure was over 60 percent for most of the period between 1990 and 2007. By contrast the total household consumption expenditure as a percentage of GDP in China, although steady, averaged a much lower level of 44 percent of GDP between 1990 and 1999, but fell by over 10 percent, from 46.7 to 33.3 percent of GDP between 2000 and 2007 before rising slightly in 2008. This indicates a relative, rather than an absolute fall against rising GDP in the 2000s, and it suggests a sharp rise in the proportion of income going to non-household sectors.

A precautionary savings policy in the wake of the 1997-1998 financial crisis is often given as an explanation for the rise in foreign exchange reserve accumulation by monetary authorities in emerging markets. This explanation has been advanced by the PBC governor Zhou Xiaochuan (2009b, 2), who suggests that the 'high savings ratio and large foreign reserves in the East Asian countries are a result of defensive reactions against predatory speculation'. Further, according to Zhou (ibid): 'International organizations also failed to perform their regulatory responsibilities over abnormal capital flows, forcing the East Asian countries to amass foreign reserves to fend for themselves'. This explanation will be investigated more fully in chapter eight. For now, although monetary authorities in crisis-hit markets may have actively sought to rebuild depleted reserve stocks, the precautionary story seems to be about something else — such as a defence of capital and exchange rate controls and 'self-insurance' rather than reliance on the IMF or the Group of Seven (G7) after the experience of IMF intervention in crisis-hit countries such as Indonesia and South Korea. A more compelling reason for the sharp rise in gross savings over investment in non-China developing East Asia after 1998, is the collapse in corporate investment in the post-crisis period as companies sought to pay down debt and rationalise production (Asian Development Bank 2007) — hence the emergence of a savings surplus.

However, there is no evidence of a rise in precautionary government savings in mainland China after the crisis which would substantiate the precautionary savings hypothesis for China's rapid reserve accumulation in this period. Chinese government sector saving, as distinct from saving by state-owned firms, has remained low and barely increased as percentage of GDP since the 1990s, while government revenue increased marginally during the 2000s. Government revenue and expenditures in mainland China, as a percentage of GDP have also remained low. Between 1990 and 1999 reported Chinese government revenue was averaged a low 5.3 percent of GDP, before rising from 7.1 percent in 2001 to 10.3 percent in 2006. Government expenditure as a percentage of GDP has also been low, averaging 10.9 percent of GDP between 2002 and 2006 (author's calculations based on WDI data, see appendix). What is evident is a low level of government expenditure and investment — which does augment gross savings. However, these figures indicate that any explanation for China's foreign exchange accumulation based on the government's role as a precautionary saver must also rule out fiscal savings as the source of the surplus.

6.2.3 **The rising corporate profit share of gross savings in mainland China**

The key source of the rise in China's gross savings as percentage of GDP since the early 2000s has been a sharp rise in the savings of the corporate sector, which is explained by a sharp rise in corporate profits (Anderson 2008, 61-69; Lane and Schmukler 2007; McKay and Song 2009; Zhou 2009b). According to the PBC governor Zhou Xiaochuan (2009b, 3), there was a 'remarkable increase in corporate savings', measured by a rise in corporate sector disposable income from 13 percent to 22.5 percent of annual national disposable income between 2002 and 2007. By contrast, the government income share only rose by 2 percent of the total national disposable income in the same period. The causes of this sharp rise in corporate profits include deeper structural and institutional causes as well as

more immediate causes. The deeper structural and institutional causes are given a fuller treatment in chapter seven, but are considered briefly here. The immediate source of rising corporate profits and the corporate share of gross savings in the period between 2000 and 2008, however, appears to be a phase of *dynamic import substitution* in heavy industry (McKay and Song 2009, Anderson 2008, 61-69), which is explained below.

To start with the deeper structural and institutional reasons, Zhou (2009b, 3) says the rise in the corporate profit share of income is explained by an 'unresolved distortion' in the costs and profits of enterprises in the 'transition' period — primarily enterprises, especially state-owned enterprises, are no longer officially responsible for meeting the full costs of reproducing labour. A key objective of government-led SOE restructuring from the mid-to late-1990s was to reduce labour costs — through large scale sackings and efforts to reduce indirect or social wage costs, by removing enterprise provision of pensions, healthcare and housing. After profits recovered in the late 1990s, there was a further surge in corporate savings. According to Zhou (ibid): 'After the reform in the 1990s, the "iron bowl" (lifelong secure job and welfare) system was smashed and the enterprises stopped providing pension[s] and housing for free [sic]', while an 'effective social security system ha[s] not been in place either'. Zhou (ibid) says this cost-profit distortion explains both the surge in corporate profits and the rise in household savings over this period. These institutional changes suggests that a rise in the corporate profit share of income relative to the wages share of income, as well as an explanation for the low and falling consumption share of GDP since the late 1990s. However, they do not fully account for the recent rise in corporate savings.

There are deeper issues here of political-economic structure and structural change. The immediate impetus for government-led industrial restructuring was a strategic response to the deepening SOE profitability and debt crises in the 1990s. However, the repression of 'factor costs' of labour, resources and capital (see, Huang 2009) has characterised the

growth model or accumulation strategy under central planning as well as during the reform and post-reform periods. Extensive price liberalisation in the reform period meant that enterprises, especially in the predominately state-owned heavy industries, still benefit from administrative price setting, especially in resources (McKay and Song 2009, 288, 290). Questions about the overall political-economic 'growth model', i.e. accumulation strategy and overall political-economic structure, are salient, but not one which can be adequately addressed in this thesis. However, an initial inquiry into the deeper causes of the surplus, and 'reform' of the 'growth model' are discussed in chapter seven, while the related question of financial system 'reform' is discussed in chapter eight.

The proximate causes of the rise in corporate profits remain to be explained. Anderson (2008, 62) locates the immediate source of the rise in corporate profits and corporate savings in the changes in the 'net trade' in the heavy industrial sector. Export growth surged between 2004 and 2008, and at the same time there was a 'dramatic fall in import growth' resulting 'almost completely from net trade in heavy industrial products (aluminium, machine tools, cement, key chemical products, and especially steel and steel products)' (ibid). The result was a rise in the share of industrial profits from about five to more than ten percent of GDP between 2004 and 2005, as is shown in figure 6-7 below. However, this represents a rise in the mass of profits, rather than an increase in the rate of profit. Indeed as is shown in figure 6-7 industrial profits as a share of GDP rose faster than industrial profits as a share of revenue.

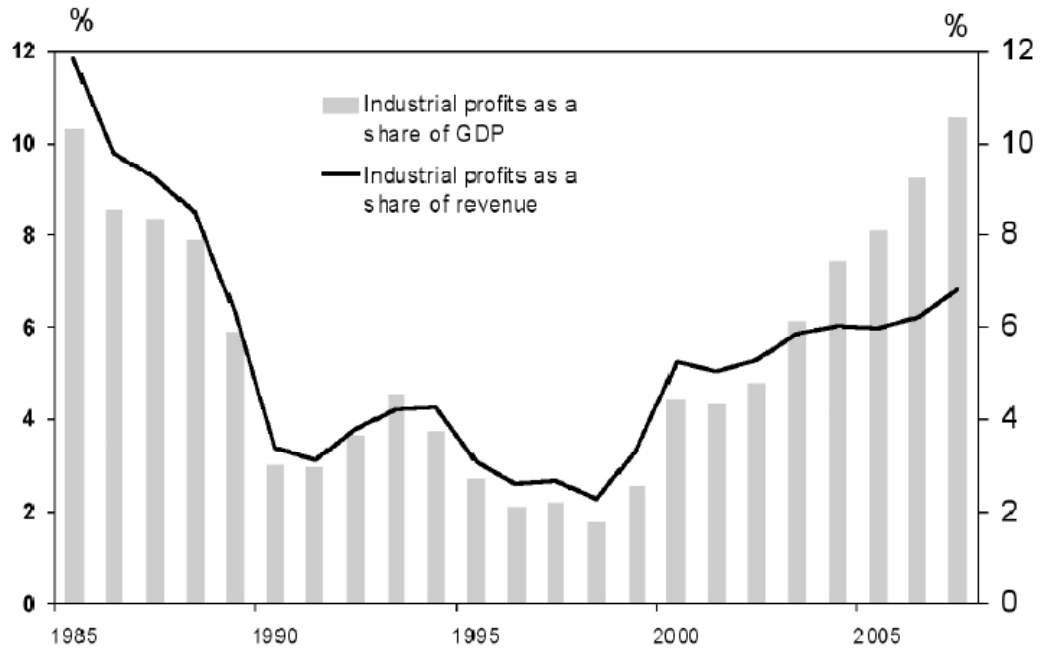


Figure 0-7 Industrial profits as a share of GDP and as a share or revenue.
All measures calculated from underlying data sourced via CEIC n.d., *CEIC Database*, CEIC Data Company Limited.
Source: (McKay and Song 2009, 279).

Thus the proximate source of the rise in corporate profits and savings as a share of GDP in the period 2004 to 2008, was a rise in the mass of heavy industrial profits.

The relationship between the rise in corporate profits and the rise in corporate savings as a share of GDP is shown in figure 6-8 below, which disaggregates China's 2007 current account by sector.

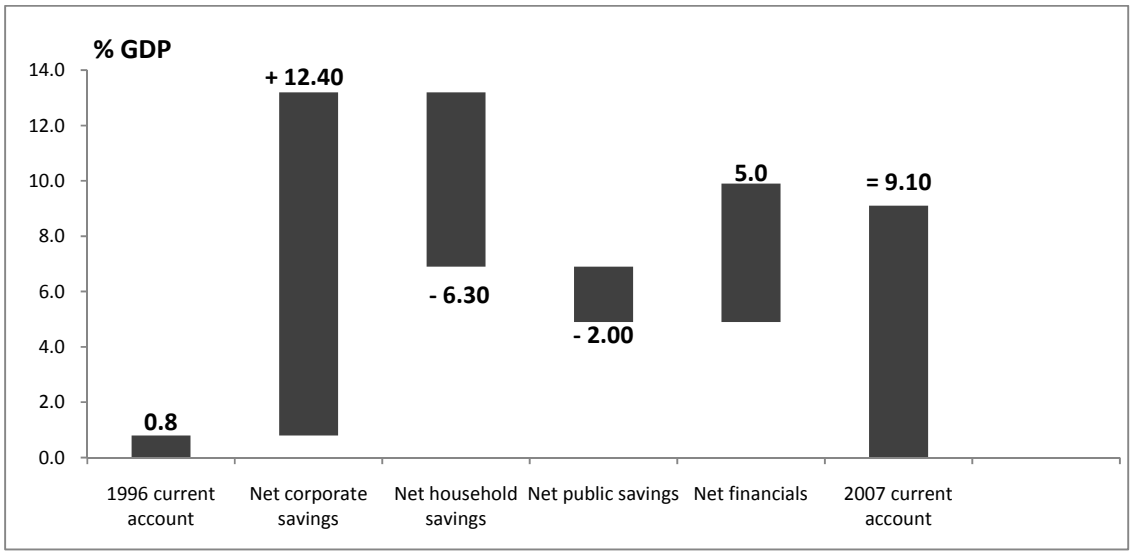


Figure 0-8 Net corporate savings in China's current account, second quarter 2007.
Source: Ma (2009) based on CEIC data.

It shows the bulk of China's net current account surplus in the second quarter of 2007 came from net corporate savings, at 12.4 percent of GDP, while net savings by financial firms was five percent of GDP. This was offset by a fall in net household savings, and a small fall in net public (government) savings. The small current account surplus of 0.8 percent GDP in 2006 is shown for comparison.

Conclusion

The preceding analysis has attempted to identify the proximate sources of the rising surplus in China and the more rapid growth in 'national savings' over 'national investment' during the mid-1990s, which despite very high rates of investment, grew wider during the 2000s. The proximate cause of the rising share of national savings to GDP, and the excess of national savings over national investment in China — at least since the 2000s — was a rise in corporate savings on the back of increased total profits for heavy industrial producers. Although other sectors, such as 'households' are also part

of the high savings story in mainland China, household savings has fallen as a share of GDP over the same period, while government fiscal savings have remained low. The key change, however, during the period 2000 to 2008 has been the rise in corporate profits, and this suggests material rather than so-called cultural explanations for high national savings. Nevertheless, the deeper causes of the recent sharp rise in corporate profits and the accumulation of a financial surplus remain to be explained — and this begs an analysis of the structural and institutional changes in the political-economic growth model in China in recent decades.

Conclusion to chapter six

This chapter has developed a descriptive empirical analysis of the main components of China's recent official foreign exchange accumulation and high 'national savings', focussed mainly on the decades since the 1997-98 financial crisis. Recent rapid foreign exchange accumulation, however, didn't take off until 2001, and financial inflows dominated trade-originated inflows of foreign exchange until 2005 when the current account and trade surplus expanded rapidly. The proximate causes of this rapidly expanding trade surplus between 2004 and 2008, was a sharp rise in net exports as a result of the substitution of imported heavy industrial products by local heavy industry production. This import substitution led generated a sharp rise in the mass of industrial profits, and a rising share of corporate savings to GDP. Because the vast majority of cross-border trade and capital flows into mainland China are invoiced in foreign currency, primarily in US dollars, a sharp rise in the net current account surplus (also a rising stock value for heavy industry) took the form of a rapid rise in foreign exchange accumulation.

This descriptive empirical explanation, however, poses two deeper problems for analysis. If the sharp rise in corporate profits is the proximate cause of the surge in China's

savings-investment gap from 2004, it has been generated by an underlying economic and political-economic structure, which is itself the outcome of the complex interaction of a particular accumulation strategy or ‘growth model’. Therefore chapter seven seeks to deepen this analysis into the causes of the rising surpluses and savings in China over recent decades. The analysis seeks to trace the key value-chain processes and their determinants which explain this rapidly expanding surplus. The question of why part of this rapidly growing surplus has taken the form of official foreign exchange accumulation, that is, a form of international financial intermediation, remains to be explained, and this is the subject of chapter eight.

Chapter 7

The deeper causes of China's recent surpluses

Although the proximate sources of the dual surplus on China's current and capital accounts have been net exports and strong capital inflows, the deeper causes of these surpluses need to be explained. The national accounting identity entails an analytical relationship by definition in which the national cross-border measure of 'external balance' is equal to the level of 'national' savings minus investment. As such, the recent sustained rise in China's payments surpluses is consistent with a rise in the level of savings over investment. Neither side of this identity, however, implies an explanation of causes. A rise in the level of national savings, for instance, could simply be a result of a rise in corporate profits through higher export earnings at a constant level of investment, wages and other costs. In order to find *where the surplus is coming from* this chapter pushes deeper into the causes of China's expanding trade and financial surpluses in the decade after the 1997-98 emerging markets crisis.

The proposition here is that the rapid accumulation of value and hence the rising surplus in mainland China in recent decades is explained by a process of expanded capitalist reproduction, which is the contingent outcome of a combination of complex-causal relations. These complex-causal relations, or causal groupings, include the following: the industrial, agricultural and institutional legacy of the Mao era 'leap forward' strategy which entailed a combination of primitive and bureaucratic state capitalist accumulation over three decades; the subsequent 'reform' era shift in accumulation strategy to an export-oriented but domestically led market-based capitalist accumulation strategy in agriculture, industry, trade and investment; the timing of this shift in a period in which a strategically selective opening to foreign trade and investment could facilitate a major reorganisation of regionalised manufacturing production in East Asia and lastly the

unique demographic (i.e., social and institutional) impact of these combined processes on the supply of wage labour in China during the reform and post-reform periods.

7.1 **A conceptual framework for understanding the recent surpluses in China**

The general proposition here is that the deeper causes of the recent surpluses are the contingent outcome of a sustained period of rapid capital accumulation. Although this period of rapid capital accumulation in China is understood by economists as the outcome of rapid accumulation of two main production 'factors' — capital and labour (Cai 2008, 214), this begs the question: what explains this rapid 'factor' accumulation of capital and labour? Because fixed capital accumulation is defined by investment rather than savings, the analysis must extend beyond rapid capital accumulation to explain the recent pattern of rising savings over investment, i.e., a surplus. The rapid accumulation of capital and labour and the explanation for rising savings over investment are linked through multiple causal chains. A conceptual framework of analysis here is provided by: an understanding of capital accumulation as a process (strictly many processes) of social and institutional transformation in a definite geo-historical context. Second, a strategic relational approach to understanding the contingent success of the reform era Chinese economic policy shifts in the overall 'accumulation strategy' or 'growth model'. As such, this conceptual framework also necessarily requires a conjunctural analysis. This section proceeds analytically from a discussion of how these more abstract concepts are applied, to a more concrete analysis of how the legacy of the leap forward strategy under Mao conditioned the processes of rapid capital accumulation in the subsequent reform and post-reform periods.

7.1.1 **Capital accumulation as a process of social and institutional transformation**

Capital accumulation here is broadly understood as a set of internally related processes of material, social, and institutional transformation. This does not mean that all material social processes or institutional changes are internally related to processes of capital accumulation — they can also be externally related — and as such, the determination of whether the objects of analysis are internally or externally related is a concrete question. What this conceptual approach does mean, however, is a theoretical understanding of the processes of capital accumulation which is radically different from the neo-classical economic emphasis on the steady accumulation of socially-disembedded (and disembodied) 'factors' of production. The neo-classical tradition understands capital accumulation as the steady growth of the productive potential of an economy, including through technological improvement (Nell 1998, 14-19). Steady growth is of course a legitimate definition of capital accumulation. However, capital accumulation has also been understood, starting with the classical political economists, as the outright transformation of the productive organisation of an economy, broadly understood. In this sense:

Capital must also be understood as a way of organising production and economic activity, so that the accumulation of capital is the extension of this form of organisation to areas in which production, exchange and distribution were governed by other rules (ibid).

This is a relational definition of capital, in which capital accumulation is internally related to the broader social transformation of the technical, organisational and institutional forms of economic activity — including the transformation of the internally related social relations of labour and work. The proposition here is that an understanding of capital accumulation as a set of internally related processes of material, social and institutional transformation can be effectively applied to understand the historical processes of capital accumulation in China, under both the Mao and post-Mao eras.

The question of where to locate the development of capital accumulation in China historically is somewhat controversial. Leaving aside the political problems for what has been an ostensibly communist regime since 1949 (McNally 2007, 108-23) — officially China's post-reform economic system is called a 'planned market economy' — the critical problem is a conceptual one: how to understand capitalism. The definition here is that capitalism is a mode of social-economic organisation in which the relations of capital are internally (and externally) geared towards the ceaseless competitive accumulation of capital-value. By this definition, while the internal relations of capital accumulation have been historically mediated through a wide variety of institutional forms, these differing institutional forms of competition between capitals (whether market, state based or 'mixed') are *analytically secondary* to the internal relations of capital accumulation. Thus, the proposition here is that internally and externally geared competitive processes of capital accumulation in mainland China didn't stop in 1949 and begin again after 1979 but should inform our understanding of the Mao era as well.

The related concept of primitive accumulation provides a useful way to understand how capital accumulation entails internally related processes of social and institutional transformation — and can be applied to the case of accumulation in mainland China. The concept of primitive accumulation was used by the classical political economists to characterise the transition from feudalism to capitalism — as a process that went beyond the steady accumulation of 'factors of production' to encompass the wholesale transformation of the forms of economic activity broadly understood, including the social and political relations (Nell 1998, 14-19). The key features of primitive accumulation in England were vividly described by Marx ([1867] 2004, 873-930). These centred on the transformation of the relations of production in agriculture and the corresponding development of capitalist industry, which further transformed relations of labour and work. The agricultural revolution entailed the removal of most of the rural population

from the land through the enclosure of common lands and forcible evictions, the transformation of rural land under large-scale agricultural production, the replacement of independent peasant proprietors with capitalist farmers and the creation of a mass supply of wage labour, which was a key precondition for the development of capitalist industry. The agricultural revolution also created a local market for industrial capital. The state's role was internal to this process of primitive accumulation through the enacting and enforcing of laws related to agricultural land use such as the enclosure laws, the regulation of the new class of wage labourers, as well as via colonial expansion and surplus extraction.

Primitive accumulation then can be understood as a set of internally related processes, where the creation of capital and an industrial labour force out of peasant-based agriculture are mutually conditioning processes. The most compelling use of the concept of primitive accumulation to analyse the transformation of China in the reform and post-reform periods to date has been Webber's (2008) study based on extensive fieldwork interviews in China between the early 1980s to the mid-2000s. Webber (ibid, 301) defines primitive accumulation, as 'the process (or set of processes) through which capitalist production emerges from pre-existing conditions of work'. Webber (ibid) identifies the 'principle means of primitive accumulation' in China as 'the transformation of state and collective enterprises into capital, the peasants' loss of land through various forms of dispossession, and the voluntary migration of peasants from agricultural to industrial pursuits.' In terms of labour, Webber suggests that the cities have exhibited a powerful pull on peasants and rural labourers who have also been motivated by the possibility of economic and social opportunity as well as push factors such as rural poverty (ibid).

What is useful about Webber's analysis is its emphasis on the way in which recent forms of capital accumulation in industry and agriculture in the reform era are not only related,

but have emerged through a process which has transformed earlier social relations. Such an analysis will be pursued in the following sections. However, a conceptual problem remains over whether these transformative processes are best understood in terms of primitive accumulation or in terms of pure capital accumulation, or both. Webber's use of primitive accumulation is similar to Marx's original conception: primitive accumulation describes the processes through which capitalist productive relations are established through the 'subsumption' of non-capitalist forms — a perfectly legitimate usage. The problem however, is how to apply it. Webber applies the concept of primitive accumulation to understanding the reform era transformation of relations of production in mainland China. This is similar to Harvey's (2003) characterisation of reform-era capitalist development in China as a process of 'accumulation by dispossession'. The phrase 'accumulation by dispossession' adequately describes specific 'reforms' in this period, such as owner-looting of SOEs. But the argument here is that the reform era changes are not a departure from *pre*-capitalist relations, but were changes internal to the organisational, institutional, and social relations of capital accumulation that are more explicable as a shift in accumulation strategy. The relationship between these processes of transformation, rapid accumulation and the development of growing surpluses and high savings during the post-reform era is the focus of the rest of this chapter. First however, an approach to understanding the state's shifts in economic policy is elaborated.

7.1.2 **A strategic relational approach to economic policy shifts**

Jessop's (1990; 2008) 'strategic relational approach' to the state and the linked concept of 'strategic selectivity' provide a useful way to understand the Chinese party-state leadership's economic policy shift after 1979 towards a new accumulation strategy or 'growth model'. As Breslin (2007) convincingly argues, ensuring rapid accumulation was a central legitimising principle of the party-state leadership from the early 1980s.

However, this objective was not entirely new — what was different after 1979 was the shift in the growth model by sections of the party-state leadership for achieving rapid accumulation — away from the pre-reform system and its internally-oriented 'leap forward' strategy and towards a more market-based system and an outward, export orientation. The analysis here centres on how the legacy of the pre-reform accumulation strategy has shaped the accumulation of value and the development of a surplus in the post-reform era.

This strategic relational approach provides a useful way of thinking about the Chinese party-state leaderships pragmatic and piece-meal policy shifts during the reform period, which facilitated the emergence of new strategy. Although there are limits to the coherence of any particular accumulation strategy, more or less coherent strategies have existed as state-led or facilitated 'national' industrialisation strategies. Jessop (2008, 24), defines an accumulation strategy as:
a means of imposing provisional, partial and unstable 'substantive unity' on the various interconnected formal manifestations of the capital relation and thereby securing the conditions for relatively stable periods of economic growth.

The strategic relational approach used here defines the 'economy in its inclusive sense' (ibid). For Jessop, this means an analysis of the relevant accumulation strategy (and its discourses) should include an analysis of the social modes of 'economic regulation'. Thus, capital accumulation is understood as 'the self-valorisation of capital in and through regulation' (Jessop 2008, 24-25).[31] The understanding of 'regulation' in this

[31] There is a conceptual issue that is raised by Jessop's understanding of the relationship between economic regulation and accumulation strategies. Jessop's approach incorporates the thinking of the French regulation school. Briefly, this approach suggests that specific capital accumulation strategies conform to their modes of regulation. A substantial discussion and response to this question is outside the scope of this thesis. However, the general response here is that while forms of (public and private) regulation may be more or less determinant in the reproduction of specific capital relations, the overall coherence of any particular regulatory framework or accumulation strategy is doubtful on conceptual and empirical grounds. For instance, while the notion of a growth model is a conceptual simplification, any concrete analysis of such must be a multi-variable investigation into the material, social, technological, organisational

thesis, like ‘the economy’, is broadly understood — capital accumulation is understood to be internally, not just externally, related to processes of social and institutional transformation.

Thus the strategic relational approach provides an analytical bridge between the analysis of value-chain processes of capital accumulation, and the mediating role of state institutions, policies and actors, as they seek to facilitate, articulate or shift policies in relation to particular growth models (Jessop 1990, 199). The concept of a growth model or accumulation strategy implies a ‘structural’ coherence to particular configurations of capital accumulation processes, which are not always warranted given these are inherently uneven and differentiated processes. Nevertheless, capital accumulation processes do comprise relatively consistent structural conjunctures of those processes in particular geo-historical contexts. Further, the strategic relational approach entails an analysis of the ‘strategic selectivity’ of state institutional policies, discourses and practices in relation to those conjunctures. It is in this sense that the policy shifts by the Chinese party-state leadership from an ‘import-substitution industrialisation’ strategy to an ‘export-oriented’ growth model during the 1980s, as well as the debates over the current growth model, are analysed in this thesis.

The best known of these accumulation strategies are import substitution and export-oriented growth models. Import substitution industrialisation (ISI) has typically been associated with a strategy developed in Latin America. However ISI strategies were also

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capacities — i.e., into the constraints and limits as well as opportunities — of the relations of capital in any given context, which determine the possibilities and limits of ‘regulation’. Even where accumulation has been subject to forms of full-scale bureaucratic state mobilisation and direction — such as existed in Stalinist Russia, Nazi Germany, Maoist China, or for that matter the ‘directed’ economies of the US and Britain during the Second World War — this does not mean that processes of capital accumulation could be determined by regulation in any absolute sense, or that internal ‘economic’ i.e., material-social, contradictions or pressures could be resolved through regulation outside of their particular geo-historical context. Rather, there are good historical reasons to believe that the material-social processes and pressures internal to capital accumulation — in definite geo-historical contexts — actually determined ‘policy’ more thoroughly than is generally appreciated (e.g., see Kershaw, Ian (1998; 2000) brilliant historical investigations of these tensions in Hitler’s Germany).

central to the so-called ‘primitive socialist accumulation’ strategies pursued in Stalinist Russia during the 1930s and Maoist China between the 1950s and the 1970s — considered in the next section, 7.2. The reform era in the PRC entailed a shift away from ISI and internally directed, state-led ‘primitive socialist accumulation’ to a more market based and export-oriented industrialisation strategy. This shift is considered in section 7.3 which examines the relative success of this latter accumulation strategy to understand the deeper causes of the rising surplus in China in the reform and post-reform periods. In turn chapter eight focuses on the strategic selectivity of China’s authorities in ‘selecting’ specific foreign exchange and monetary policies — officially mediated price and value-management strategies — to understand why much of China’s foreign exchange surplus has taken the form of US dollar reserve accumulation.

7.2 **So-called ‘primitive socialist accumulation’ in Maoist China**

Under Mao, the strategic objective of securing rapid capital accumulation, especially from the early 1950s to the 1970s, was as much a priority for the party-state leadership as it was in the reform and post-reform eras. What was different was the strategy for securing accumulation. A conceptual framework for understanding the link between the pre-reform and post-reform economic systems is partially provided by Lin, Cai and Li (2003) and Naughton (2007, 55-58; 330-31). This framework centres on an analysis of the primary strategic objective of heavy industry-oriented development in the pre-reform era — i.e., the leap forward strategy of so-called ‘primitive socialist accumulation’, and the way in which this strategic objective determined the macro-policy ‘environment’ and resource allocation mechanisms in the pre-reform economic system (Lin, Cai, and Li 2003). This conceptual framework provides a basis for understanding the link between the unique industrial ‘value-stream’ and price/cost outcomes in the reform and post-

reform periods, and thus provides a basis for understanding the deeper causes of the recent surpluses.

During the early 1950s the Maoist party-state leadership embraced a strategic objective of heavy-industry oriented development. The economic, military and political reasons for adopting this path were closely tied. When the CCP came to power in 1949 the combined economic output from rural and industrial sources was extremely low — the small colonial era industrial base and limited agricultural surplus in what was a backward agrarian economy was wrecked by subsequent Japanese occupation, a war of resistance and national civil war (Risken 1987). The new PRC state was politically isolated and faced a 'constant external threat' to its rule (Liew and Wu 2007, 43) from military invasion. The US state instigated an economic embargo on China in 1950 (until 1972) during heavy US and PRC engagement on opposite sides of the Korean War (1950-53), and this was followed by the Sino-Soviet split in 1961.

The reasons why the PRC adopted a heavy-industrial strategy flowed from this. For non-core states after the Second World War without access to Western (primarily US) capital, international competition was met by a heavy industry ISI strategy. Under political isolation and the military threat, posed sharply by the Korean War, the PRC leadership sought to rapidly develop a self-contained industrial structure. Paradoxically, according to the prevailing Stalinist logic — because capital was scarce — the quickest path to a self-contained industrial structure was capital-intensive heavy industrialisation. According to this model, endemic poverty meant there was insufficient demand for rapid and sustained accumulation along a path of light and labour-intensive industrialisation, but 'self-sufficient' demand could be generated by prioritising the investment in heavy industry (Lin, Cai and Li, 2003, 31-32).

The logic of the heavy industry development model is clearer if we understand an industrial structure in terms of value-chain activities, or value 'streams that connect many different types of activities' (Naughton 2007, 57). The top industrial 'value-stream' consists of natural resource extraction and raw material industries. These industries feed into the middle industrial value-stream of refining, processed material and machinery industries, and these then feed into the bottom industrial value-stream of final products for enterprises and consumers (peasants and workers). According to the heavy-industry model, if available resources were directed into the capital-intensive top and middle value-streams, this would generate 'self-sufficient' demand and sustain rapid capital accumulation. In this respect the PRC's industry strategy, at least until 1979, had been the opposite of the strategy pursued by its rapidly industrialising East Asian neighbours. In Taiwan for instance, industrialisation started with labour-intensive low-value added manufacturing, which then facilitated industrial upgrading up the value-steam (ibid).

The 'leap forward' heavy industry strategy entailed a specific macro-policy, from which flowed 'highly centralised planned resource allocation' through 'administrative' forms of organisation. Lin, Cai and Li (2003, 30) call these macro-policy, resource allocation and highly centralised administrative planning mechanisms the 'trinity of the traditional system'. At the macro-policy level, centralised state controls on prices of outputs and inputs were designed to repress capital formation costs, extract a high rate of surplus and direct it into heavy-industry investment. Macro-policy controls included controls on the prices (and costs) of foreign exchange, energy, raw materials, agricultural produce and labour (ibid). At the micro-economic level the relevant units of production were the urban work unit (*danwei*) in industry, and the rural production brigades and production teams in agriculture, which served as institutions of labour discipline and social and political control. To ensure that rural and industrial production were geared towards the extraction of a surplus and its redirection into centrally-planned heavy-industry projects, micro economic decision-making was removed from these work units and production teams

(ibid). The overall system was centrally managed through a system of administrative planning, involving different administrative units all ostensibly working towards successive central plans.

It is fair to characterise this development strategy, its mechanisms, and its institutional forms as bureaucratic state capitalism (Cliff 1974, Harris 1978, 190). Mao left no doubt about the strategic objective of rapid capital accumulation in PRC China, known as the 'leap forward strategy'. According to Mao in 1961:

> The accumulated capital of the Soviet Union constitutes approximately one-fourth of the national income [per annum]. The ratio of our country's accumulated capital to national income was twenty-seven percent in 1955, thirty-six percent in 1958, and forty-two percent in 1959. It appears likely that the ratio of our accumulated capital to national income henceforth can be maintained at over thirty-nine percent or higher. The most important question is the rapid development of production (Mao 1961, 280 cited in Harris 1978, 188).

This strategic objective of rapid capital accumulation was administratively and bureaucratically managed at the macro-policy and micro levels to ensure that the costs of capital were repressed and a surplus was generated and directed into capital accumulation in heavy industry.

To meet the demands of heavy-industry oriented development in a situation of extreme capital scarcity, the rate and structure of accumulation was force-marched through a strategy of so-called 'primitive socialist accumulation' combined with ISI. Briefly, ISI entailed an inwardly oriented strategy to building a complete industrial structure, in this case at the top and middle of the industrial value-streams — and because of its relationship with foreign exchange, the implications of this strategy will be addressed in the next chapter. For now, considering the strategy of 'primitive socialist accumulation' is pertinent because it was a central part of the overall leap forward strategy. Its

mechanisms shaped the extraction of the surplus from agriculture and the peasantry under central planning, and these mechanisms persisted during the reform era. Hence it helps explain the recent surpluses.

Primitive socialist accumulation centred on the use of 'price-scissors', backed with 'rationing and coercion' to extract an agricultural surplus for industrial accumulation out of a mostly peasant-based agricultural economy. This strategy was hotly debated in Russia in the 1920s, was implemented as Stalinist policy in the 1930s and 1940s, and was central to the heavy-industrial strategy in Maoist China (Sun 2001, 95–213). The 'price-scissors' mechanism worked by calculating the 'terms-of-trade' against agriculture, and in favour of industry, to ensure a net flow of capital from agriculture to industry. Although this strategy is politely presented as an inter-sectoral strategy by development economists, it was fundamentally about extracting a surplus from the peasantry, and this extraction had to be enforced through mechanisms of rationing, quotas and coercion. There is a substantial empirical debate about the effect of the 'price-scissors' during the Mao and reform eras because of the statistical problems of accounting for all forms of fixed investment, and how to account for the transfer role of nominal and real prices. Nevertheless, according to the official *Statistics on Fixed Investment in China: 1950-1985* (cited in Sun 2001, 209-10)—between 1953 and 1985 the agricultural sector received less than ten percent of investments, whereas 45 percent went to heavy industry, 'despite the fact that more than three quarters of the population lived from agriculture' (Sun, ibid).

While urban industrial workers were better off than their peasant counterparts, the rate of capital accumulation in heavy industry was also boosted by a strategy of holding the wages and consumption of workers low relative to output. Although it is not clear to the author how non-wage payments have been calculated in official statistics, the figures suggest a steadily increasing surplus was extracted relative to wages over time:

Between 1952-1978, the wage rate in China was kept almost constant, increasing by only 12.7 percent in real terms, while the real National Income per capita nearly tripled (*Statistical Yearbook of China*, 1993, pp. 132, 33–34, and 81) (Sun 2001, 210).

Although industrial wages and consumption have risen in the reform and post-reform era, especially in the key industrial centres along the Eastern seaboard, output and corporate profits have again recently outstripped wages and consumption growth. These issues, and the debate about the supply of 'surplus labour', are evaluated in the last section of this chapter. The pursuit of rapid heavy industrial accumulation also required a repression of input costs for the non-agricultural sector. Following the logic of 'primitive socialist accumulation' in Stalinist Russia in the 1930s and 1940s, from the early 1950s until the late 1970s the PRC leadership sought to repress costs, and allocate investment by extracting a high rate of surplus from the peasantry and the industrial working class in order to finance industrial accumulation. The next section evaluates the industrial and cost-price legacy of this pre-reform system to better understand the rapid growth of low-cost manufacturing led industrialisation in the reform and post-reform eras — as a deeper cause of the recent surpluses.

7.3 **From shifts in accumulation strategy to changing output**

The story of China's economic reforms has been well told elsewhere and in much more depth than is possible here (see for instance, Naughton 1995). The aim here is not to reproduce those analyses. Rather, for the purpose of this thesis, two strands of strategic economic policy reform — the role of domestic market-based reforms, and the shift to an export-oriented industrialisation strategy — are considered here. Usually, it is the export side of the story which is carried in the financial press and which shapes the analysis of

non-China specialist academic work, but in distorting ways.[32] The missing element from such analyses, however, is the legacy of the heavy-industry industrial structure and the subsequent role of internal market reforms in transforming the processes and scale of surplus generation in agriculture and domestic industry. Further, the role of exports tends to be portrayed in a one-sided manner as a national outcome of Chinese trade policy with little regard to the reorganisation of global production networks within East Asia to centre on China as their final export-processing platform. The analysis here centres on how these strategic economic policy shifts helped to transform the structure and rate of capital accumulation in agriculture, industry and 'foreign trade' — which in turn have generated a high rising structural surplus in the post-reform period. This structural surplus is traced through an analysis of the internal value-chain outputs across agriculture, industry and foreign trade.

7.3.1 **Explaining the strategic policy shifts in the reform era**

From 1979, the central party elite under Deng Xiaoping started a process of economic reform, which although gradual and piecemeal, and often pushed from lower down the ranks of the CCP, rather than from the centre, ultimately resulted in a major shift in state strategy from an internally oriented industrial accumulation strategy under central planning to a market-based and outwardly oriented strategy. The central sets of reforms were shifts from 'plan' to 'market' in agriculture and industry, and an 'open door' for attracting foreign direct investment and pursuing export-oriented industrialisation. Key problems, however, remain in understanding why these series of strategic policy shifts took place and how these shifts helped transform the structure and rate of accumulation to generate a rising structural surplus. A strategic relational approach is applied here to understand the strategically selective and contingent nature of the post-1978 policy shifts

[32] For a discussion of this problem see Breslin 2007, chp.1.

at the top and their relationship to processes of social, institutional changes in the structures of capital accumulation. Crucially, the shifts in the structure and rate of accumulation which have generated rising structural surpluses, were necessarily contingent on the industrial, social and institutional legacy of the pre-reform economic system and the timing of ‘reform and opening’, which enabled the deepening integration of domestically-led accumulation with regionally-based, global production value-chains within East Asia.

In other words a strategic relational approach can explain why the reform era policy shifts in accumulation strategy took place and how these shifts helped transform the structure and rate of accumulation to generate a rising structural surplus. A strategic relational approach necessarily also includes an evaluation of the role of political forces at work in, through and on state institutions, as determining factors in the strategic selection of specific policy shifts by key decision making actors in a given geo-historical conjuncture. In this respect Breslin (2007, 37) locates the reform era policy shifts as political decisions at the top of the Chinese Communist Party that were made because ‘key decision makers decided that it served specific [i.e., their] political interests’ motivated by 'changing conceptions of how the CCP could reform the basis of political legitimacy and maintain its grip on power'. Breslin identifies these changing bases of political legitimacy as nationalist ideology, legitimacy through economic performance, and economic growth as the basis of social stability (ibid, 44-45). Crucially, for Breslin (ibid, 44): ‘the emphasis on economic performance as a key basis placed a primacy on rapid accumulation, and increasingly, the best way of securing this rapid accumulation and economic growth was seen as the adoption of modified capitalist methods and insertion into the global economy.’

Breslin’s analysis fits with a strategically selective approach to understanding these economic policy shifts as shifts in the strategy to secure rapid capital accumulation — but

it begs the question of why 'the best way of securing this rapid accumulation and economic growth was seen as *the adoption of modified capitalist methods and insertion into the global economy* [emphasis added]' Indeed, rapid capital accumulation was also a central basis of political legitimacy under the leap forward heavy-industry and inward oriented development strategy from the 1950s to the 1970s. Sustained political and social dislocation — from the disaster of the Great Leap Forward (1958-61), the subsequent Cultural Revolution (1965-68) and its legacy of political and social instability until the mid-1970s — are potential paths of analysis, but these questions are beyond the scope of this thesis. What we can say is that the search by key Chinese leaders for new paths to secure political legitimacy also had economic roots in the failures of the pre-reform system — understood as a definite accumulation strategy internally related to (embedded in) definite social and political relations. Reasons why key Chinese leaders began to search for new paths to secure accumulation included the following: the heavy industry development strategy wasn't succeeding; urban and rural living standards were stagnant; tens of millions of peasants still faced the threat of starvation and attempts by the new leadership after Mao to strengthen their legitimacy by speeding up economic growth and by raising living standards wasn't working. The failure of the traditional system after many decades lowered the cost of abandoning it (Lin, Cai, and Li 2003, 139-140).

There was also a major change in the external environment — with the PRC gaining diplomatic recognition in the UN 1971, followed by the US, Japan and a host of other western powers. This offered the opportunity for the 'open door' policy (Ping 2009, 51-52). As a result, key Chinese leaders were able to get a much better idea that the gap between China and its neighbours had widened, and alternative accumulation paths were potentially within their reach. (Lee 2000, 602-3). After decades of hostile cold war relations, vice premier Deng Xiaoping was able to visit Singapore in November 1978. According to Deng in an October 1979 speech:

> I went to Singapore to study how they utilised foreign capital. Singapore benefited from factories set up by foreigners in Singapore: first, foreign enterprises paid 35 percent of their net profits in taxes which went to the state; second, labour income went to the workers; and third, it [foreign investment] generated the service sectors. All these were income [for the state] (Deng quoted in Lee 2000, 602-3).

Over the next 15 years key Chinese leaders and delegations visited Singapore and other rapidly industrialising East Asian neighbours to study their foreign investment regimes, and directly raise investment along the lines of the 'Singapore model' (Lee 2000, 637-38).

This does not mean that the policy shifts in key sectors or macro-policy areas were made according to some thought out blue-print or overarching plan from the top and centre. Key reforms were often pragmatic responses to problems as they developed, including responses to pressure from lower down administrative levels, not to mention pressure from below, such as peasant resistance to the quota system, which was later generalised into the household responsibility system. However, a comprehensive evaluation of how forces from above and below, and from the centre and local officials, contributed to the overall strategic selection of key policy shifts is not possible here. Rather, the following sections consider the relationship of key policy shifts to the changing structure of accumulation and the development of a rising structural surplus — in the key sectors of agriculture, industry and foreign trade and investment.

7.3.2 **Rural transformation, expanded output and surplus transfer**

The post-Mao reforms in agriculture and rural industry transformed the relations of agricultural production in China (Unger 2002), generated a rising surplus among rural households, and facilitated large transfers of agricultural surplus out of rural areas. These

rural reforms transformed the relations of agricultural production — the social (institutional) relations of capital, labour and work in rural China — through the creation of a new class of 'independent commodity producers' in agriculture, and a new social logic centred on competitive market-based accumulation through the 'collectively-owned' Township and Village Enterprises (TVEs) (Webber 2008, 302-4). These changes led to a major rise in output in agriculture and rural industry, and a major transfer of this new rural surplus to urban industry via savings channels in the rural credit co-operatives (Huang, Rozelle, and Wang 2006).

The greatest initial shifts in accumulation were made in agriculture and rural areas, through the household responsibility system which de-collectivised agriculture, reintroduced market incentives and allowed peasants to sell a surplus on the market. From the late 1970s local and national reforms had led to a 'decollectivizing and commercializing agriculture' (Zweig 1989, 174) as the previous communal land relations — i.e., the system of work brigades — were effectively broken up and redistributed. Individual households were given responsibility for production and allowed to keep a portion of the surplus they produced above quota production levels. As Zweig (1997) emphasised, this process was driven from below before it became sanctioned from above. The practice of keeping and selling agricultural products in excess of the quotas was illegal under the communal work unit systems, but became increasingly common among rural households. This practice became informally sanctioned and proved very effective at increasing production and the available surplus. According to Lin, Cai, and Li (2003, 145) total annual agricultural growth was over 42 percent between 1978 to 1984, and can be attributed to the effective household responsibility system, which became formalised in the Land Management Law of 1987 (Selden 1993). The reforms effectively transformed household farmers into 'independent commodity producers' (Webber 2008, 302-3) and led to a rapid rise in agricultural growth and the accumulation of a surplus among peasant households. A new pattern of class relations emerged in the countryside.

On the one hand a new class of entrepreneurs was created (Goodman 2008), and on the other the ‘freeing’ of peasants from the communal land system vastly raised the supply of ‘surplus labour’ for rural and urban industries, which will be discussed in section 7.4.

A related process of reform was the transformation of the rural Township and Village Enterprises (TVEs) during the 1980s, which accounted for a massive 60 to 70 percent of total rural output value in this period (Lin, Cai, and Li 2003, 147). TVEs were owned by local governments, and local officials stood to gain by their growth. TVEs were given authority to produce for the market outside of the heavy-industrial plan. Growth was concentrated in labour-intensive secondary and lighter value-stream industrial products that had not been invested in by the SOE heavy industry sector — but these products could link in to the heavy industry sector. TVE success was also built on very cheap ‘production factors’ — especially capital which came from local stated owned banks and credit cooperatives and the huge supply of low-cost ‘surplus labour’ in the rural areas. Also, because TVEs were owned by local governments they did not pay for land use. The TVEs rapid accumulation of production ‘factors’ was stunning:

> Between 1978 and 1997, the number of labourer's that were employed in TVEs roles increased by 102.2 million. This alone account for 41.4 percent of the increase in the number of non-agricultural labourers (246.71 million) nationally (ibid, 192).

From being communal enterprises controlled by local governments many TVEs were also privatised during the 1990s and beyond (Webber 2008, 305).

The massive growth of output in agriculture and rural TVEs in the initial decades of reform outstripped the growth in the traditional SOE heavy industry sectors and a substantial and net structural surplus was also extracted from rural areas to urban heavy-industry via the banking sector. The key sources of funds were the deposits of newly rich rural households and landowners in rural financial institutions, mainly the Rural Credit

Cooperatives (Huang, Rozelle and Wang 2006, 13). The rate of extraction from agriculture and rural industry exceeded the amount of reinvestment through the fiscal system throughout the entire reform period, rising further between 1980 and 1995 (ibid). According to Huang, Rozelle and Wang (ibid), in the period from 1980 to 2000, 'bankers had moved more than 1.4 trillion yuan from agriculture to industry...At this rate of extraction, the outflow from the financial system was nearly three times that of the inflow through the fiscal system.' The authors (ibid) estimate that another 688 billion yuan (now the renmimbi) was transferred out of agriculture through the mandatory grain and agricultural commodity delivery system, through which farmers were require to sell produce at below market prices.

7.3.3 **Reform, structural change in industry and the industrial surplus**

New paths of rapid capital accumulation in agriculture and rural industry were the cause and consequence of the transformation in rural productive relations. However, the massive growth in output in the non-traditional rural industries put the traditional SOE sector under market and institutional pressure during the 1980s and 1990s. A value-stream approach is taken here to understand and evaluate the contribution of industry to recent structural surpluses. Rapid accumulation of capital in non-traditional downstream industries opened up an extended phase of 'catch-up' or 'payback' growth in lower value-added labour intensive production (Naughton 2007; Lin, Cai and Li 2003). Although growth in the non-traditional sectors was facilitated by the implicit cost and price subsidies of the pre-reform and heavy industry system, growth in the non-traditional sectors also placed pressure on the profitability of the traditional SOEs. This pressure accelerated the push for microeconomic reform in the SOE sector, through privatisation of small to medium SOE enterprises and through the restructuring, concentration and centralisation of SOE's in heavy, capital-intensive 'strategic monopoly sectors'. By the

2000s, profits were evenly split by ownership between the SOEs, and private (including foreign invested) enterprises. However, rising corporate savings in the 2000s —a key source of recent structural surpluses — was concentrated in the SOE ‘strategic monopoly sectors’.

A value-stream approach also helps to understand the growth in industrial output in the 30 years since reform began. Industrial output rose ten-fold between1978 and 2000 (Naughton 2007, 297). In the first two decades growing industrial output was primarily driven by the rapid accumulation of ‘production factors’ — primarily capital and labour (Cai 2009, 214), which it also enabled. Labour’s role in this accumulation is the focus of section 7.4. Rapid accumulation in lighter industrial and labour-intensive manufacturing was the key change in structure of industrial accumulation during the reform era. Rapid growth in lighter industrial, labour-intensive manufacturing benefited not only from the intersections left by the heavy upstream industries, to which they could sell products, but also from the repressed ‘factor’ and price costs from the pre-reform and heavy industrial structure (Lin, Cai and Li 2003). As such, the conventional pattern of 'industrial deepening' was reversed in China. Instead of proceeding from light to heavy industrial accumulation, China followed the Soviet Union model before it followed the Taiwan model. Labour-intensive low-valued added production had barely begun at the start of the reform period, and the result of reform and opening is what Naughton (2007, 330) has called 'make-up' or 'payback' industrialisation (in contrast to Soviet 'catch-up') — a massive growth of 'low tech' assembly operations in the 1980s and 1990s.

Although Lin, Cai and Li (2003) argue that the inwardly oriented ISI pre-reform strategy repressed the potential for rapid capital accumulation for many decades, the heavy industrial structure nevertheless directly and indirectly enabled the rapid expansion of the lower value-stream level market sector from the 1980s. Directly, sections of the heavy industry base were turned from military to civilian industries during the 1980s (Ping

2009, 51-52), such as the shift from production of military trucks to civilian trucks and autos. Indirectly the state-owned heavy industrial sector provided a massive expansion of infrastructure at little or no cost to the new market-based, private and foreign invested industries. From 1995 to 2006, railways in operation extended by 28 percent, highways extended by 200 percent, civil aviation routes extended by 87 percent, postal delivery routes extended by 79 percent (to 2006), mobile telephone capacity and subscribers by 7252 percent (to 2006), and broadband subscriber ports by 260 percent (Geng, Yang and Janus 2009, 166). Another source of indirect subsidisation of lower cost market-based and private industries has been price controls, especially in energy and resources, which have been kept below market costs, helping energy intensive industries to rapidly accumulate (ibid).

During the 1980s industry reform entailed incremental managerial reforms to provide incentives to managers and enterprises to sell in the market after production quotas under the traditional planning system had been met. These 'microeconomic reforms' provided mechanisms to encourage new streams of value-generation, based on secondary and lighter industries where rates of growth and profits were very high, because of the suppression of factor costs / prices. In addition the industrial market provided an already developed upstream industrial input-output complex. During the first phase of reforms, the local government controlled and 'collectively owned' TVEs were the dominant form of new industrial entrants, driving industrial competition, especially in product markets (Naughton 2007, 297). Moreover:

> With the rapid expansion of production and circulation outside the planned system and the increasing importance of the non-state economy, the weight of market-price track increased while that of the planned-price track decreased. By 1996, 93 percent of all retail goods, 79 percent of all agricultural products, and 81 percent of the total sales volume of production factors were priced solely by the market (Lin, Cai and Li 2003, 172).

Further, the non-traditional industries had few of the social liabilities (wages, pensions, housing, and health care) of the traditional SOEs, and increasingly the profitability of the SOEs was put under pressure, especially as government funding was withdrawn (Lardy 2002, 76) Again, according to Lin, Cai and Li (2003, 186):

> The proportion of non-state sector [i.e., the non-traditional SOEs, including TVEs] in total industrial output value grew from 22.4 percent in 1978 to 74.5 percent in 1997, an increase of 52.1 percentage points. The proportion of the non-state sector in the total retail volume of commodities rose from 45.4 percent to 75.5 percent, an increase of 30.1 percentage points.

By the mid-1990s SOE profits had nosedived, and although they were kept alive by indirect lines of credit from the state-owned commercial banking system (discussed in chapter eight), they had become some of the most indebted firms in the world (Lardy 2002, 76). In response, tens of thousands of SOEs were privatised during the late 1990s.

Although 'owner-looting' of SOEs was a feature of the privatisation process, as former state managers could buy privatised assets at cut prices from their former colleagues, the recent structural surpluses are not explained by these forms of 'dispossession', but rather by the retention, concentration and centralisation of 'strategic monopoly' sectors by the state. Tens of thousands of unprofitable and loss-making SOEs were privatised, mostly small to medium enterprises in the competitive market sectors, while large profitable SOEs in the 'strategic monopoly' sectors were retained, and their assets and profits have soared (Geng, Yang and Janus 2009, 163-35).

Since the mid-1990s the ownership structure of industry, by number of enterprises, has been split evenly between SOEs, 'collective enterprises' (local government controlled), and private (domestic and foreign). But by 2005 the top five strategic monopoly sectors — petroleum and refining, metallurgy, electricity, military-industry and communications

— accounted for *three-quarters of all industrial asset value* in mainland China (Naughton 2007, 301).[33]

Structure and performance of top-500 Chinese industrial enterprises, 2005

Ownership	No. SOEs	Assets (RMB billion)	Profit (RMB billion)	ROA %
State	3999	6090	268	4.40
Collective	1331	343	23	6.62
Private	5584	1110	68	6.13
Foreign	5272	2880	203	7.05
Total	16186	10423	562	5.39

ROA = return on assets

Source: National Bureau of Statistics (NBS) 2005, China Statistical Yearbook 2005, China.

Structure and performance of top-500 Chinese enterprises in 2007, by ownership (percent)

Ownership	No. SOEs	Assets	Profit	Employees	Taxes	ROA
State	69.8	93.6	87.9	89.3	92.7	1.4
Collective	5.8	4.2	2.2	2.4	1.7	0.8
Private	17.8	1.7	7.1	7	3.9	6.1
Foreign	6.6	0.5	2.8	1.3	1.7	8.5

ROA = return on assets

Source: A Report on the Development of China's Enterprises 2007, Enterprise Management Publishing House, Beijing, Chapter 12, p. 88.

[33] These five 'strategic monopoly sectors' also employed two-thirds of central State Asset Supervision and Administration Commission (SASAC) workers in 2005.

Structure and performance of top-500 Chinese
manufacturing enterprises in 2007, by ownership (percent)

Ownership	No. SOEs	Profit	ROA
State	49.8	61.1	3.2
Collective	7.8	7.8	6.2
Private	29.4	21.4	6.4
Foreign	13.0	9.7	7.9

ROA = return on assets

Source: A Report on the Development of China's Enterprises 2007, Enterprise Management Publishing House, Beijing, Chapter 13, p. 126.

Structure and performance of top-500 Chinese enterprises
in the service industry in 2007, by ownership (percent)

Ownership	No. SOEs	Assets	Profit	ROA
State	61.4	93.6	92.4	0.8
Collective	11.4	5.4	1.1	0.2
Private	23.2	0.8	5.3	5.3
Foreign	4.0	0.1	8.3	8.3

ROA = return on assets

Source: A Report on the Development of China's Enterprises 2007, Enterprise Management Publishing House, Beijing, Chapter 14, p. 137.

Table 7-1 Structure and performance of enterprises, 2005 and 2007.
Source: Geng, Yang, and Janus (2009, tables 9.1; 9.2; 9.3; 9.4, 158-59).

SOE profits in the strategic monopoly sectors have been the main driver of the recent growth in corporate savings. Profits are high and are also often retained, rather than distributed in the form of dividends or through the tax system. In 2007, 69.8 percent of the top 500 Chinese enterprises were SOEs, and these accounted for 93.6 percent of total enterprise asset value and 87.9 percent of the profits of the top 500 firms (see table 7-1.)

(Geng, Yang and Janus 2009, 158). SOEs accounted for almost 50 percent of the top 500 manufacturing enterprises in 2007, and 61 percent of the manufacturing profits. And in services SOEs accounted for 61.4 percent of the top 500 services enterprises, 93.6 percent of the asset value, and 92.4 percent of the profits. Thus, the rising share of corporate savings in the recent structural surpluses has been driven by the retained high profits of SOE strategic monopolies in heavy industry and strategic services like communications.

7.3.4 **Opening, export-orientation and the foreign trade surplus**

The development of a 'world factory' in mainland China since the 1990s has been based on the relocation and expansion of final assembly processing from regional production networks, geographically centred in East Asia, but heavily invested from MNCs internationally. But few aspects of accumulation in China are as poorly understood as the strategic shift to an export-oriented strategy by China's authorities after the late 1970s, and the role that shift played in the changing accumulation and recent trade and official foreign exchange surpluses. While opening by China's authorities facilitated 'catch-up' accumulation through a major relocation of low value-added manufacturing assembly operations to mainland China, it is a mistake to characterise the overall pattern and sources of growth in China as 'export-dependent'. By contrast, the analysis here supports the characterisation of the sources of growth and capital accumulation as 'domestically-led, but outwardly oriented'. What is true, however, is that because cross-border trade is primarily invoiced in US dollars, net cross-border trade surpluses — a direct result of the deepening integration of internationalised manufacturing production networks in China — have provided the key source of foreign exchange earnings during the reform period. A key part of the shift in accumulation strategy during the reform era was a process of strategically selective opening to foreign trade and investment. Foreign trade had been pursued during the early 1970s within the context of the ISI strategy, thus efforts to

increase exports were aimed at raising foreign exchange to fund higher technology capital goods imports (Lardy 2002, 12). The shift to an export-oriented industrialisation EOI strategy was initially justified by key Chinese leaders such as Deng Xiaoping as a break with the ISI strategy of technological 'self-reliance'. But the shift to an EOI strategy also involved broader objectives. As mentioned previously, Deng was impressed by Singapore's use of foreign capital to derive income taxes, wages and the creation of a services sector. Thus the open door strategy was a shift in industrial strategy like that pursued by the 'Asian Tigers' (Taiwan, South Korea, Hong Kong and Singapore) utilising concessional FDI regimes in special export zones such as Shenzhen, Zhuhai and Xiamen, which attracted labour-intensive foreign investment in secondary and lighter value-stream industries.

Few aspects of recent accumulation in China have been as poorly understood as how the EOI accumulation strategy has contributed to accumulation in China. The pre-reform foreign trade regime was based on an ISI strategy that was 'biased' against export production through controls on what enterprises could produce and through a 'high' exchange rate to subsidise imports, but under which exporters made substantial domestic currency losses. By contrast, although export-promotion or EOI regimes are 'outwardly oriented' they are also ostensibly neutral trade and industrial regimes, rather than being the opposite of ISI regimes, which is how they are often understood. The key features of EOI regimes are minimal trade controls (minimal quotas), lower or non-existent tariffs, and a neutral exchange rate regime, i.e., one that is not set to maintain domestic currency losses on exports or subsidise imports (Lardy 1990, 5-8). Under 'reform and opening' the shift from an ISI to an EOI regime entailed state reduction of the mandatory foreign trade plan and the devolution of control on foreign trade activities and foreign exchange retention to SOEs, regional governments, fiscally independent cities and sectoral authorities (ibid). The details of this story have been told elsewhere (Breslin 2007). The focus here is on the 'necessary contingency' of the success of EOI strategies, and the

contribution of growing globally integrated accumulation to the structural surplus and, more specifically, to the accumulation of recent foreign exchange surpluses.

This success — judged here by rising inward capital investment and a rising value-stream of sustained export earnings over three decades — has been 'necessarily contingent' on the industrial, macro-political and social legacy of the pre-reform system and the reorganisation of final assembly to mainland China from pre-existing regional production networks. The former point is simply that policies of reform and opening facilitated the rapid accumulation of capital in lower value stream, labour-intensive export-processing activities. These industries were not just given concessional FDI regimes, but were also implicitly subsidised by the repression of production costs due to the industrial, institutional and social legacy of the pre-reform industrial system. The counterpart of the rapid accumulation of capital in export-processing activities was the rapid accumulation of low-cost labour (the subject of section 7.4).

The latter point is that the success of this strategy was also necessarily contingent on the reorganisation of pre-existing regionally-based (and internationally invested) production networks which had successfully specialised in labour-intensive export-processing in Taiwan, Singapore, South Korea and Hong Kong in the 1960s and 1970s. Although the timing of reform and opening from the late 1970s can be explained, its success in facilitating the reorganisation of labour-intensive assembly operations from within East Asia to mainland China presupposed this prior development. Upward pressure on wage rates and other production costs in these countries by the 1970s, given much smaller pools of labour and resources, facilitated the move of final assembly operations to lower cost mainland China during the 1980s and 1990s. The proximity of the 'China circle' of familiar and business networks also facilitated investment-gathering trips of PRC officials and the flow of inward investment from regionally based operations. The

spectacular appreciation of the Japanese yen following the Plaza Accords in the mid-1980s also made capital-investment from Japan to mainland China an attractive option.

Nevertheless, while sustained and relatively large-scale foreign investment has facilitated rapid capital accumulation in mainland China since the early 1980s, the majority of financing for capital formation in mainland China has come from domestically generated sources. The estimated cumulative stock of FDI into mainland China was US$500 billion dollars from 1980 until 2004 (Naughton 2007, 405). However, Xiao (2004) estimates the share of 'round-tripping' from 1980 to 2004 — as local investors took illegal advantage of the arbitrage opportunities created by concessional FDI treatment — as high as 20-40 percent of headline FDI. Gross capital formation has been primarily driven by domestic sources of investment through the reform period, and this domestic-led investment has been the single largest component of GDP growth since the early 1980s. In the period 1999-2001, for instance, gross capital formation was a high (by comparative standards) 40 percent of GDP — of this FDI account for 11 percent of total capital formation in these years (Naughton 2007, 405). This suggests it is a mistake to characterise the overall growth in output (the streams of value), and less still capital formation (stocks of value), as 'export dependent', for reasons outlined below.

The rising volume (and value) of merchandise trade in the three decades since reform and opening (discussed below), has contributed to 'aggregate demand' in China — directly by facilitating domestic-led investment in export-processing activities, and indirectly through backward linkages to domestic capital goods industries and wage-consumption. It is beyond the scope of this thesis to quantify the contribution of deepening of globally integrated production — measured by the value of cross-border merchandise trade (imports plus exports — on either the growth in the total value of output (GDP) or the value of gross capital formation. However, a few qualitative points are made here.

	Total trade									Net trade (Exports-imports)			
	Imports + Exports		1	Imports		2	Exports		3	Exports-imports			4
Year	Total	FIEs	Share	Total	FIEs	Share	Total	FIEs	Share	Year	Net Total	Net FIEs	Net Share
1986	738	30	*4*	429	24	*6*	309	6	*2*	**1986**	-120	-18	*15*
1987	827	46	*6*	432	34	*8*	394	12	*3*	**1987**	-38	-22	*57*
1988	1028	83	*8*	553	59	*11*	475	25	*5*	**1988**	-78	-34	*44*
1989	1117	137	*12*	591	88	*15*	525	49	*9*	**1989**	-66	-39	*59*
1990	1154	201	*17*	533	123	*23*	621	78	*13*	**1990**	87	-45	-
1991	1357	290	*21*	638	169	*27*	719	120	*17*	**1991**	81	-49	-
1992	1655	437	*26*	806	264	*33*	849	174	*20*	**1992**	44	-90	-
1993	1957	671	*34*	1040	418	*40*	917	252	*28*	**1993**	-122	-166	-
1994	2366	876	*37*	1156	529	*46*	1210	347	*29*	**1994**	54	-182	-
1995	2808	1098	*39*	1321	629	*48*	1488	469	*32*	**1995**	167	-161	-
1996	2899	1371	*47*	1388	756	*54*	1511	615	*41*	**1996**	122	-141	-
1997	3251	1526	*47*	1424	777	*55*	1827	749	*41*	**1997**	403	-28	-
1998	3239	1577	*49*	1402	767	*55*	1838	810	*44*	**1998**	436	42	*10*
1999	3606	1745	*48*	1657	859	*52*	1949	886	*45*	**1999**	292	27	*9*
2000	4743	2367	*50*	2251	1173	*52*	2492	1194	*48*	**2000**	241	22	*9*
2001	5098	2591	*51*	2436	1259	*52*	2662	1332	*50*	**2001**	225	74	*33*
2002	6208	3302	*53*	2952	1603	*54*	3256	1699	*52*	**2002**	304	97	*32*
2003	8512	4723	*55*	4128	2319	*56*	4384	2403	*55*	**2003**	255	84	*33*
2004	11548	6632	*57*	5614	3246	*58*	5934	3386	*57*	**2004**	319	140	*44*
2005	14221	8317	*58*	6601	3875	*59*	7620	4442	*58*	**2005**	1019	567	*56*
2006	17607	10364	*59*	7691	4726	*61*	9691	5638	*58*	**2006**	2000	912	*46*
2007	21744	12569	*58*	9563	5610	*59*	12182	6959	*57*	**2007**	2619	1349	*52*

Total, FIE and Net total figures in US $100 million; Shares in percentages

Table 7-2 Total trade, imports and exports by FIEs, 1986-2007.
Data: Customs Statistics (Ministry of Commerce 2009). Net trade shares (Column 4) are the author's calculations.

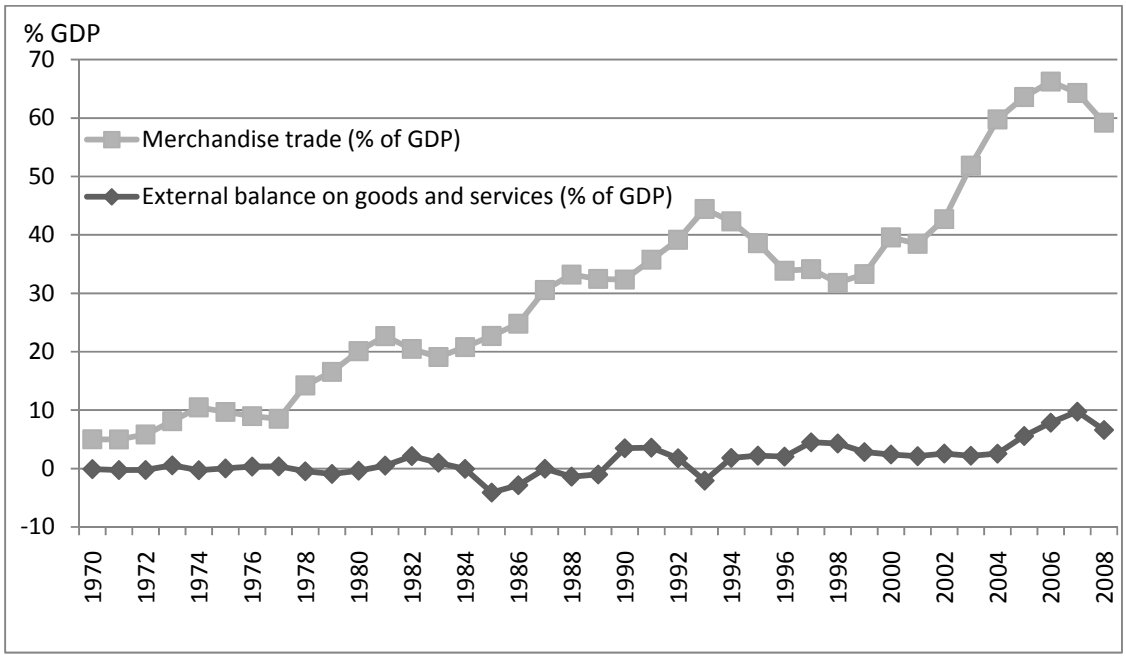

Figure 7-1 China, merchandise trade, & external balance on goods and services as a percent of GDP.
Note: Merchandise trade is imports plus exports. External balance is the net 'balance' (i.e. exports minus imports) of cross-border goods and services trade. Data: World Development Indicators (Online), World Bank.

First, while the contribution of FDI and exports may be often overstated in explanations for the rising surplus in China, it is also true that domestic investment sources dominated capital formation in export processing the first two decades of the reform period and have only been surpassed by foreign invested enterprises (FIEs) in the 2000s. Table 7-2 shows the share of imports and exports by FIEs, as a share of total imports and exports from 1986 to 2007. FIEs share of total trade rose steadily, especially from the 1990s. However FIEs share of total trade only reached 50 percent in 2000-1 (column 1), and 51 percent of total exports in 2002 (column 3). FIEs still accounted for less than half (40 percent) of net trade (i.e., exports-imports) in 2004 (column 4). This suggests that 'domestically-led' investment accounted for the majority of total trade and net trade shares until the early to mid 2000s, and then accounted for between 40 to 50 percent of trade shares until 2007. Nevertheless, FIEs accounted for 84 percent of total processing trade (as distinct from overall trade), processing exports, and processing imports by 2007 (Ministry of

Commerce 2009). The overall picture then, is that deepening global integration of investment, production and trade in mainland China, has been a greater cause of 'domestic' capital formation, but not necessarily the source of the original surplus invested, than is accounted for by a breakdown of investment origins by conventional categories of domestic and foreign investment.

Further, the total value of merchandise trade flows (imports plus exports) has grown much faster than the ‘external balance’ on those flows, which shows a high level of global integration measured by cross-border production activity, but a low level of low value-added within mainland China as a result of that activity. The total value of merchandise trade (imports plus exports) was 20 percent of the value of GDP in 1980, and had risen to over 60 percent of the value of GDP by 2005 (figure 7-1). But despite this high net trade, the net ‘external balance’ on goods and services (i.e., goods and services exports minus imports), which is dominated by merchandise trade, was negative throughout much of the 1980s. The development of a current account surplus is much more recent. The ‘external balance’ reached 4.5 percent of GDP in 1997, before falling to two to three percent of GDP between 1999 and 2005, and then rising from 2005 to 2007 as high as ten percent before falling with the global financial crisis in 2008. An ‘external balance’ of five to ten percent of GDP is comparatively high, but it is far less than the total value of imports and exports, which indicates high integration through regional production assembly, but low-valued added in the process. Nevertheless, because the majority of this activity is invoiced in US dollars, this surplus has been the primary channel of recent foreign exchange flows.

Conclusion

The strategic shifts in accumulation strategy from the late 1970s facilitated the transformation of agricultural, industrial and foreign trade based production, all of which

have contributed to the development of a structural surplus in the post-reform period. The approach taken here has centred on a value-stream analysis of the changing structure of capital accumulation and the sources of value-generation in mainland China since the beginning of reform and opening. The success of this shift in accumulation strategy — judged here by the rise in output and capital accumulation — has been contingent on the heavy industrial, social and institutional legacy of the pre-reform system, as well as on the timing of the shift towards an export-oriented industrial strategy from the late 1970s, which facilitated the reorganisation of regionally based cross-border production networks. The rise in output in agriculture and rural industry during the 1980s generated a rising surplus, much of which has been extracted to finance urban industry via the banking system. The more recent rise in the overall structural surplus has primarily been driven by rising corporate savings in the heavy and strategic monopoly SOE sectors since about 2005. Despite the deepening global trade and investment integration through cross-border export processing, the development of a current account surplus and the rapid accumulation foreign exchange reserves through this channel is relatively recent — from the early 2000s. There is however, a missing link in this value chain story: an explanation of the rapid accumulation of labour in the three decades since reform, and the relationship between labour and the generation of a rising level of output over this period.

7.4 **The role of ‘surplus labour’ in China’s recent surpluses**

This section focuses on a missing element from recent value-chain analyses of global accumulation in China (e.g., Breslin 2007): a systemic approach to the role of labour in these value-chain processes. For Chinese developmental economists, however, such as Lin, Cai and Li (2003), it is taken for granted that a key factor in the rapid accumulation of secondary and lighter value-stream manufacturing in mainland China since the 1980s has been the ‘comparative advantage’ of low-cost labour abundance. Indeed, alongside

access to a finance surplus, the rapid increase of labour in the TVEs was central to accumulation (Lin, Cai and Li 2003, 192). Athukorala, Fukao and Yuan (2009, 179-208), argue that in 'dualistic' transitional economies such as China, the continued supply of low-cost surplus labour helps to explain the familiar pattern of rising industrial output and corporate profits, while the real wage share of value-added remains stagnant or even falls.

A popular objection to this surplus labour theory however, is that it presumes what it does not explain, i.e., labour abundance. Further, Hung (2009, 5-25) claims that the theory of surplus labour is a mistaken demographic explanation for reform era wage stagnation in mainland China, because real wages rose in Taiwan and South Korea after two decades of rapid labour-intensive manufacturing industrialisation, but have not yet done so in China to the same extent. This objection raises an important explanatory problem, but it does not invalidate the theory of surplus labour developed by Lewis (1954; 1958) and extended by Fei and Ranis (1964; 1979), nor does it invalidate its applicability to the China case. The proposition here is that that the supply of a vast low cost 'surplus labour' force within the PRC has been a cause and consequence of rapid accumulation and the recent rising structural surplus in mainland China. However, the existence of such a surplus labour force cannot be assumed — and must be located in a concrete understanding of how the industrial, social and institutional legacy of the pre-reform economic system conditioned the rapid accumulation of capital and labour during the reform era; and, an understanding of capital accumulation as a broader internally related process (strictly many processes) of social and institutional transformation. There has also been a major and related demographic transition in the three decades since the reform era began, in which the working age share of population — and thus 'labour participation' and 'labour supply'— have risen sharply, while dependency ratios have fallen (Ma and Zhou 2009).

7.4.1 **The ‘surplus labour’ framework**

The theory of surplus labour developed by Lewis (1954, 1958, 1979), and extended by Fei and Ranis (1964; 1979) potentially provides a powerful explanatory model by providing ‘a macro-theoretical framework to analyse the role of labour supply in economic transformation from a historical perspective’ (Athukorala, Fukao, and Yuan 2009, 181). According to the Lewis surplus labour growth model, the development of a modern industrial sector in transitional economies is facilitated by the supply of a surplus labour force. Transitional or developing economies are ‘dualistic economies’ because they have large ‘traditional’ sectors, often assumed to be agricultural, but also including informal and subsistence production, and ‘modern’ capitalist industrial sectors. Therefore transitional economies also have a dualistic labour force, comprised of agricultural labour but also a potentially large informal and underemployed labour force in the non-agricultural sectors, and a modern industrial labour sector. The wage pattern between sectors is held to reflect this division. Wages in the modern industrial sector are higher than the traditional sector due to higher costs of subsistence and labour reproduction in urban and modern capitalist workforces. However, the traditional, informal and underemployed labour force constitutes a pool of surplus labour that can be employed in industry at wages just above subsistence wage costs in the traditional sector.

Because of the supply of surplus labour, employable at near the traditional subsistence wage rate, increased investment, capital formation and technological progress can generate a rising profit share of income *while wage rates remain low*. Major domestic policy regime shifts, such as occurred in China in the late 1970s, can facilitate growth in the modern capitalist sector, while real wages remained low and constant. High profits attract further local and international investment, leading to a rising cycle of expanded production, output, reinvested profits, and demand for labour, moreover:

For the surplus labour economy, this means greater opportunities for output expansion through the export of goods that are intensive in unskilled labour. This combination of modern industrial technology, low wages and a highly elastic labour supply therefore produces a high rate of profit, translated into a high growth rate through increased capital accumulation (Athukorala, Fukao, and Yuan 2009, 181). Thus, there can be a rising profit share of total income, while wages for workers moving into industry remain at or near the subsistence wage level. Continued capitalist development, however, suggests an eventual turning point in the supply of surplus labour — at which point wages will start to rise as will the cost of production (ibid).

A criticism of this model is that it does not explain the supply of surplus labour in the first place and as such, this 'demographic' theory is an apologia for rising profits and stagnate wages (e.g., Hung 2009, 5-25). Hung makes a comparative case that, whereas the manufacturing wage rate in China has remained virtually stagnant as a percentage of the US wage rate in the past three decades, the manufacturing wage rate had risen sharply in Japan, Taiwan and South Korea within a decade or two during earlier phases of manufacturing-led industrialisation because of an urban-rural bias in the PRC's development path, which is a policy choice that was not pursued in the earlier transitions elsewhere (ibid, 12). Accepting that there was a different development strategy pursued in agriculture in Japan, Taiwan and South Korea, the point made here, however, is that capitalist development in Japan began much earlier, and that the demography and geography of Taiwan and South Korea is an order of magnitude smaller than mainland China. Thus two decades of rapid industrialisation in Taiwan and South Korea, could easily see pressure on manufacturing wage rates, because the potential labour supply in these countries was no larger than a single mainland Chinese province. Thus capital was more rapidly forced to upgrade the industrial value-stream structure, along with manufacturing wage rates. By contrast, within China's borders, there are many more provinces with a potential supply of low wage-rate labour.

Nevertheless Hung's (2009) criticism does raise an important explanatory problem — accounting for the supply of a vast surplus labour pool in mainland, and especially rural China. By 1990 China was in the midst of a profound demographic transition in which the total labour force was not only high but continued to grow at rate faster than the total population. China's labour force grew from 501 million workers in 1985 to 783 million workers in 2007 (table A-2, appendix). China's potential labour force, or labour supply, grew even faster than full time employment during this period. China's potential labour force, measured by its working age population (16-64 years) is estimated to rise from its current 925 million to 1.018 billion people in 2025 (Tao 2006).

The explanation here is that this surplus labour supply has been in the first instance the contingent outcome of the legacy of the pre-reform economic system — broadly understood; and secondly, the subsequent changes in productive relations that have led to the 'freeing' of mainly rural labour has been the result of the specific accumulation strategy pursued by the PRC leadership during the reform and post-reform periods and thirdly a specific demographic transition which began during the reform era, but had multiple social causes.

7.4.2 **The impact of rural and industrial transformation on labour supply**

On the first point, a key legacy of the pre-reform economic system is the institutional and social legacy of the 'primitive socialist accumulation' strategy — that is the strategy of extracting a steep surplus from the peasantry (and urban workers) in order to finance heavy-industrial accumulation. This strategy entailed the subsumption of subsistence agricultural relations, and an institutionalised system of controls to extract a surplus. Extraction was enforced through the organisation of peasants into rural production

brigades and teams, which served as institutions of labour discipline as well as political and social control. Although these forms of institutional control had their origins in the national liberation struggle, they were turned over to mobilise labour under the 'leap forward' accumulation strategy by providing mechanisms (including rewards) to enforce systems of rationing, production quotas and coercion.

A key element of this system of institutional and social control was the introduction of the *hukou* system of household registration in the 1950s, which imposed rigid controls on labour mobility, while access to non-wage payments such as housing, education and other social services, were tied to work units in urban and non-urban areas (Cheng and Seldon 1994). Although controls on movement have been relaxed, urban residency permits, which are required to access services in urban areas, remain unattainable for the majority of non-urban residents (Naughton 2007, 127). There is also strong informal social discrimination in hiring. Urban hukou residents are given employment preferences, especially in higher skilled jobs in key centres, which non-local, and still more, migrant hukou holders, are effectively excluded from. Thus, despite greater movement between urban and rural sectors, access to types of employment, relative wages and non-wage social services, has remained dualistic and differentiated.

Further, the policy and structural shifts in agricultural and industrial accumulation transformed agricultural and industrial productive relations. The transformation of rural China through the 'decollectivising and commercialising' of agriculture (Zweig 1989, 174), created a class of 'independent commodity producers', and thus class differentiation among the peasantry. The system of mandatory quotas, which served to extract a surplus from agriculture and the peasantry through a system of 'price scissors', continued during the reform era. Similarly, fiscal redistribution from the centre to the rural areas remained less than a third of the rate of extraction through the banking system during the entire reform period (Huang, Rozelle and Wang 2006, 13). As with the pre-

reform accumulation strategy, this suggests that the PRC leadership's interests and preferences lay in the continued flow of credit via the banking system to the traditional SOE industrial sector. The combination of reforms and the continuation of the pre-reform strategy in relation to agriculture generated push factors, which facilitated the supply of surplus labour to the rural TVE industries, and to the export-processing industries. This does not mean that all rural labourers who sought work in the rural industries, the coastal export-processing zones and the major cities, have done so as a result of dispossession. Many peasant households retained access to the land, but pull factors — made all the more attractive by the changing structure of accumulation in agriculture — motivated the shift to industrial employment, if not for the whole family, than at least for individuals to earn a marginally higher income in the TVEs or the export-sectors and supplement the household income (Webber 2008).

Since the reform era there has been a tremendous shift of labour out of agriculture and into rural and urban industries. Between 1980 and 2008, the rural population fell from 80 to 57 percent of the total population, while the urban population grew from 20 to 45 percent of the total (table A-2, appendix). At the same time within the category of rural, there has been a substantial shift out of agriculture and into rural enterprises and industry located within nominally rural areas. Thus there has been a steady but major shift out of agriculture and into industry, suggesting a sustained rise in demand for industrial labour. Internal migrant labour, which presumably is still counted as rural on the census, has also been an important part of the surplus labour pool in China. China's 2000 census put the estimated migrant population, defined as those who have lived outside their place of residency permit for six months at 144 million people (Naughton 2007, 129). Over 50 percent of migrant labour within China has been concentrated within the rapidly industrialising south-east, especially in process manufacturing, where there has been a pattern of often young migrant women working in factories for several years before returning to rural provinces to be replaced by a new generation of young workers at a

similar initial wage rate (Gong et.al. 2008, 114-132). The insecurity faced by migrant workers in labour-intensive export industries is also a mechanism for employers to secure very high rates of absolute exploitation (the length of overtime and consecutive working days) under piece rate systems (Chan and Siu 2010, 167-190). Migrant labour is also concentrated in local government construction and the 'informal sector' across China's urban areas.

Similarly, the restructuring the traditional SOE industries has added to the pool of surplus labour through underemployment and the rise of open unemployment in urban centres. The officially registered urban unemployment rate was four percent in 2007, or 8.6 million unemployed workers (Athukorala, Fukao, and Yuan 2009, 189). There is good reason to believe that the real unemployment level in urban areas is considerably higher. Mass lay-offs in the state-owned sector after 1995 saw urban SOE employment reduced from 112.6 million in 1995 to 68.8 million by 2003, to 64.2 million by 2007; a reduction of nearly 50 million workers (See table A-2, appendix). How many of these workers found full time employment is unknown, but many others would be counted in the official unemployment reporting system, which cuts the reporting age off at 50 for men and 45 for women. In addition to migrant labour and urban unemployment, there are also large numbers of unemployed people in the non-industrial, informal and rural sectors estimated at between 100 and 200 million potential workers in 2002 (OECD 2003) and although more recent estimates give similar figures, they remain general estimates (Tao 2006, 527-28).

7.4.3 **Reform-era working age demographic transition**

The relationships between particular demographic patterns, the labour force, other institutional and policy variables, and levels of savings and investment in China are, as elsewhere, complex. What is apparent in China, however, is a reform era demographic

transition in which the labour force has grown faster than the population dependent upon it, known as a falling dependency ratio (Ma and Zhou 2009, 8). Using a dependency ratio defined as the sum of old-age (over 65) and youth (below 15) compared to the working age population (16-64), Ma and Zhou (2009, 8) calculate that China's dependency ratio fell from 55 percent in 1985 to 38 percent in 2007; that is, a major fall in the ratio of dependents to the working age population (Figure 7-2).

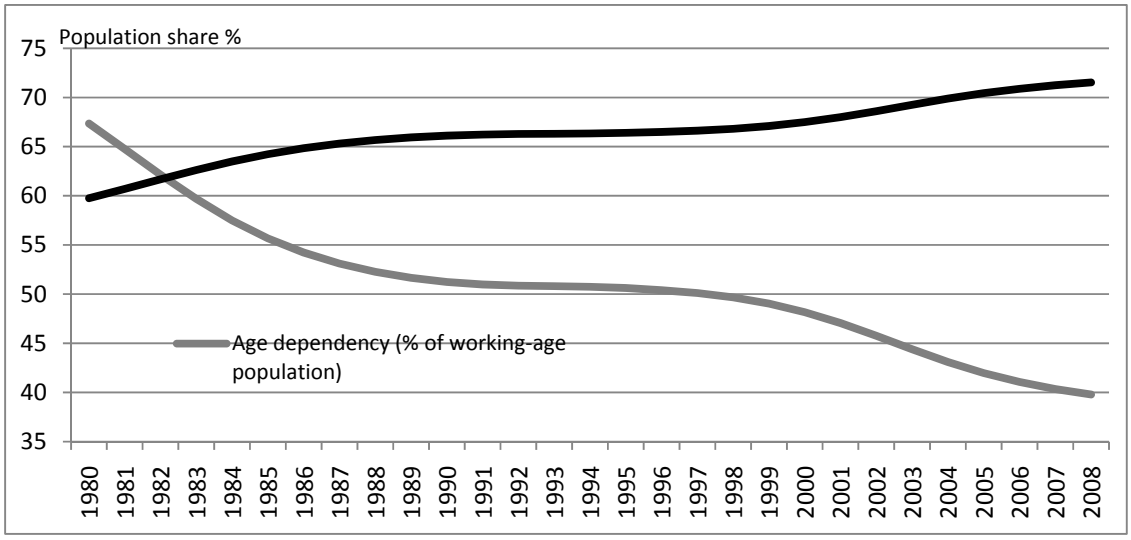

Figure 7-2 China's rising working age share of population & declining dependency ratios, 1980 to 2008.
Note: The age dependency share is calculated as: the age dependency ratio, young <15 (% of working-age population) plus the age dependency ratio of old > 65 (% of working age population). Data: World Development Indicators (Online), World Bank.

The reasons for this demographic transition include a generational catch-up of 'baby boomers' in China born between 1962-1971 after the disaster of the Great Leap Forward that coincided with improved health and living standards. This led to a sharp rise in births and hence the sharp rise in the working age population from the late 1980s. This demographic bulge coincided with the introduction of the stringent One-Child Policy from 1980, whose effect was to drastically reduce the number of dependent children, and hence the dependency ratio to the working age population fell (Naughton 2007, 170-75). The major reduction in the ratio of youth to the working age population since the 1980s reinforced the near universal employment of females in the paid labour force, which has

stood at over 70 percent between 1980 and 2008 (table A-2, appendix). This demographic transition of a falling dependency ratio and increasing labour participation relative to total population, is a window lasting from about 1990 to 2025, and is extremely favourable to rapid economic growth (ibid, 173-74). Williamson and Higgins (2001, 123-154) make a compelling case that falling dependency ratios facilitated rapid accumulation in other East Asian countries at earlier stages by generating higher household savings, rising household investment and overall per capita income growth. Plausibly, a falling dependency ratio has led to a rise in the rate of household savings for the current working age population in China (Naughton 2007, 173).

7.4.4 **Wages and the wage share of value added**

Empirical evidence of rising output, rising corporate profits and a stagnant or falling wage share of value-added in the three decades since the beginning of reform fits the pattern of rapid capital accumulation under the surplus labour framework. Between 1978 and 2000, industrial output, driven by the rapid accumulation of capital and labour, increased ten-fold (Naughton 2007, 297). By contrast, real wage urban rates (nominal wage rates deflated by consumer price inflation by province) across all ownership forms of employment remained stagnant well into the mid-1990s (Athukorala, Fukao and Yuan 2009, 193).[34]

However, official urban wage data, which records wages in the urban SOE sector, shows a rise real wages between 1995 and 2007 across nearly all provinces, but the rise is greater in the coastal provinces and major cities. According to these figures the real wage rose at an average rate of 11.2 percent per year in SOEs, compared with 7.4 percent per

[34] Real urban wages actually declined for nearly two decades during the 1960s and 1970s under the pre-reform economic system (Naughton 2007, 132).

year for private firms and 8.3 percent per year for collective farms (Athukorala, Fukao, and Yuan 2009, 194). Although such an annual real wage rises suggest a tightening of labour force employment, it is not clear if the official figures include non-wage costs, especially in the SOE category. Nevertheless, the surplus labour theory centres on the level of the marginal wage rate, or the cost of employing relatively unskilled labour, rather than the rate among urban and more skilled workers. A better wage rate, in this case then, is the TVE wage rate, which according to official data, rose 5.5 percent a year between 1987 and 2005 — but despite this real rise, the average TVE real wage rate remained at 65 percent of the average urban private wage rate (Athukorala, Fukao, and Yuan 2009, 198). Further, although data on the real wage rate for the 144 million migrant workers — based on the 2000 census — is not available, case studies that do exist show the initial real wage rate (for new migrant workers) in export-processing has been stagnant well into the 2000s (Gong et.al 2008, 114-132).

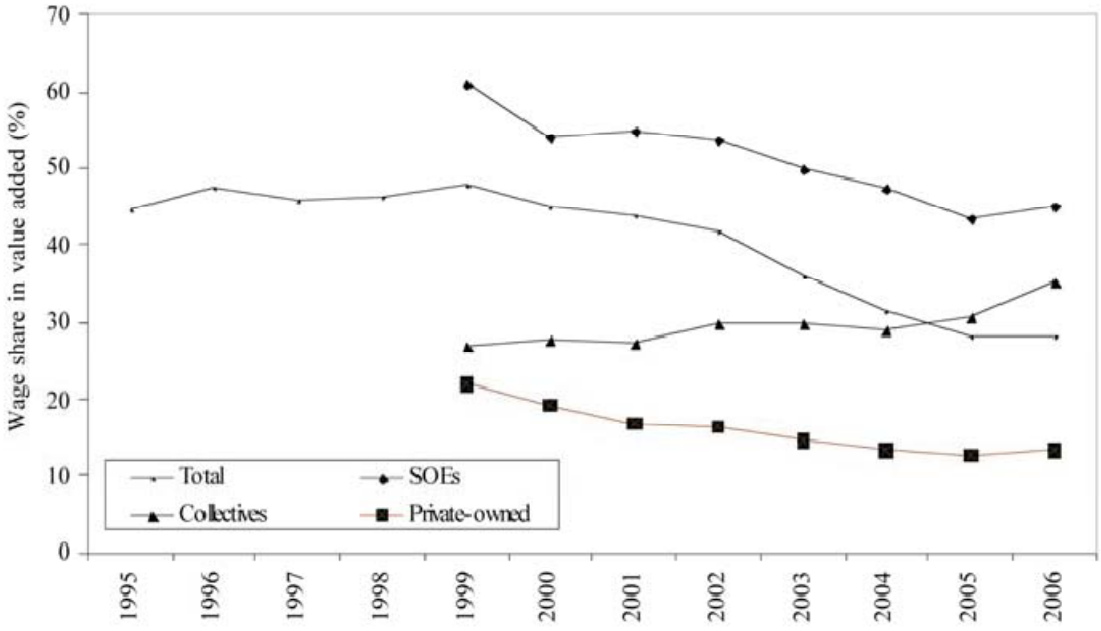

Figure 7-3 Wage share in industrial valued-added by ownership category, 1995–2007.
Source: Athukorala, Fukao and Yuan (2009, Figure 10.5, 201) based on data from the CEIM database.

More important than real wage data is the wage share of value in industrial value-added, or wages as a share of profits in enterprises — because it is a relational concept. The evidence here is consistent with a high and rising profit share relative to wages. The labour share of industrial value-added was almost 50 percent in mid-1990s but fell to about 40 percent by 2006. Again this figure is somewhat distorted by the high level of non-wage payments recorded for the wage share in SOEs and collective enterprises. By contrast, the wage share in private enterprises underwent a remarkable decline from 22 percent to 12 percent of industrial value-added between 1999 and 2006, suggesting an extremely high and rising profit share in private enterprises during this period (Athukorala, Fukao and Yuan 2009, 201). This wage share decline could also be caused by increased productivity; for instance, if wages were relatively stable, and average productivity increased through investment in new technology. This is consistent with the surplus labour growth model of a rising profit share to wages, as a result of investment and technological upgrading. The declining wage share of industrial value-added is also consistent with a sharp rise in corporate savings in China over the past decade.

Conclusion to chapter 7

The deeper causes of the recent rising structural surplus, including foreign exchange accumulation, in mainland China, are a product of multiple complex-causal variables. These include the industrial, institutional and social legacy of the pre-reform accumulation heavy-industry strategy and the subsequent contingent success of the reform era shift to a market-based and export-oriented strategy. The shift in accumulation strategy to reform and ‘opening’ facilitated new value-streams in agriculture, industry and foreign trade, and the subsumption of previous relations of accumulation, especially in agriculture but also in industry. The development of a recent structural surplus has been a product of rapidly rising output, led by new value-streams in the agricultural, industrial and foreign trade sectors. The extraction of an agricultural surplus from rising

output in agriculture and rural TVE industries has been a source of credit for the traditional industrial sectors via the banking system, and the source of the labour surplus for accumulation in rural, traditional SOE and export-processing industries. In the 1980s and 1980s, most of the rise in output and capital accumulation took place in the market-based (i.e., non-plan), non-traditional and lower value-stream industries, centred on the TVEs and the new private and foreign invested enterprises, and much of this was reinvested in domestic capital formation.

However, a different pattern emerged in the 2000s, where the main source of the rising structural surplus has been the rising corporate profits and savings of the traditional 'strategic monopoly' SOE sectors. It is difficult to separate the domestic and global trade components of this surplus, but a rising mass of profits from sales at home and abroad are evident. The contribution of expanding export-processing production to this structural surplus has, until the 2000s, mostly been through the demand mechanism as a stimulus for rapid capital formation and labour accumulation. Although the primary channel of foreign exchange accumulation — discussed in the next chapter — has been the development of a surplus on the 'external balance', or the current account on goods and services, this surplus is a recent development that is attributable to the strategic monopoly of SOEs as well as the export-processing sector. The next chapter turns to the question of why much of this surplus has taken the form of official foreign exchange accumulation by China's monetary authorities, mostly in the form of US dollar assets, and the implications of that accumulation for China's authorities and international finance.

Chapter 8

China's reserve accumulation: two-way international financial intermediation

This chapter shifts from an analysis of the value-chain processes that have generated a rising structural surplus in China since the reform era to understand why much of this surplus has taken the form of official reserve accumulation, especially in US dollar assets, the pressures on Chinese authorities that flow from this official reserve accumulation and Chinese authorities' response to those pressures. The approach taken here differs from both the conventional political agenda of analysing international finance in terms of state to state financial relations, especially financial power relations between nation-states (Andrews et.al. 2006), and from the view that these international financial flows represent a departure from some nationally-centred equilibrium condition. Although in the case of China and the US attributes of the former view are clearly relevant, the argument here is that international financial relations have an ontological depth — they have multiple and layered determinants — which do not necessarily conform to the political dimension of inter-state relations, or even coherent national stories, even though these two dimensions of international finance may sometimes overlap. The approach taken here opens up a different analytical path, which centres on how and why China's official reserve accumulation can be understood as a value chain process of international financial intermediation.

The proposition here is that although Chinese monetary authorities sought to secure a greater stock of foreign exchange reserves in response to short-term payments shortfalls in the 1980s and in response to the threat of sudden capital withdraw during the 1997-98 financial crisis, the subsequent scale of official reserve accumulation has been a by-product of structural determinants (the trade surpluses) and other policy objectives,

especially the twin objectives of maintaining a nominal exchange rate anchor against the US dollar, and a degree of control over cross-border finance. Rising official foreign exchange liquidity has been the by-product of the institutional and administrative measures adopted to secure these price risk and financial asset-risk mitigation objectives. International financial intermediation is the process through which China's authorities have sought to offset this rising foreign exchange liquidity and secure its present value, especially through the purchase of US Treasury and agency securities.

Understanding international financial intermediation as a value-chain process that transforms financial claims along dimensions of risk, maturity, and instrument has a number of analytical benefits. It allows us to understand the financial pressures on China's authorities that flow from this financial transformation — the concentration of market and credit risk in US dollar assets, and the risk of unchecked growth in domestic RMB liquidity that flows from transforming foreign exchange inflows into domestic currency. It allows us to analyse their responses to those pressures: attempts to diversify out of concentrated dollar asset risk and encourage RMB trade invoicing at the margins, and the limits of those attempts in the absence of an alternative to US government dollar bonds, particularly in the absence of pursuing full convertibility of the RMB. It also allows us to understand the relative weight and consequences of official Chinese US dollar accumulation as a systemically important, but typically overstated, financial intermediary relationship within US international securities markets.

This chapter is organised as follows: section 8.1 analyses why and how China's official sector has been accumulating official foreign exchange assets, and why these assets have been concentrated in US dollar assets. Section 8.2 examines the financial pressures on China's authorities that have flowed from this accumulation, including domestic liquidity pressures, and evaluates Chinese authorities' responses to these pressures. Section 8.3

evaluates the prospects for Chinese official disintermediation — that is, a reversal of previous intermediation — from US dollar assets.

8.1 **Applying a theory of international financial intermediation**

International financial intermediation denotes a two-way cross-border and often cross-currency value-chain process in which an increase in financial assets of an international financial institution entails a simultaneous increase in financial liabilities of the counterparty institution. In the process financial assets are transformed along dimensions of instrument, maturity and risk. In the case of recent Chinese official US dollar asset accumulation, however, the prevailing view is that this process of international financial intermediation is perverse because it entails to a flow of capital or savings from a poor, developing country to a rich industrialised country (Wolf 2008, Zhou 2009b). The related and bigger theoretical problem is the neo-classical assumption that such international financial flows are a form of market imperfection that has arisen, in the case of China, because of financial 'distortions' stemming from state policy interference, or in the case of other international investors in US dollar assets, because of the irrational behaviour of market participants. The alternative theoretical explanation advanced here is that that process of international financial intermediation between the Chinese and US official sectors can be understood as a value-chain process that has been driven by the prevailing social relations of capital in which China's financial authorities have sought to secure the present value of its official surplus, discounted into an uncertain future, through the purchase of US dollar assets, as the most relatively 'risk-free' outlet for rising official foreign exchange liquidity.

This understanding of financial intermediation as a value-chain process, which is driven by the pressure to transform existing financial assets to secure and augment present value, and which is institutionally mediated, provides a flexible and open approach for

understanding financial processes, dynamics and the choices of financial intermediary institutions. It also fits with the approach, advanced in this thesis, to understanding the contemporary dynamics of the money form of value as a capitalist social relation. As such, rather than finance and financial intermediation being a departure from a ‘normal’ or perfectly working market, processes of financial intermediation are social relations that operate as generative and leading mechanisms in the processes of accumulation — through which financial intermediary institutions attempt to secure present value. Thus China's official intermediary institutions — principally the PBC and SAFE, may be understood as strategic institutional actors engaged in a process of ongoing intervention to secure the accumulation of value within circuits of money and finance. In this context, China’s official international financial intermediation can be analysed as a set of integrated value-chain processes, which are mediated through multiple financial institutional stages. The stages of these integrated value-chain processes are introduced below through an analysis of the reasons for the development of official international financial intermediation.

8.1.1 **Explaining the development of official IFI in China**

China’s official foreign exchange reserve accumulation is understood here as a process of official international financial intermediation. But there is no single overriding or constant policy objective that explains official foreign exchange accumulation. Rather China’s authorities have pursued an evolving series of foreign exchange, monetary and financial objectives in response to unforseen immediate or medium-term risks. These evolving policy objectives have been specific responses to the transformation of price risks, currency and inflation risks, and asset-based risks (the risks of disintermediation from the domestic asset base and sudden international capital reversal) that arose in the process of attempting to secure rapid accumulation in the reform and post-reform era.

Although there is little publicly available official evidence, a greater stock of official foreign exchange appears to have been a policy objective that arose in response to acute foreign exchange shortages and payments shortfalls from current account deficits in 1977 and again in 1985-86 (Lardy 2002). A larger stock of official foreign exchange reserves was also one objective in the implementation of the 1994 foreign exchange reforms (Liew and Wu 2007; Zhang 2000), and a greater stock of reserves was again an objective in the wake of the 1997-98 financial crisis. The bulk of recent official foreign exchange accumulation, however, has largely been a by-product of the officially managed exchange rate and related foreign exchange, monetary and financial objectives, in the context of rising foreign exchange liquidity from the twin current and financial account surpluses. International financial intermediation is the process through which China's authorities acquire foreign exchange domestically and transform these assets internationally into US dollar and other liquid international reserve assets.

8.1.2 **Foreign exchange objectives and reserve accumulation**

Foreign exchange policy objectives have entailed a broad and evolving set of foreign exchange tensions and specific policy objectives, including trade, foreign exchange price formation, as well as wider macro-policy and official reserve objectives. The relationship between official reserve accumulation and these broader and evolving foreign exchange objectives is not straightforward. Nevertheless, the analysis here suggests that although official foreign exchange accumulation was an objective at key points, other foreign exchange objectives which arose in the process of reform and opening have played a determining role in recent reserve accumulation. These evolving objectives and their relationship to official foreign exchange accumulation are analysed below.

While many official institutional controls remain, the role and mechanisms for determining money and prices have been transformed during the transition from central bureaucratic resource allocation mechanisms and administrative macro-policy determination to a more market-based set of resource allocation and macro-policy mechanisms. In the context of wider tensions arising from the shift in accumulation strategy in this period, these money and price changes unleashed a new set of foreign exchange and inflation risks. Under the heavy-industry ISI system, administrative controls on the allocation, use and price of foreign exchange effectively created an 'air-lock' between authorised foreign exchange users, domestic accumulation, and between foreign and domestic prices. Foreign exchange risks under this system were minimal.

The shift towards an EOI strategy broke this 'air-lock' by decentralising foreign exchange retention and trading rights in a series of reforms from 1979 onward to thousands of authorised enterprise, local, provincial, city and trade based units. But the immediate consequence of this opening was a foreign exchange crisis in 1985-86 based on a sharp rise in imports over exports, especially in consumer durables, leading to haemorrhaging of official foreign exchange reserves (Lardy 1992, 59). This classic 'external balance' payments crisis proved to be short-lived, but its spectre provided the impetus for continued reform of the foreign exchange system.

Thus trade objectives and official foreign exchange reserve objectives were part of the broader foreign exchange reform objectives of China's authorities which culminated in the implementation of a new unified exchange rate system from 1 January 1994. A key problem in the first decade and a half of reform was that the official exchange rate (as opposed to the decentralised internal swap market rate) still reflected the ISI era price which was set artificially high to subsidise imports and discourage exports. This led to continued domestic currency losses for exporters into the 1990s because the domestic cost of earning a unit of foreign exchange was higher than was received in return in

domestic currency for earning a unit of foreign exchange. And because there was still a relative shortage of foreign exchange, authorities attempted to address this problem by allowing a decentralised internal swap market during the 1980s and the first part of the 1990s where exporters could sell foreign exchange for a domestic currency profit, in the process moving towards a more trade-neutral exchange rate (Lardy 2002). The lower internal swap market exchange rate price was then used as a guide by authorities to devalue the official rate. This culminated in the 1994 exchange rate system reform, which abolished the internal swap market and established one unified exchange rate under official management, which was devalued to 50 percent of the price of the previous official exchange rate (Zhang 2000).

However, trade objectives were only one objective of the exchange rate reforms that took effect from 1 January 1994. Authorities were still worried about international payments risk arising from shortages of foreign exchange reserves. According to Liew and Wu (2007, 83), the government's objectives 'were to increase foreign exchange earnings, reduce foreign exchange spending and gain control over a large stock of foreign exchange through regulating foreign exchange purchases and sales.' As part of this 1994 reform, the foreign exchange retention system, which had allowed enterprises to sell foreign exchange for a profit in the domestic swap market, was abolished (along with the swap market, which was replaced by an inter-bank market), and a foreign exchange surrendering system was introduced. The result was that official foreign exchange reserves began to rise between 1994 and 2007 (Zhang 2000, 1065). However, this rise in official foreign exchange reserves was also dependent on the modest current account surplus (net foreign exchange earnings) at the time. Nevertheless, a greater stock of official foreign exchange reserves was a policy objective for China's authorities in response to the spectre of short term payments risk during the 1980s and early 1990s, and as such, greater foreign exchange accumulation was an outcome of the official foreign exchange management reforms that took effect in 1994.

However, while more officially held foreign exchange was an objective of the 1994 foreign exchange system reform, other risks and therefore policy objectives were also being targeted, especially currency, inflation and asset-based risks. The argument here is that although a greater stock of official reserves was an objective of exchange rate reform, these other exchange rate objectives in response to key price and asset-risks have also been determinants of the official international financial intermediation. Indeed, the foreign exchange reserve stock objective is effectively a by-product of the objective of mitigating currency and asset based risks, and is therefore a secondary causal mechanism of China's recent official foreign exchange accumulation and official financial intermediation.

Unlike the first decade and a half of reform, in January 1994 the RMB was nominally anchored to the US dollar, albeit informally, where it has effectively remained until the present.[35] Although there is debate over the rationales behind the exchange rate reform objectives (Zhang 2000), three policy rationales for nominally anchoring a domestic currency to a key outside currency are relevant here — especially in transitional economies. The first is the objective of socialising exchange rate risk by removing currency volatility for domestically-located firms, especially exporters who can sell at a stable nominal rate in international markets. In the case of China, the US dollar is the key invoice currency within regionally integrated production and trade networks in emerging East Asia, and other countries in the region similarly anchor their nominal exchange rate patterns to the US dollar. The process of official international financial intermediation is

[35] Officially the new foreign exchange management system established 'a managed, uniform floating rate system based on market supply and demand' (Resolution of the Central Committee of the CCP, November 1993, quoted in Zhang 2000, 1063). But the exchange rate was managed against the US dollar, via a de-facto currency peg, and while the price level was notionally based on market supply and demand, it was informally anchored to the dollar. The new official rate followed a nominal crawling peg against the US dollar where it appreciated 4.5 percent between January 1994 and December 1997 when the Asian Financial Crisis hit (ibid). During this 1997-98 financial crisis the exchange rate was nominally fixed at 8.276 to the USD, where it stayed until July 2005, before resuming a faster nominal crawl upwards against the US dollar (Green 2006). This upward crawl was stopped during the GFC between 2008 and 2009, but has been started again in 2010.

therefore generated through the institutional mechanisms that make up the financial transactions and payments system and these provides a means for the official sector to socialise currency risk.

The second risk is inflation. China experienced a series of sharp inflationary, stop-start growth cycles during the 1980s and 1990s. Inflation risk was a major problem in the transitional post-Soviet systems in the 1990s, and this included China, which had began transition towards market-based price determination a decade earlier. Although inflation was a problem under the pre-reform system, the structural shift to above-plan production at market determined prices for the vast majority of consumer and producer goods during the 1980s and early 1990s was also accompanied by supply shortages and production bottlenecks in what was still a shortage economy. The result was a series of stop-start growth cycles accompanied by sharp rises in inflation up to the peak of each cycle. The devolution of institutional responsibility for growth to provincial, regional and city authorities also meant the weakening of central policy controls over credit expansion in each of these cycles, partly due to the overlap of fiscal and monetary mechanisms (Garnaut and Ma [1993] 2001, 93-97). Indeed, during the 1980s local PBC branches remained under local government, rather than central government authority.

Inflation posed risks to the value of household savings which had been rapidly accumulating in the domestic banking system and was a cause of capital flight by domestic residents (discussed below) as well as a major risk to workers' and peasants' real incomes. And as growth was choked off at the peak of each cycle, employment growth fell below the rate needed to soak up a growing supply of surplus labour, including tightened job opportunities for student graduates. Given the immense social changes over the previous decade, and problems of continued authoritarian rule, the combined impact was in the mid to late 1980s was deepening social and political tensions, which culminated in splits at the top and mass worker participation in the spring

1989 people's movement, centred on Tiananmen Square (Saich 1990). Given that the regime's legitimacy had been rebuilt on the basis of rapid accumulation and rising living standards, the financial risk from these inflationary cycles carried a very high social and political cost—a spectre that underlies the warnings made by officials at any prospect of financial instability or a slow-down in growth which could threaten 'social stability'.

An added financial risk was asset-based. The accumulation of domestic savings by residents during the 1980s was intermediated by the domestic banking system and this posed new asset-based risks to the transitional financial system. One crucial asset-based risk was the risk of capital flight, which Cuddington (1987, 32) defined as 'short-term "speculative" capital exports by the private non-bank sector…,' especially by domestic residents with local currency assets. Two main phases of 'capital flight' seem to be accepted as having taken place in China (Gunter 2004, 67), although estimates of the scale differ, as do the sources. The first was the period of high inflation from 1989 to 1994-95, and the second was after the 1997-98 financial crisis (discussed below).The possibilities for cross-border financial arbitrage were opened by the reform of the foreign exchange, investment and trade regimes.[36] While the period sustained high inflation, political and social instability and expectations of exchange rate depreciation in the lead up to the 1994 unified exchange rate regime also provided financial incentive (ibid). The key risk from resident-based capital flight was that it threatened the solvency of the state owned commercial banking (SOCB) system, which dominated the financial system and had a growing stock of non-performing loans (NPLs) from extending credit to the heavily indebted SOE sector, based on funding from resident deposits (Lardy 2002, 76). In other words, resident-based capital flight threatened disintermediation—a reversal of previous intermediation—from the state bank dominated financial system.

[36] Unrecorded capital flows have taken a number of forms from 'round-tripping' of mainland capital by local officials and investors to take advantage of foreign exchange and tax concessions on FDI—estimated at between 25 and 40 percent of recorded FDI during the reform period—to other 'capital flight' by mainland residents, and periods of 'hot money' inflows.

Thus alongside socialising currency risk, a key rationalisation for the adoption of a nominal currency anchor in transitional economies, including China's in 1994, was its role as an anti-inflationary macro-policy stabilisation tool (Mundell 1996). Although disciplined fiscal spending and benchmark interest rates are also held to be important to anti-inflationary macropolicy stabilisation (Zhang 2000, 1059), by pegging to an outside currency the nominal anchor is believed to provide an anchor for domestic prices and according to McKinnon (2005) was an effective outcome of the 1994 exchange rate reform.

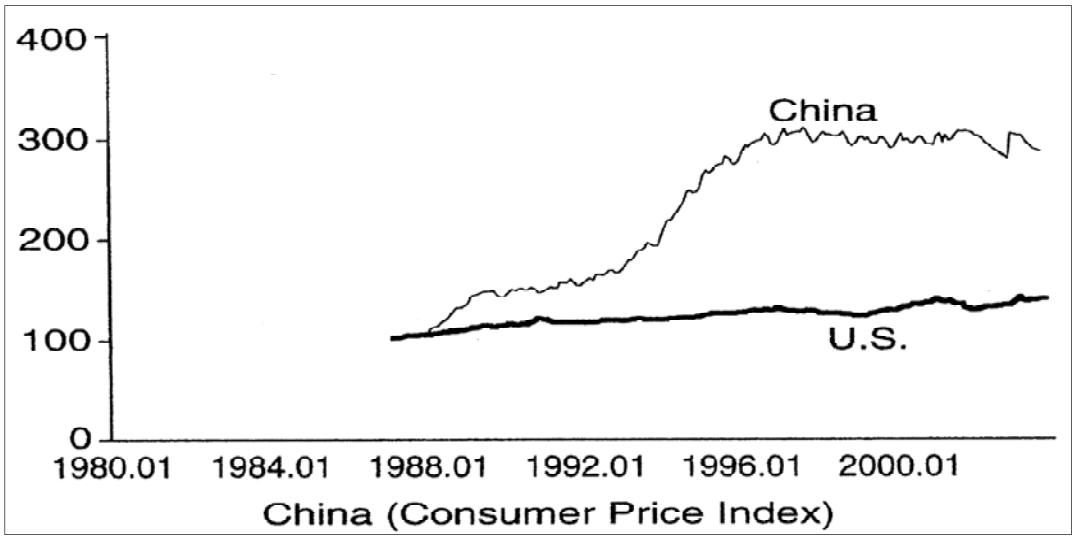

Figure 8-1 Mainland China's and US price indexes, 1987-2008.
Notes: January 1987 = 100. Data from author's calculations based on International Monetary Fund, International Financial Statistics, CEIC Data. Source: McKinnon and Schnabel (2005, fig. 1.2. 22-23).

As can be seen from Figure 8-1, other factors may have been at work, such as the impact of the 1997-98 financial crisis and SOE restructuring from 1998 which contributed to deflationary pressures on mainland Chinese prices between 1997 and 2001. Nevertheless, after the currency anchor was introduced, mainland prices, measured here by China's CPI, did stabilise against US price levels for most of the following decade. Further, after

the 1997-98 financial crises, Chinese authorities were widely praised by regional monetary authorities and US officials for maintaining the nominal dollar anchor and not devaluing the currency (Genberg et.al. 2005). It seems reasonable then to conclude the linked foreign exchange, exchange rate, monetary and financial policy objectives of China's authorities during this period were responses to currency, inflation and asset based risks.

8.1.3 **Official reserve growth after the 1997-98 financial crisis**

Macro-stabilisation in the period 1994-1997 was relatively successful and Chinese authorities' stated intention was to move to full capital account liberalisation (remove capital controls) by 2000, partly because of the apparent success of rapidly growing emerging East Asian economies (Prasad and Wei 2005, 19; Mundell 1999). But while China escaped the twin currency and banking crises that shook emerging East Asia in 1997-98, the crisis exposed a dangerous build up of risk from external borrowing by domestic investment companies, which had led to a debt crisis centred on these companies in Guangdong province (Nolan and Wang 2007, 107), a second round of resident-based capital flight, a relative lack of official foreign exchange reserves, and a near insolvent domestic bank system. China's authorities responded with a set of policies that sought to secure financial stability. These included a new stringent set of financial controls and surveillance to reduce external borrowing by Chinese resident companies, an objective of a higher stock of official reserves, restructuring of the SOE sector through privatisation to stem the NPL problem in the domestic banking system, and recapitalisation of the domestic banking system. Thus reserve accumulation was a policy objective in the aftermath of the crisis, but the contention here is that the rapid rise in official reserve accumulation from the early 2000s was primarily a by-product of these other financial objectives, institutional controls and rising payments surpluses.

A higher stock of foreign exchange reserves appears to have been a policy objective for China's authorities in the aftermath of the crisis. The crisis led to a deep psychological shock and led to a rethinking by Chinese authorities on capital account liberalisation, which was expected to have taken place around 2000 (Prasad and Wei 2005, 19; Mundell 1999). Chinese authorities had regarded a number of their rapidly growing East Asian counterparts as development role models, but the crisis-hit countries had removed financial controls while keeping fixed exchange rates. Thus sudden withdrawals of capital were possible, which precipitated banking crises and speculative attacks on fixed currencies, which authorities could not withstand with their limited stocks of official foreign exchange reserves.

China did not experience this level of financial and banking crisis, but the risks were real. Despite financial controls, the financial system in mainland China was deeply enmeshed in the international financial system through the southern border province of Guangdong, based on heavy borrowing by Chinese investment companies — in which local government officials were heavily involved — through Hong Kong financial channels. At the start of the crisis, the combined international debts of China's international trust and investment companies, and red chip SOEs, stood at US$80 billion, equivalent to sixty percent of China's foreign exchange reserves. And according to Nolan and Wang (2007, 107), the spread of the crisis was only narrowly halted by government intervention.

The official response was that China's authorities sought to build a higher level of foreign exchange reserves, alongside renewed and stringent financial controls and surveillance to reduce international borrowing. According to Prasad and Wei (2005, 19), 'The idea of capital account liberalisation by 2000 disappeared and in its place rose the notion that the higher the level of foreign exchange reserves the better in order to avoid painful crises.' This may be true and it fits with the official precautionary rationale (Zhou 2009b, 2). But

whether Chinese authorities' official foreign exchange reserve objectives were more precise — such as whether they sought a specific reserve level, and if so why — has not yet been made publicly available.

What is clearer, however, is that tighter financial controls on domestic residents and entities meant that a future rise in the payments surpluses on the current and financial accounts — which took the form of rising foreign exchange liquidity — would lead to rising official international financial intermediation. The principle of the renewed financial controls, 'easy to get in, hard to get out', was applied on cross-border financial asset transactions i.e., restrictions on financial account convertibility by domestic residents and enterprises. Despite controls before the crisis, local government and SOE entities could borrow internationally with little surveillance. After the crisis international borrowing was tightly monitored and led to international bank loan standards, with the objective of reducing external debt (Prasad and Wei 2005).

However the capacity of residents and enterprises to engage in outward investment was also tightened via the foreign exchange retention regulations managed by the SAFE. These regulations existed prior to the 1997-98 financial crisis. Foreign exchange could be held for authorised current account transactions, but a quota-based retention system restricted additional foreign exchange holdings for international use. Above-quota foreign exchange had to be surrendered to a designated foreign exchange bank (State Council 1997). By adjusting the ceilings on these quotas SAFE has been able to either decentralise additional foreign exchange liquidity to firms, or to pool foreign exchange liquidity through compulsory surrendering to the inter-bank market, where foreign exchange liquidity can be soaked up at the official exchange rate up by the PBC. This quota based retention system is a key institutional mechanism for relaxing or tightening official foreign exchange accumulation. The 1994 foreign exchange reform reduced retention and reintroduced compulsory surrendering so that the official sector could pool

foreign exchange liquidity in the wholesale inter-bank market, which it then bought to augment official reserves. It seems reasonable to suggest that the same mechanism was used after the 1997-98 crisis, and this suggests a path for future inquiry. By contrast, with the rapid growth in official foreign exchange accumulation from the early 2000s, enterprise retention ceilings were raised at yearly intervals (IMF 2005; 2006; 2007) to decentralise some of the build up in foreign exchange liquidity.

As a consequence, financial account inconvertibility has led to official foreign exchange accumulation because of restrictions on the accumulation of foreign financial assets by domestic residents, firms and financial institutions. Thus until recently, the majority of foreign exchange denominated earnings had to be surrendered to authorities through the banking system. The result was that inflows of foreign exchange on either the current or capital account generated the accumulation of foreign currency assets by the official sector, hence official international financial intermediation. Similarly the accumulation of domestic RMB assets (i.e., high savings) by domestic individuals or entities, could not find an outlet in private outward capital investment, hence contributing to the overall surplus. By contrast, moving to full convertibility on the financial account, would reduce official foreign exchange accumulation by allowing non-official entities, including non-official financial intermediaries to manage net inflows of foreign exchange and accumulate foreign assets.

8.1.4 **International financial intermediation and reserve composition**

The international (cross-border, cross-currency) financial transactions and payments system is mediated through a number of onshore official and commercial financial institutions, although the overall value chain is dominated by official intermediation. SAFE regulates foreign exchange retention by enterprises and individuals in the

decentralised retail market. Foreign exchange which is not retained by enterprises or individuals for international use must be exchanged for domestic currency through authorised commercial foreign exchange banks and other non-bank financial institutions.[37] In turn these financial intermediaries can buy and sell foreign exchange in the onshore wholesale (inter-bank) foreign exchange market, via the China Foreign Exchange Transactions System (CFETS) trading platform. The key 'market-maker' in CFETS, however, is the PBC (central bank) which quotes a price (the official exchange rate) at which foreign exchange can be sold (bought by the PBC) in exchange for RMB. This official intervention in CFETS is the mechanism through which the PBC soaks up and pools foreign exchange liquidity. Figure 8.1 below shows the CFETS trading platform and the institutional participants in the wholesale inter-bank foreign exchange market. The PBC is the dominant market maker in this onshore foreign exchange market.

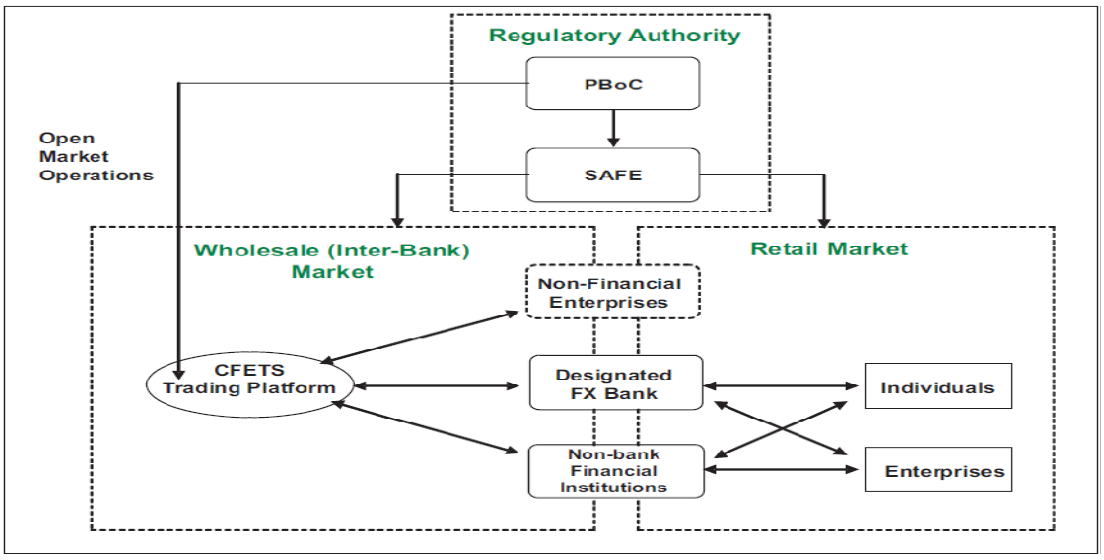

Figure 8-2 China's wholesale (inter-bank) foreign exchange market.
PBoC in figure is the PBC, the People's Central Bank. Source: Zhang and Liang, n.d. Bank of China reproduced in Green (2006, 7).

[37] Authorised enterprises can deal with the wholesale foreign exchange system directly.

In the process PBOC acts as a financial intermediary by transforming foreign exchange assets (mostly cash deposits) along dimensions of risk, maturity and instrument in two directions. By buying foreign exchange (cash deposits) in the inter-bank market the PBC must sell domestic currency RMB, either as cash or as RMB government bonds (liabilities on the PBC balance sheet). Second, in order to secure the present value of foreign exchange taken on its balance sheet, rather than holding cash, the PBC transforms existing assets internationally — mostly by purchasing bonds in the key international bond market. Thus PBC purchases have been concentrated in long term US government bonds, because they provide a 'risk-free' rate of return at the key ‘international benchmark interest rate’, and potentially can also be resold before maturity through the secondary international bond market for a profit. This international financial intermediation is a two-way process. As the PBC acquires an international asset, a US government bond, from the primary market, the US Treasury also acquires a liability on its balance sheet by definition, and therefore has to pay the rate interest along the term structure of the bond and the principal at maturity.

8.1.5 **The composition of China’s official reserves**

China’s official sector, mainly under the direct management of the SAFE’s investment institutions, reportedly held US$2.53 trillion dollars in value of official international reserve assets at the end of September 2009 (PBC 2009; SAFE 2009). But the total value of foreign exchange assets could have been half a trillion US higher if we include the CIC’s holdings of $300 billion, 87.5 percent of which ($260 billion) was held cash or cash- linked instruments at the end of 2008 (CIC 2009; Bloomberg 2009), and another $100 billion or so in foreign exchange on the state banks’ balance sheets. The overall portfolio structure and composition of these official assets are not publicly available; however, most of China’s reserves are held in US securities.

Data on the value of China's primary official holdings of US securities by type of security is available up to 30 June 2008, from the US Treasury International Capital (TIC) reporting system. These data are likely to have understated the total official holdings of China's authorities because China's official sector may have secondary holdings of US securities via private third party intermediaries which could be reported in the TIC data as private non-official foreign holdings from the UK, the Cayman Islands or elsewhere.

	Millions of dollars		Percent
	Equity	99,548	8
Debt	Short-term	30,283	3
	LT Corp	26,285	2
	LT Agency	527,053	44
	LT Treasury	521,912	43
	LT total	1,075,250	89
	Total (LT and ST)	1,205,080	100

Table 8-1 Value of mainland China's holdings of US securities, by type of security, as of 30 June 2008.
Source: Selected data and author's calculations (percent share of total holdings) from Table 21 in US Department of the Treasury, Federal Reserve Bank of New York, and Board of Governors of the Federal Reserve System. 2009. *Report on Foreign Portfolio Holdings of U.S. Securities (as of June 30, 2008)*. April 18.
http://www.treas.gov/tic/shla2008r.pdf.

Nevertheless, according to the TIC data, Chinese official financial institutions held just over $1.2 trillion in US securities at the end of June 2008, and almost 90 percent ($1.05 trillion) of these holdings were concentrated in two asset classes: long-term US treasury securities (43 percent, $521 billion) and long-term US agency securities (44 percent, $527 billion). Agency securities were issued by quasi-government federal agencies, principally the government sponsored enterprises (GSEs), such as the public (again) mortgage giants Freddie Mae and Fannie Mac, as well as Ginnie Mae. By contrast, holdings of equity (8 percent), short-term securities (3 percent), and long-term corporate debt (2 percent) were in comparatively very low.

Thus the vast majority of China's US securities holdings have historically been held in passive, long-term government or quasi-government debt instruments, which were believed to have posed low credit (default) or market risk (loss of value relative to other assets). However the assumption, judged by value of private and official institutional investment before June 2008, that market-risk to the value of long term US agencies was negligible, because of de facto government backing for these assets, was proved wrong. As discussed in the next section, because the mortgage securities crisis pulled down the market-to-market value of agency securities, and the US government refused to guarantee the market value of these securities, China's authorities sold off long-term agencies and bought short and long-term US treasury securities during the second half of 2009.

Conclusion

China's recent official reserve accumulation, primarily of US government long-term debt securities, can be understood as the outcome of a process of international financial intermediation through the official sector. The development of this international value-chain process, mediated by China's official sector, has largely arisen as a by-product of Chinese official exchange rate and cross-border financial controls. In turn these controls are explained by the currency, inflation and asset-based risk mitigation objectives of China's authorities that have arisen during the reform era in response to the monetary, financial and social tensions arising during the process of transition. The next section considers the pressures on China's authorities arising from this process of international financial intermediation.

8.2 **Pressures and responses from US dollar accumulation**

International financial intermediation has transformed the financial risks faced by China's authorities, but not resolved them. The process of international financial intermediation has overwhelmingly transformed rising foreign exchange liquidity (US cash deposits) into US dollar securities, especially long term US Treasury paper, and at least until mid-1998 long-term US quasi-government agency securities. Thus by socialising foreign exchange liquidity and investing in US dollar assets, China's authorities have built up concentrated market and credit risk in those assets — under their own authority. At the same time, in the process of buying foreign exchange domestically, the PBC must either create and sell new domestic currency — i.e., expanding domestic money supply — or sterilise their foreign exchange purchases by selling RMB central bank bonds. Although sterilisation through domestic RMB bond sales has been the preferred option for the PBC, the effect has been domestic credit growth, especially through the state owned commercial banking system, which has generated new risks through growing domestic liquidity.

8.2.1 **Pressures on China's authorities: Financial and political risk**

China's official foreign exchange accumulation is a liquidity dilemma for China's authorities which they have sought to resolve through international financial intermediation, principally by investing in US government-issued securities. But this transformation of domestic foreign exchange liquidity into US government and other international reserve assets has generated new financial pressures, namely exposure to concentrated market and credit risk for China's authorities. Alongside this market risk is domestic political risk in response to real and potential losses on US dollar assets, as well as international political risk in the form of protectionism, especially from the US

government, but also the EU, because the build up of China's official reserves has been linked to growing bilateral trade deficits with China by these states. The focus of analysis here, however, is on understanding the financial risks and responses by China's authorities, because that is where China's reserve accumulation as a question in international finance has not been well understood, and because the domestic political risks are dependent on the attempts to resolve the financial risks.

8.2.2 **Concentrated official US dollar risk**

China's official purchases of US dollar assets have been concentrated in relatively 'risk-free' US government and quasi-government US agency securities. The reason US government-issued securities are held to be relatively risk-free by international investors is because they are forms of bonds, in which the issuer repays the principal investment at maturity plus regular interest over the term of the bond in question. In the case of the US government-issued bonds by the US Treasury, credit risk i.e., the risk of a default on the bond, is generally held to be negligible or risk-free. Investors in US Treasuries also get a stream of interest linked cash flow on the principal at the key international benchmark interest rates, and can also resell US Treasuries in highly liquid secondary markets, potentially for a profit. US Treasuries are therefore highly attractive for international (especially official) investors looking for a relatively risk-free return on the principle.

The key risk on China's US Treasury holdings has been market-to-market risk— risk that the market value (price) of the asset moves up or down relative to market-value of other comparable international assets. Exchange rate risk is intrinsic to China's authorities' international reserve holdings. An appreciation of the RMB against the US dollar would reduce the relative RMB value of China's dollar bond holdings, as would a fall in the value of the dollar relative to other international currencies such as the Euro. Yet RMB

appreciation has been modest, and there are more salient reasons behind Chinese authorities' gradualist approach on this front, which are discussed in the next section. Similarly, a sharp upward move in the Treasury yield curve (which tracks the value of interest rates on comparable government bonds along all maturities) could reduce the mark-to-market value of China's existing holdings. But these capital losses are notional and would only be realised if China's authorities decided to sell their official reserves before maturity (Prasad and Wei 2005).

As it turned out, the bigger risk to Chinese official holdings has not been US Treasuries, but their stock of long-term agency securities. Chinese authorities had accumulated 44 percent (US$527 billion) of their total stock of US securities in long-term agency securities. Of these agencies, US$369 billion were asset-backed securities, principally public-label mortgage-backed securities (MBS) issued by the then privatised government sponsored enterprises (GSEs) of Fannie Mae and Freddie Mac. But after federal government intervention these quasi-public mortgage giants had taken on defaulting private-label MBS securities, and GSE stock-values went into free-fall.[38] In response Chinese authorities, along with other official foreign investors, reportedly sold off agency holdings and bought Treasuries in the second half of 2008 (Economy and Segal 2008). The extent of this shift out of agencies is not yet clear as data on China's US securities holdings to end of June 2009 are not yet available. It seems reasonable to conclude, however, that China's authorities' main concern was credit-risk.

A second round of Chinese official concern about the risks to the value of their US securities holdings was in response to the US government's decision in March 2009 to

[38] According to Drezner (2009, 36-37) Chinese officials sought a US government guarantee to secure the value of Chinese official holdings in August 2008 — which Drezner claims was refused by the US government. But Drezner's account is not clear on whether Chinese officials sought guarantees on credit-risk (the risk of default) or market-risk (market-to-market risk), or both. The US securities data shows Chinese holdings were agency MBS, and not agency common stocks — which suggests the guarantee sought was over credit-risk, that is, a guarantee that the principle on these MBS would be paid in full at maturity, along with regular interest payments.

finance US agency and treasury debt by expanding the Federal Reserve balance sheet, to increasing money supply. On 18 March 2009, the Federal Reserve expanded its balance sheet to purchase up to $750 billion in agency MBS, $100 in agency debt, and $300 billion in longer-term treasuries (US Federal Reserve 2009). According to a report by the United States China Security Commission (2009, 26), such a process allows the US to 'inflate its currency and reduce the burden of its debt — a practice known as monetising the debt.' Although in the midst of the post-GFC recession, the risk of deflation is higher than inflation, with increased money supply, there is a higher risk of inflation in a future recovery. A rise in US inflation would reduce the value of US dollar debt and devalue the US currency — and thus reduce the currency value of Chinese authorities' US security holdings.

Whether or not there is a return of high inflation, the risk from the Fed monetising debt exercised the minds of foreign investors, including the Chinese authorities. According to the president of the US federal reserve bank of Dallas, Richard Fisher, the Fed's purchase of treasury bonds, MBS and Fannie Mae paper in 2009 had created a 'perception of risk' among private and official investors in US assets. After a trip to Asia, which included China, Japan, Hong Kong and Singapore, Fisher (quoted in O'Grady 2009) said:
I wasn't asked once about mortgage-backed securities. But I was asked at every single meeting about our purchase of Treasury's. That seemed to be the principal preoccupation of those that were invested with their surpluses mostly in the United States. That seems to be the issue people are most worried about. According to Fisher, 'senior officials of the Chinese Government grill[ed] me about whether or not we are going to monetise the actions of our legislature. I must have been asked about that a hundred times in China' (ibid). The responses from Chinese authorities are discussed in the next section.

8.2.3 **Responses from Chinese authorities**

China's authorities have responded to these pressures on multiple fronts around immediate and longer-term objectives. Key objectives such as reserve diversification, a range of foreign exchange reforms linked to the long-term objective of RMB internationalisation, and efforts to limit domestic credit expansion, predate the GFC. But China's official asset exposure to the collapse in US agency securities during the second half of 2008, and subsequent US government and US federal reserve intervention in response to the sub-prime cum credit crisis, led key Chinese officials to make an unprecedented call for a new international financial strategy in March 2009, including a call to replace the US dollar as the key international reserve currency (Zhou 2009a). According to Zhang (2009, 22), the Chinese authorities' new three-tiered international financial strategy centres on RMB internationalisation, regional monetary cooperation, and the 'reconstruction of the international monetary regime'. While initiatives on each of these fronts have been taken, their impact has been limited because of the lack of any viable alternative to US government securities internationally, and because the RMB is not fully convertible on the financial account. Thus, China's authorities have remained trapped in a US dollar 'liquidity dilemma' (Ping 2009), and despite the calls for an alternative to the US dollar, have continued to accumulate US Treasuries much faster than any marginal reserve diversification. The rest of this section focuses on the question of RMB internationalisation, and its link to regional monetary reform and domestic financial reform, while the question of reserve diversification and international reform are discussed in section 8.3.

8.2.4 **Limits to RMB internationalisation**

For many reasons, the Chinese renminbi is not about to challenge the dominant centralising role of the US dollar in international finance and trade. But the objective of

internationalising the renminbi remains a long term objective for China's authorities, and has been used to guide the implementation of the recent currency reform strategy (Wen 2009). The recent current and financial account surpluses have led to an inflow of foreign exchange, mostly denominated in US dollars, and hence Chinese authorities 'liquidity dilemma', which they have sought to resolve through accumulating US dollar assets. Internationalising the renminbi would mean more of these trade and financial and financial flows and more of this surplus could be denominated in RMB. It would facilitate the capacity of official and private financial intermediaries to lend and borrow internationally in RMB assets, rather than US dollars — and this could transform the peripheral financial centres of Shanghai, and Beijing, into new international financial centres (alongside Hong Kong) within international finance. Although a pre-requisite for such a development is full RMB convertibility, a series of minor institutional innovations in the foreign exchange system have been implemented by China's authorities since 2008 to develop RMB internationalisation.

Although it is a sub-set of China's official broader regional monetary cooperation agenda, China's authorities have signed a series of bilateral RMB swaps and cross-border trade settlements agreements which allow trade accounts to be settled in RMB rather than US dollars. These bilateral agreements have mostly been regional, but they also include Argentina and Belarus. As of August 2009 these cross-border trade settlement agreements were worth RMB $650 billion (about US$95 billion) a year with Hong Kong, Indonesia, South Korea, Malaysia, Argentina and Belarus. According to the State Council, the pilot program will also be extended to cross-border trade with all ten Association of Southeast Asian Nation members, while similar deals have been hinted at with Brazil (USCC 2009, 28). Limited RMB settlement has existed on mainland China's border zones of Mongolia, Russia, Vietnam and Laos since 2003, however starting July 2009, authorisation for RMB settlement was extended to the mainland cities of Shanghai and Guangzhou, as well as Hong Kong. And in the southern cities of Guangzhou,

Shenzhen, Dongguan and Zuhai companies have been reportedly offered tax breaks for settling trade with Hong Kong and Macao in RMB, while certain banks in Hong Kong were allowed to issue RMB bonds (Bradsher 2009).

These institutional innovations include firm-level RMB trade invoicing pilot schemes (PBC 2009, 33) and bilateral currency agreements, mostly with regional states, to develop RMB trade invoicing. Although these initiatives gained international attention in 2009, they were being developed before the GFC. To encourage firms to settle in RMB currency, an offshore RMB settlement market centre is to be developed in Hong Kong in 2008 to facilitate RMB trade-invoicing and investment in offshore RMB trading 'pilot projects of licensed small-value currency exchange business were launched. Eligible financial companies and enterprise groups were allowed to conduct spot sales and purchases of foreign exchange' (ibid). The immediate rationale is to encourage ‘invoicing to market’ by firms exporting to China to bring them into RMB markets (McKay 2007, 292). Without full convertibility of RMB in mainland China, this process would be facilitated by the offshore RMB settlement centre in Hong Kong, which would serve as an institutional base for trading RMB offshore and future internationalisation.
To promote these institutional changes, a new PBC department was announced in July 2009 under the direction of Hu Xiaolian, the current deputy governor of the PBC and head of SAFE, to draft exchange rate policy, promote RMB internationalisation and manage its implementation (Wen 2009). The objective of RMB internationalisation is therefore linked to wider currency and foreign exchange reform objectives, as well as ongoing financial reform and development generally. In July 2005 the PBC resumed the upward gradual appreciation of the RMB against the dollar, but perhaps more importantly from the point of view of foreign exchange reform, also widened the daily trading band within which the RMB could fluctuate against the dollar (Green 2006). Although the upward exchange rate crawl was halted during the GFC, it was resumed again in 2010. This increased, albeit minor, volatility is designed to facilitate the recent rapid

development of an onshore RMB currency swaps and forwards markets (CFETS 2009). These foreign exchange instruments and markets allow onshore trading institutions to hedge and take positions on future currency price movements, and therefore facilitate the capacity of non-official financial intermediaries to manage exchange rate risk for microeconomic entities, should China's authorities move to greater RMB flexibility, if not a full float of the exchange rate, in the medium to longer term.

8.2.5 **Financial reform, IFI and savings-investment relations**

This raises the relationship between foreign exchange reform, the gamut of potential financial reforms and the recent overall pattern of savings-investment and international financial intermediation. There are many overlapping issues here and these would require substantial elaboration and are therefore beyond the scope of this thesis. The relationship between 'financial reform', the pattern of high surpluses and the form which the recent rising net foreign asset position has taken — i.e., as official foreign exchange accumulation, is briefly considered here. The key point here, however, is that most of the major financial reforms that have advocated by many economists (below), would not necessarily bring about the desired outcome of their advocates.

A prominent view in international economic policy thinking (for instance, Goldstein and Lardy 2008, 1-60) holds that reform of China's officially-dominated financial sector would reduce China's recent pattern of high, current account dominated surpluses and reduce official reserve accumulation. Major potential cross-border financial reforms include floating the exchange rate, and making the RMB assets convertible between onshore and offshore financial markets. Other major domestic financial sector reforms — interest rate liberalisation, banking deregulation, corporate financial reform, and the development of social security and a pension insurance system — are also held to result

‘in over-saving (failure of consumption smoothing) and excessive financing constraints on domestic investment spending, both contributing to a rise in the saving-investment gap’ (Ma and Zhou 2000, 10). This view fits with the hypothesis that greater financial development in developing countries will reduce international financial intermediation through outside international financial centres by mediating funds internally to facilitate a higher rate of domestic investment and limit capital outflows (Kindleberger 1976). Thus the major international and domestic sector financial reforms are internally related.

Analytically, there are a number of separate, but related, financial reform issues. ‘Financial reform’ for China is often short-hand for greater exchange rate ‘flexibility’, by which is meant exchange rate appreciation. The popular view is that exchange rate appreciation in the region of 10-30 percent would significantly reduce China’s recurrent current account surpluses. In theory, a major one-off exchange rate appreciation could work through the following valuation channels: raising the international price of Chinese manufactured goods, and altering the allocation of new investment away from the lowest margin export-processing manufacturing, and raising the level of domestic consumption through raising the international purchasing power of Chinese wages, and therefore facilitating investment in services and other consumer oriented industries. There is, however, no consensus among economists that exchange rate appreciation would have anything more than an ambiguous effect on the size of China’s pattern of current account surpluses, either intuitively, or based on the battery of econometric studies which have failed to yield conclusive evidence either way.

The principle problem with modelling the valuation effects of a one-off large scale exchange rate appreciation is the valuation assumptions about the price elasticities of manufacturing exports from China (McKinnon 1996, 291-303) The problem is that the prices of final export goods export typically include a high import price component because of the manufacturing processing trade through China which means that the effect

of appreciation on the overall trade balance remains ambiguous. A higher RMB makes the high relative value of components goods imported for export reprocessing cheaper, which has the opposite effect on the trade balance to what is expected. Indeed much of the 'global imbalances' discourse assumes a world of discrete national manufacturing production of finished goods, subject to discrete price effects on merchandise trade volumes, rather than the reality of extensive 'production fragmentation' of the manufacturing production value-chains across national borders (Athukorala 2009). This is why this thesis has sought to advance an alternative path of analysis based on an analysis of the value-chain processes and relationships in international finance.

Because PBC currently needs to sterilise foreign exchange inflows through issuing domestic currency bonds, this has repressed domestic interest rates — indeed real domestic interest rates have been negative for much of the past decade — thus repressing the cost of capital financing and investment.[39] This is one reason why investment has been a relatively very high 40 percent of GDP in the decade after the 1997-98 crisis. Increasing the cost of capital might reduce gross savings, but it could also reduce gross investment (domestic capital formation), leading to a rise in savings — at least in the short term — an increase in the gross surplus. And while China is still relatively capital-poor, it is not clear that a higher rate of domestic fixed capital formation can be effectively utilised, given the current process of investment allocation.[40]

Institutionally, the process of investment allocation is dominated by the relationships between the state-bank mediated financial system and the institutions making the fixed investment — local, provincial and city governments on the one hand, and the SOE strategic monopoly sectors on the other. These questions go to the heart of some of the key political-economic interests and relationships in post-reform China, and their

[39] They have also had the negative effect of limiting the development of a corporate bond market, which could potentially price and allocate capital.
[40] The ratio of fixed capital investment per capita is a tenth of the OECD average.

relationship to the recent growth model. These issues intersect with the process of international financial intermediation — because they turn on the institutional make-up of domestic financial intermediation and the political-economic bases of decision making authority and power — but these issues are beyond the scope of this thesis. The suggestion made below, however, is that these savings-investment reform issues will not necessarily conform to a reduced national current account and financial aggregates.

Finally, turning to the relationship between official international financial intermediation and exchange rate and capital account reform, the proposition here is that floating the exchange rate and opening the capital account would end China's accumulation of new foreign exchange reserves immediately — presuming China's authorities did not continue to intervene around the currency. But although a fully 'floating' exchange rate and capital account opening would remove China's official sector's role as the dominant international financial intermediary, and hence end its foreign exchange accumulation, it would not necessarily reduce either the current account or the capital account surplus. Indeed China's capital account would, in the short-term at least, almost certainly be flooded with higher inflows of capital, while domestic asset holders, whether individual savers or financial institutions, would keep their funds onshore in the expectation of RMB asset appreciation relative to foreign currency alternatives. Instead of 'one-sided exchange rate intervention' to prevent rapid currency appreciation, this would bring about a 'one-way bet' on RMB appreciation. As such, it is not an option that is likely to be undertaken given the threat such a 'one-way bet' would pose to the macro-policy stability objectives of China's monetary authorities.

The argument here, then, is that currency and capital account reform, including full liberalisation, would change the form of China's surplus and the composition of its net foreign asset position, from the official monetary authorities to the commercial financial intermediaries. However foreign exchange and capital account liberalisation would not

substantially reduce the surplus, which would remain as a structural by-product of the factors already discussed, especially China's still vast supply of 'surplus labour' and the extent of the reorganisation of East Asian production supply chains over the past three decades, which has located their final assembly operations within mainland China. Again, this calls into question the conceptual adequacy of applying cross-border benchmarks of national trade balances to such patterns of globally integrated production, investment and trade. It also highlights the need for an alternative analytical framework, such as the analysis of value-chain processes and intermediary relationships in this thesis.

8.3 **Prospects for China's official disintermediation from US dollar assets**

This final section briefly considers the prospects for Chinese-official led international disintermediation from US dollar assets. Speculation about the consequences of China's official reserve accumulation, before and after the 2008 global financial crisis, has mainly focused on the consequences of China's US dollar asset accumulation for international financial stability, and the geopolitical significance of China's rise as an international creditor. Indeed, during 2008-2009 there was widespread speculation that China's authorities were seriously seeking to diversify away from US dollar assets based on Chinese official statements to that effect. These statements played into the widespread belief that China's US dollar accumulation has been unsustainable because China's authorities would eventually stop accumulating dollar assets because US payments deficits were getting too large, and this would lead to a collapse of the dollar, and hence a sell off dollars by China's authorities and other international investors.

But there are a number of conceptual and empirical problems with this story, and these are highlighted here based on analysis of these issues as questions of international financial intermediation, understood as a set of value-chain processes and relations. The

main conceptual problem is the understanding of the relationship between balance of payments phenomena and international financial intermediation, which is discussed below. Second, the key issue for China's authorities' official reserve investment decisions is the risk-adjusted return on value and liquidity of reserve investments. Chinese official and other foreign disintermediation from US dollar assets would require a substantial alternative pool of liquid international financial assets, principally alternative international reserve assets, but these do not yet exist in the depth and security required, which fits with the evidence of limited diversification by Chinese official investment institutions. Finally, the analysis here suggests that the weight of China's official reserve holdings in US securities markets has been overplayed, and that private US-resident and private international institutional investors far outweigh the stocks and institutional capacity of Chinese official holdings.

The impending US dollar collapse scenario (minus China's role), based on the belief that growing financial payments liabilities had become too large and would undermine the willingness of investors to continue to hold and buy US dollar assets, has been around since the since the 1960s (Depres, Kindleberger and Salant 1996). But this view suggests a lack of understanding of international financial intermediation. International financial intermediation is a two-way value-chain process in which the purchase of an international financial asset by an intermediary and the creation and sale of liability by a counterparty financial intermediary are simultaneous. Thus demand for international reserve assets from intermediaries in the financial periphery can be met by the creation of a liability on the balance sheet of the reserve-centred intermediary. The balance of payments balances by definition. Thus the apparent paradox that the demand for US dollar assets can be high along with the price of the dollar, while US international dollar liabilities rise. It is not the absolute, or even the relative stock of assets and liabilities which is at issue, but the capacity to repay the interest on those liabilities and the principal at maturity. In this respect, international financial flows are more important than stocks.

8.3.1 **The PRC's call for international monetary reform**

Nevertheless, during the GFC, Chinese officials expressed concern over the continued international reserve-currency role of the US dollar and called for international monetary reform, including the revival of IMF Special Drawing Rights as an alternative reserve currency unit (Zhou 2009a). It would be a mistake to understate the commitment of the Chinese leadership to pursue international monetary and financial reform. But there are a number of issues here, which are distinct from the substance the debate over alternative reserve currency units (SDRs, or Euro assets) to US dollar reserves and the reasons for the limited recent Chinese official diversification from US dollar assets.

One line of inquiry is the PRC leadership's initiatives in 2009 to position themselves within and exert influence over the direction of institutional reform of the G7, the IMF and the G20. The issue here is the configuration of the key international public financial governance institutions (with the exception of the central banks), the IMF and the closely related G7 finance ministers committee. The US and the G7 states represent the post-World War Two Cold War settlement, which failed to reform these institutions after the break-up of the Eastern Bloc to incorporate the new international balance of power, especially the emerging market country authorities which developed international trade surpluses in the 2000s. The need for a more legitimate international policy response to the GFC from these institutions meant the G7 had to be replaced with the expanded G20 and governance reform of the IMF implemented. PRC central bank officials convened meetings with Russian and other emerging market state officials in the lead up to the G20 summits, ostensibly around international currency reform, namely reviving the IMF Special Drawing Rights currency unit, which is discussed below. The proposition here is that the PRC's calls for international monetary and financial reform were as much about securing influence in and over the direction of the institutional changes that were already in play. But inquiry into these questions requires further development which is not

possible here, given the principle focus of this thesis is on international financial intermediation.

We now turn to the potential for disintermediation from US dollar reserve assets, and the limited evidence of reserve diversification by China's authorities. Disintermediation is the reversal of previous intermediation. Salant (1972, 646) identified at least two possible sources of international financial disintermediation from US dollar reserve assets. These were a rise in the domestic financial intermediation efficiency of current claimants, which would see a rise in demand for 'domestic financial assets', or a decline in 'foreign capital formation' which would reduce the demand for international financial intermediation. The first, a rise in domestic financial intermediation in the reserve-acquiring claimants such as China, requires that Chinese authorities can successfully float the RMB, make RMB assets fully and relatively freely convertible across borders and currencies, and transform their domestic financial system by dismantling the current institutional controls, replacing them with a new set of more market-based institutional mechanisms, as a basis for a new international financial centre. But this is a long-off proposition, and success in these terms is by no means guaranteed. The second, a decline in 'foreign capital formation', understood as a decline in surplus formation in the non-reserve centres, rather than a decline in fixed capital investment which raises the available international surplus, could lead to disintermediation by making it less costly for reserve holders to reinvest those assets domestically. Effectively this would require a major reduction in the rate of accumulation, either through recession or a long-term slow-down in growth in emerging markets, including China. The former is possible, but the later remains decades away.

8.3.2 **The absence of viable alternative international reserve assets**

A third potential source of international disintermediation, however, could be the development of a viable alternative international reserve asset. Alongside the currency composition of international reserve assets, central banks have two primary criteria for choosing international reserve assets — security and liquidity. Security for the asset value, because of their public intermediary role, means that international reserve assets are primarily held as relatively safe or risk-free government issued debt instruments (bonds), which if they are held to maturity provide a government credit-risk guarantee as well as a stream of interest. The criteria of safety mean that not any government debt-instrument will do, and many current Euro area governments, such as Greece, would be excluded. The preferred assets must be able to be bought and sold in deep and highly liquid primary and secondary markets, so that reserve assets are available in sufficient quantity and purchases or sales are easy to make because there are many potential buyers, so extensive training doesn't start a fire sale of the assets and threaten existing stocks of assets or financial stability generally (Wyplosz 2010). In this respect, the alternatives to the US dollar instruments are much more limited. According to Wyplosz (ibid):
The market for US Treasuries is the world's deepest. The total value of existing US public debt instruments is nearing $9 trillion, of which $500 billion is traded on an average day. German debt instruments amount to about €1 trillion, with an average daily turnover of less than €30 billion. The situation is similar for French debt instruments. The United States simply plays in a different league.

In other words if a central bank decides to sell long-term US Treasuries for some immediate need, the depth of the US Treasury market means that it will not cause capital losses. The recent debt pressures on the Euro-zone, especially on Greece, Portugal, Spain and Italy, suggest that the expansion of safe Euro-denominated debt instruments, by for

instance the German government, on the scale required for international reserve use is unlikely in the foreseeable future.

In this respect, the evidence of the currency composition of international reserve shares is revealing. Since the formation of the euro its share of international reserve shares has risen internationally, but the recent euro share is no larger than pre-euro currency reserve shares, and there has been no major diversification from dollar reserves. The following tables are calculations by the author of the international currency shares of global reserves reported in the IMF's Composition of Official Foreign Exchange Reserves (COFER) database.[41]

Percentage shares[1]	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]
Claims in US dollars	59	62	65	69	71	72	67	66	66	67	67	65	64	64	62
Claims in Euros	-	-	-	-	18	18	19	24	25	25	24	25	26	26	28
Claims in Yen	7	7	6	6	6	6	5	4	4	4	4	3	3	3	3
Claims in Pound Sterling	2	3	3	3	3	3	3	3	3	3	4	4	5	4	4
Claims in other currencies	5	4	4	4	2	1	1	2	2	2	2	2	2	2	3

Notes: 1. Percentage shares of allocated reserves 2. End September 2009

Table 8-2 Currency Composition of Official Foreign Exchange Reserves (COFER), annual.
Source: Percentage share calculated by author on data from the COFER (2009) IMF database, http://imf.org/external/np/sta/cofer/eng/index.htm

Table 8-2 shows the largest shares of the currency composition of official foreign exchange reserves for the years 1995 to 2009 by total value. Dollars accounted for almost two-thirds and the euro accounted for less than a third of international reserves during this period. However, because the shares are based on the total reported dollar value of official reserves, exchange rate valuation effects must be taken into account when reading

[41] The COFER data are limited by the under-reporting of official foreign exchange reserve composition held by monetary authorities in developing countries. In those countries, the currency composition of 10 percent of total official reserves holdings is not known (authors calculation based on COFER 2009) because of this underreporting. However, there is little reason to suspect that the actual composition departs substantially from the reported holdings. If anything, the actual holdings are likely to be more weighted to the US dollar and the euro because developing country holdings are probably less diversified than those of developed countries, since authorities in developing countries are more likely to peg or target their currencies to either the dollar or the euro, and their hold claims in these currencies.

these shares. There has been a gradual decline in the value share of reported official dollar holdings from a peak of 72 percent of total official holdings in 2000 to 62 percent by the third quarter of 2009. In contrast, from 1999 when the euro was formed, the euro's share in total official holdings has risen from 18 to 28 percent. The value of reported official foreign exchange claims in dollars rose a little over 1.7 times in the decade from 1999 to 2009 from $624 billion in 1999 to $1.53 trillion in 2009. Official foreign exchange reserves held in euros however rose almost 3.6 times measured in US dollars — from $160 billion to $572 billion in 2009 (author's calculations, see appendix). However, these shares and value changes do not necessarily represent a shift out of dollars and into Euros, but a relative rise in the total stock value of euro currency assets because of the rise in the euro relative to the dollar — a trend which reversed with the euro-zone debt crisis in 2010.

Nor is there evidence to support the claim that the weight of the euro in official reserve portfolios has expanded beyond its pre-euro constituent currencies. Table 8-3 shows the share of euros in world foreign exchange reserves compared to its pre-euro currency shares, calculated by the author from the COFER (2009) data on global reserve shares.

Percentage shares[1]	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 [2]
Claims in Deutsche mark	16	15	14	14	-	-	-	-	-	-	-	-	-	-	-
Claims in French francs	2	2	1	2	-	-	-	-	-	-	-	-	-	-	-
Claims in ECU[3]	9	7	6	1	-	-	-	-	-	-	-	-	-	-	-
Total (pre-Euro)	27	24	21	17	-	-	-	-	-	-	-	-	-	-	-
Claims in Euros	-	-	-	-	18	18	19	24	25	25	24	25	26	26	28

Notes: 1. Percentage shares of allocated reserves 2. End September 2009 3. European Currency Unit

Table 8-3 The Euro versus its pre-Euro currency shares of official reserves, annual.
Source: Percentage share calculated by author on data from the COFER (2009) IMF database: http://imf.org/external/np/sta/cofer/eng/index.htm

Although the euro's share has risen from 18 to 28 percent in the decade since it was adopted in 1998, the pre-Euro currency share of claims in Deutsche mark, French francs and European Currency Units (ECU's) was 27 percent in 1995. This suggests that a

decade after the euro was launched, that the share of euros in the composition of official foreign exchange reserves is only slightly higher than it pre-euro currency component shares in 1995.

Thus, despite the widespread belief that China or other official institutional investors started diversifying out of US reserves during the GFC, such a claim should be treated with scepticism. Although China's authorities do not publicly report their reserve asset composition, including to the IMF COFER database, the evidence from reporting industrial countries suggest an increase in dollar reserve holdings during the GFC. This fits with the 'flight to quality' explanation for investment in US government-issued securities in response to heightened risk-aversion from international (mostly institutional) investors.

	2006				2007				2008				2009		
Percentage shares	I	II	III	IV	I	II	III	IV	I	II	III	IVp	Ip	IIp	IIIp
Claims in US dollars	67	66	67	65	65	65	64	64	63	63	65	64	65	63	62
Claims in Euros	24	25	25	24	25	25	26	26	27	27	26	26	26	27	28
Claims in Yen	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Claims in Pound Sterling	4	4	4	4	4	5	5	5	5	5	5	4	4	4	4
Claims in other currencies	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
Note: p = provisional reporting															

Table 8-4 Currency Composition of Foreign Exchange Reserves (COFER), recent quarters.
Source: Percentage shares calculated by author from COFER (2009) IMF database:
http://imf.org/external/np/sta/cofer/eng/index.htm

Table 8-4 shows the reported currency share values of official reserves for 2006-09 by quarters. It shows a minor rise in the value share of claims in US dollars in the third quarter of 2008 — during the GFC — which was sustained until the second quarter of 2009. This is also consistent with a rise in the value of the US currency during this period. More recent data is not yet available, however.

Finally, there is unlikely to be an expanded use of the IMF's SDR as currency units or as alternative reserve assets. SDRs are composite currency instruments created by the IMF

whose value is calculated against a basket of key international currencies. However, SDRs are not a separate currency, rather an SDR 'gives central banks the right to obtain a combination of dollars, Euros, or other currencies of wide international use' (Wyplosz 2010). This means that SDR holders can 'draw' the SDRs into one of its component key currencies — but this must be underwritten by the relevant central bank. The problem is that no central bank or government knows which currency will be drawn, and this means that central banks will be reluctant to issue large amounts of currency which would be drawn without their control (ibid). This is why, despite the symbolic initiative over SDRs by China, Russia, India and Brazil in the G20, there will not be agreement by either the US or any of the key central banks or their governments to support a major expansion in the use of SDRs. Thus nationally-tied currencies are likely to continue to dominate international reserve and currency use.

8.3.3 **Limited Chinese official reserve diversification**

Despite China's authorities' clear long-term desire for alternative to US dollar assets, in practice they have continued to accumulate US Treasury securities and diversification of new foreign exchange assets has been marginal. While the most recent annual US TIC data on purchases of US securities are not yet available, this data will most likely show a big rise in US Treasury holdings. According to a recent USSC report (2009, 24), based presumably on early access to the data, 'Chinese holdings of US Treasury debt grew by more than 45 percent between July 2008 and July 2009 (USCC 2009, 24) — after the peak of the financial crisis. So there is not yet any evidence of disintermediation from US dollar assets by the Chinese official sector. Rather, as Chinese officials and researchers have stressed, any reserve diversification would come about through the diversification of new foreign exchange stocks, rather than that of existing stocks of US claims (Li quoted in Kurtenback 2006). But the 2008-2009 growth in Chinese official Treasury holdings

suggests that this diversification is marginal, and that most new foreign exchange assets are joining the existing stock of US dollar claims.

China's foreign asset composition, however, reflects the constraints on the investment capacity of China's official sector. Until September 2007 the Chinese official sector lacked a separate official investment vehicle — a Sovereign Wealth Fund (SWF) — which could invest a portion of the accumulated assets in higher yielding asset classes, especially equities, through direct or indirect investment. The China Investment Corporation (CIC) was established to fulfil this role in September 2007. Although the CIC has made some financial equity investments, the implicit bias in the CIC's portfolio discussed below is a preference for strategic stakes in resource investments. In this respect the CIC offers a minor outlet for foreign exchange liquidity through equity investment, but it is not strictly an institution geared towards reserve diversification.

As of September 2009 the CIC held almost $300 billion of foreign exchange assets (CIC), less than 10 percent of China's official foreign exchange reserves. But of that $300 billion, the CIC held 87.5 percent ($260 billion) in 'Cash or equivalents' and had only 12.5 percent invested in portfolio and direct investments at the end of 2008 (Bloomberg News 2009). Such a portfolio reflects the high level of market risk in 2008. But it also reflects political risk. The CIC came under intense domestic criticism when it suffered heavy losses of nearly US$1 billion in a month — on its investments in the US financial institution Blackstone, in 2007. During the same period it also emerged that China Development Bank (CDB) lost $1 billion on its investment in the UK's Barclays Bank around the same time. Shortly afterwards the CDB's plans to invest $2 billion in Citigroup were reportedly killed off by Chinese political officials (Crebo-Rediker and Rediker 2008).

Investing in major financial institutions just as the GFC was breaking was always going to be a risky exercise. But the experience also suggests a lack of institutional capacity by state-owned Chinese financial institutions to select and manage financial investments on that scale. According to Li Xiaogang, director of the Foreign Investment Research Centre at Shanghai Academy of Social Science, China's financial institutions are 'still novices' in those markets (Li Xiaogang quoted in Li 2010). By contrast, the concentration of Chinese outward investment in portfolio and direct investment in areas outside of the resources sector appears to be sounder, reflecting less risk in these investments but also greater institutional capacity on the part of China's state-owned strategic resource sector. Strategic investments in commodities, traditional power and renewable energy generation for instance, make up the majority of the CIC's separate direct and portfolio investments. These strategic resource investments were less than 15 percent of the value of the CIC's overall portfolio.

8.3.4 **China's dollar holdings in US securities markets**

It is beyond the scope of this thesis to fully evaluate the claims and the evidence about the weight and consequences of China's foreign exchange accumulation within US financial markets before, during and after the GFC. But the general line of analysis here is as follows: the prominence of Chinese official US dollar asset accumulation has far outweighed its value as a source of liquidity within US securities markets and the role of Chinese securities holdings has been vastly overstated. The Chinese predatory lending story — the view that Chinese lending caused the sub-prime crisis and the GFC — has largely been driven by the politics of the US's bilateral trade deficit with China, rather than any substantive analysis of the causes of the sub-prime and banking crisis that defined the recent GFC. The belief that the Chinese official sector is a primary institutional anchor for continued inflows into the US securities markets is also mistaken,

and a range of mostly private, but also public financial intermediaries have continued to dominate the majority of US security holdings. Finally, foreign owned securities are far outweighed by domestic-resident owned US securities in every US security asset class with the exception of Treasuries. These initial propositions about the relative weight and role of China's reserve holdings within US securities markets, and the role of other international financial intermediaries, such as the international and US banking sector, suggest a further path of inquiry, and flow from the analysis (central to this thesis) that international financial intermediation is a value-chain process.

Conclusion

Despite the prominence of Chinese official criticism of the US dollar's international reserve currency role during the GFC, Chinese official disintermediation from their stock of US dollar assets is not on the agenda. In the absence of a full currency floating and dismantling of current financial controls — potentially this could result in the successful internationalisation of the Chinese RMB in decades to come — China's authorities' will continue to accumulate US government issued securities. Diversification of Chinese official reserve assets is also possible, but the absence of an alternative supply of international reserve currency assets with the security, depth and liquidity of US government issued securities means diversification has been at the margins of Chinese official reserve management strategy and practices.

Conclusion to chapter eight

This chapter has sought to understand the accumulation of US government securities by China's official financial sector as a two-way value-chain process of international financial intermediation between the Chinese and US official financial sectors. The analysis here suggests that rising Chinese official reserve accumulation has been a

secondary outcome from Chinese official responses to other currency, inflation and asset risks and objectives — especially maintaining a nominal currency anchor, and controls on cross-border financial flows. The dominance of the official sector in China's cross-border financial processes effectively socialises currency and other financial risks, but in the context of a rising structural surplus, it has also generated pressures on China's authorities to secure rising foreign exchange liquidity. International financial intermediation is the process and outcome of Chinese official intervention to soak up foreign exchange liquidity. It is the process through which China's authorities seek to secure the present value of that liquidity through acquiring relatively risk-free international reserve assets. During the GFC perceived credit risk to Chinese official holdings of US agency papers, and US government intervention to expand the Federal Reserve balance sheet, led China's authorities to signal a shift in their international financial strategy, ostensibly away from dollar assets. The pursuit of RMB internationalisation and other financial and monetary reforms suggest paths for future inquiry based on the value-chain framework in this thesis.

Chapter 9

Conclusion

According to the popular orthodoxy, China's recent official foreign exchange accumulation has resulted in a growing international payments imbalance, caused by Chinese currency undervaluation, which also poses a threat to US deficit financing and the US dollar. This orthodoxy, and the wider discourse about 'global economic imbalances', has been driven by the politics of the US trade deficit. However, the popular orthodoxy is also conceptually rooted in prevailing economic and political assumptions. The economic orthodoxy holds the view that payments balances and exchange rates must 'adjust' to reduce China's foreign exchange accumulation; and the political orthodoxy is the idea that Chinese officials should somehow withdraw 'foreign financing' of the US deficit by switching their official reserves to euros or some other assets. Nevertheless, this orthodoxy has poorly understood China's official foreign exchange accumulation and has misread the consequences of China's official reserves for the US dollar and the US balance of payments. Indeed, despite the popular orthodoxy of an unsustainable US balance of payments position, at a deeper level there is no real agreement about the financial relationships involved. A whole set of conceptual problems in understanding global financial relations are embedded in this — including the conceptual problem of how to understand international dollar reserve accumulation by monetary authorities in the financial periphery, such as in China.

This thesis has developed an explanatory critique of the popular view of China's foreign exchange accumulation. The argument put forward throughout, is that although the 'global economic imbalances' discourse has broad appeal, it has nevertheless been politically driven by misuse of the US's recent national trade and payments positions in order to further domestic political and international strategic interests. However, this

discourse's popular acceptance can also be explained by its intellectual foundations in the prevailing nationally-centred international economic and political economy frameworks. The conceptual problem with the standard international economic framework is that it sees cross-border capital flows, that is, international financial relations, as departing from some ideal national equilibrium condition. Similarly, the analysis of financial relations within IR and IPE is often about subjecting 'financial relations' to the analytical logic of national and international 'politics'.

The convergence of standard economic and political science approaches around a nation-state centred view of international financial relations has been found here to be conceptually inadequate for understanding China's recent foreign exchange accumulation, because it privileges national dimensions of finance over an analysis of financial relations per se. The analytical result of this has been a superficial understanding of the development of China's foreign exchange accumulation, and the systematic overstatement of the phenomena's import within international finance. The bigger problem that has been revealed by this critique is the need for a substantive theory of international finance.

This thesis has sought to chart an alternative framework for analysing international financial relations, from a perspective based not on nation-state power relations, but on a theory of international financial intermediation — understood as a dynamic value-chain process of financial transformation (Scholtens and Van Wensveen 2003). The need to start with a theory of finance arises because understanding the object of inquiry, in this case China's official foreign exchange accumulation, requires form-specific concepts. The application of this framework to the analysis of China's foreign exchange accumulation has developed a deeper understanding than have pre-existing approaches to the processes and forms which have generated China's official reserve accumulation. In addition, this thesis has developed a broader perspective on the consequences of China's

US-dollar claims by situating those holdings within their wider international financial intermediary relations.

This thesis has sought to chart a distinctive analytical path through these issues. It has done so firstly by developing an analysis of the successive stages of the value-chain process which have generated a rising financial surplus within mainland China, in the reform and post-reform periods. Second, it has challenged the existing literature through an analysis of the mechanisms which have generated official financial intermediation, including the changing relationship between structural and policy mechanisms across the reform and post-reform periods. Third, it has considered the pressures and strategic responses of China's authorities to the concentration of market risk in US dollar assets, while exploring the prospects for China's international disintermediation from US dollar assets. This conclusion pulls together the key theoretical and analytical themes which have been discussed and developed in this thesis. It draws out the advances made in our understanding of the 'China' case, as well as this thesis' broader contribution to the study of international finance within IPE.

9.1 **Finance in the global political economy**

This section resumes the key theoretical and analytical themes addressed in this thesis. It centres on our conceptual and contemporary empirical understanding of international finance in the global political economy. It begins with a conceptual and empirical critique of the standard international economic frameworks in the study of international finance, before moving to consider the limits of current IPE approaches, and argues that IPE needs to broaden its focus of inquiry to better account for the processes and forms of international financial intermediation. The main elements of the alternative theory of international financial intermediation are drawn out and used to structure the analysis of

the development and consequences of China's foreign exchange accumulation, before moving to a discussion of the empirical and theoretical implications.

The failures of international economics

There have been two outstanding failures of international economics in the recent debate about China's foreign exchange accumulation and the so-called global economic imbalances. The first has been an empirical or analytical failure, whereas the second is conceptual. Each of these failures has its roots in the standard macro-theoretical framework of international economics. The empirical failure here is the prediction that the recent global economic imbalances are not sustainable, and would end with an international sell-off of US dollar assets. By 2005, the standard analysis had crystallised around the following propositions: that the US current account deficit had grown too large and had become unsustainable because it would lead to a rising cost of foreign financing and that the alternatives were either gradual 'adjustment' to reduce the current account deficit led by US policy makers, or a sharper unwinding based on a sudden rise in interest rates and a withdrawal of foreign financing. According to the IMF's (2005) World Economic Outlook, financial globalisation had changed neither the need for global economic adjustment, nor how it would occur. For the IMF, it was not a matter of if, but instead when. Yet even after the global financial crisis, the anticipated withdrawal of foreign financing has not occurred. These assumptions have been central to the standard analysis about the unsustainable nature of both China's foreign exchange accumulation as well as the US balance of payments.

The bigger conceptual failure here is the still widely held view that international finance is a passive 'accommodating' counterpart to national current account 'imbalances' — that is, to a view of international finance as aberrant. This is the view of international finance that inhabits the core graduate texts of international economics, in which

individual national economies build up claims or debts as a counterpart to their individual nationally produced income streams and consumption preferences (e.g., Obstfeld and Rogoff, 36). In this textbook framework, finance is a passive accompaniment to the national accounting 'balance' between income based on trade in goods and services on the one hand, and consumption preferences on the other hand. As such, although it may be accepted that there is a process of financial development — understood as a financial deepening (accumulation) and a broadening of financial institutional forms and instruments — across time and space. Such financial development does not exert an independent structural influence on patterns of financial intermediation or on the potential for disintermediation.

The standard international economic theory therefore has a set of distorting analytical implications, because financial as well as trade variables, in the absence of any independent role for cross-border financial relations or economic integration, are viewed as nationally-determined and therefore as purely national outcomes. The consequences for analysis is that China's recent pattern of national current account surpluses is held to be too high relative to its 'internal', i.e., national, consumption or investment levels. The pattern of global manufacturing integration in mainland China which has generated over half of the surplus income in recent years is entirely absent from such an analysis. There are other grounds for thinking that internal consumption is too low in mainland China, but the distortion remains, so that the standard analysis mistakenly benchmarks what are in part global outcomes to national variables.

Similarly, when it comes to the analysis of financial phenomena, the lack of any developed view about financial development and international financial intermediation generates poor analysis. The argument developed in this thesis is that the process of financial deepening and the development of the capacity of financial institutions to transform financial claims and liabilities through a process of financial intermediation,

means that international finance is not simply accommodating, but also plays an autonomous role. The implications for the analysis of official payments phenomena, such as China's foreign exchange accumulation and the US balance of payments, means that these variables are not properly accounted for by the widely accepted nation-centred economic models.

International financial relations in International Political Economy (IPE)

The second major theoretical theme in this thesis has been the treatment of international finance within the broad field of international relations scholarship. The 'politics' of high finance — that is, financial relations between states — was at the core of the mainstream International Relations discipline of IPE as it emerged in the 1970s. Despite major changes in international finance, the macro-framework regarding finance in mainstream IPE is taken directly from mainstream international economics, while the analytical focus remains much as it was in the 1970s — the politics of inter-state bargaining determined by the financial power relations between states (e.g., Andrews 2006). The problem for this sort of IPE is that it tends to conflate the discourse of power relations between states — a product of state strategy and interests — with an analysis of substantive financial relations. The bigger theoretical challenge is that of moving beyond the reduction of financial relations to inter-state political bargaining. This requires a more developed analysis of international finance within IPE.

The mainstream IPE we know today arose in the early 1970s as a study of international finance, understood as the set of issues concerning 'payments relations between states' (Cohen 2002). With some exceptions, this conventional treatment of international finance within IPE remains with us today. Scholarly analysis of China's rise to prominence in international finance and US-China financial relations has proceeded down this well worn path, as a study of financial relations between states. The common problematic has

been that of which state has more international monetary or financial 'power', and thus who will win out in the inter-state bargaining over the 'the politics of adjustment'. This problematic has occupied recent work by IPE/IR scholars with ostensibly different theoretical allegiances, from Chin and Helleiner (2008), to Kirshner (2008), Drezner (2009), and Bowles and Wang (2006, 2008).

Such an approach does not differentiate between the political discourse of inter-state 'adjustment' and the role of state strategies or political interests in generating that discourse. It does not distinguish between the discourse and critical analysis of substantive international financial issues either. In the first instance, what is needed is a more critical analysis of the 'politics' of inter-state adjustment than has generally been the case. The calls for 'adjustment' have come loudest from US government officials, who have called on the Chinese authorities to appreciate China's exchange rate and to reduce China's current account surplus. Yet the recent Andrews (2006) volume on 'international monetary power', which includes contributions by Cohen, Kirshner, and the US foreign economic policy activist Henning, places these economic assumptions at the core of its analytical framework. The analytical and conceptual problematic of this sort of IPE basically reflects the official political discourse — it does not provide a critical analysis of the discourse or the substantive international financial issues.

The bigger theoretical challenge for IPE studies of international finance is moving beyond the reduction of financial relations to inter-state political bargaining, and that requires a more developed analysis of international financial relations within IPE. The development of important works by more critical IPE scholars such as Germain (1997), Seabrooke (2001, 2006), Konings (2008), and Schwartz (2009) have sought to broaden the scope of analysis into international financial relations. These have been important contributions because they have sought to uncover the social, historical and institutional foundations of international financial power. By broadening the objects of legitimate

inquiry in IPE scholarship beyond the inter-state dimension of financial relations, they have also produced more empirical insight into the breadth, depth and dynamics of international financial relations. However, this thesis also suggests that existing IPE scholarship has nevertheless lacked a framework that provides bridge between these concerns and an understanding of 'balance of payments' phenomena, which could then provide an alternative to prevailing orthodox accounts.

A financial intermediary view

This thesis has argued for a conceptual innovation in how IPE scholars think about international financial relations —— by incorporating a 'financial intermediary' view of international finance. The tendency by IPE scholars to view international finance as 'out there', is less common than it was in the 1990s, and it is now more frequent for critical IPE scholars to view 'financial intermediaries' as institutional actors which are either partly or wholly constituent of financial relations. This tension is worth exploring because although a strategic and political role for financial intermediaries as institutional actors is integral to the framework in this thesis, the claim being made here is that such an account can only be partial.

The reason that the common focus of analysis on institutional forms and actor behaviour is insufficient is that the objects social scientists study 'are concrete in the sense that they are the product of multiple forces and determinants' (Sayer 2000, 21). The implications for analysis are that we must move beyond the readily observable ontology of international financial relations, such as their national political dimensions or the behaviour of institutional and social actors, to open up an analysis of financial intermediation as a value-chain process as well (e.g., Scholtens and Van Wensveen 2005). As such, this thesis has argued for a particular 'financial intermediary' view of

international finance that incorporates an analysis of value-chain processes of financial transformation by financial intermediary institutions.

The notion of financial intermediation as a value chain processes has a number of analytical benefits for the analysis of financial relations. Financial intermediation is a value-chain process through which risks to value claims and value processes are pooled and managed. Through the pooling of liquidity (value-claims) by financial intermediary institutions, the institutional forms of financial value claims are transformed, by type of financial instrument and maturity, into new forms of liquidity with new risk exposures. Thus financial transformation is a dynamic process. Financial intermediation is a process that sets and generalises price information. It also acts as a financial multiplier, by pooling, breaking up and circulating liquidity. And crucially, for the analysis developed in this thesis, financial intermediation is a two way process in which the acquisition of a financial asset, or the issue of one, also creates a counterparty financial liability.

This understanding of the category of financial intermediation as a value-chain process can also be scaled. International financial intermediation (IFI) refers to any financial intermediation with a cross-border or cross-currency dimension (Scholtens 1992, 471). Similarly, IFI involves the simultaneous creation of both assets and liabilities, only it does so with a cross-border or cross-currency dimension. An important point for analysis is that the process of international financial intermediation involves official government, as well as financial and private financial, intermediaries. Despite the important strategic role of the former, it is nonetheless the latter which overall dominates the process internationally.

A great benefit of this category of IFI is that it was part of the conceptual and empirical debates about how to understand the pattern of international payments ‘imbalances’ in the 1960s (Depres, Kindleberger and Salant 1966). It was also crucial to thinking about the

relationship between the processes of financial development and international financial intermediation in the 1970s (for instance, Kindleberger 1974).[42] In terms of international payments 'imbalances', understanding the process and forms of IFI allows us to understand how the demand of monetary authorities in the financial periphery, such as in China the call for a safe store of financial value, can be met through the issue of a financial claim by reserve-centre authorities such as the US Treasury. Moreover, such a process involves the creation of official liability for the US Treasury, yet it does not imply that this is a 'payments imbalance' in need of remedial policy action, because the payments actually balance — as a matter of definition.

Applying the IFI framework to China's foreign reserves

This IFI framework was applied in chapters five and six of this thesis to the analysis of the development and consequences of China's official foreign exchange accumulation, with the application of this framework suggesting a rich path of inquiry. The proximate balance of payments components of China's official foreign exchange surplus are relatively well understood among economic and financial analysts and are relatively easy to quantify. But it is more difficult to determine the deeper causes of China's foreign exchange surplus, including why the surplus takes the form of predominately official US dollar asset accumulation by China's monetary authorities. Also, how to interpret the consequences of that foreign asset accumulation is more problematic.

A few broad conclusions about how to understand the development of China's official foreign exchange accumulation are made here. Although the accumulation of a larger

[42] Regardless of Kindleberger's advocacy of hegemonic stability theory, his role in developing the concept and analysis of international financial intermediation during this period suggests that Cohen's (2008) account of the theoretical contributions (as it goes, there was only one contribution – hegemonic stability theory) of the founding scholars to early IPE ignores a crucial theoretical contribution and analytical framework in favour of its opposite side in the debate.

stock of foreign exchange reserves has been a direct immediate objective of China's authorities at various stages, this is not a sufficient explanation for China's recent mammoth official foreign exchange accumulation. A more widely accepted view among close observers is that China's foreign exchange accumulation has been a by-product of a particular accumulation strategy or 'growth model', and the analysis in this thesis supports that broad conclusion.

China's rising dual surplus is the outcome of a rapid phase of manufacturing led-industrialisation (McKay and Song 2009), central to which has been a massive demographic expansion of the working age population and supply of surplus labour, and the reorganisation of global manufacturing production within East Asia to centre on China as the final export assembly platform (Athukorala 2005). The expansion of the working age population has been facilitated by the transformation of work and labour relations in China's industrial and rural areas over the past three decades, which together have generated a steady supply of surplus labour at a low marginal wage rate (ibid). The rising value of industrial output has generated a sharp rise in corporate profit share of 'national income' between 2001 and 2008, while the relative wage and consumption shares of output fell.

Although the rising scale of China's official sector's international financial intermediary role is best understood as a contingent outcome of multiple concrete causes, a key factor has been the authorities' de-facto fixed exchange rate (and now crawling band) against the US dollar.[43] The rationale for China's exchange rate regime has been hotly debated — suffice it to say that in the financial intermediary view, fixing the exchange rate is a risk pooling strategy by Chinese authorities (Genberg, McCauley and Park 2005). The fixed rate mechanism has multiple risk pooling rationales. The two most important of

[43] China's officially reported exchange rate regime is a 'managed floating' with 'reference to a basket of currencies', although it is also a de facto crawling band against the US dollar, i.e., a crawling peg that slowly appreciates against the US-dollar around a small band of daily trading volatility.

these are: socialising exchange rate risk for resident firms by fixing the currency to an outside anchor (to facilitate trade and investment) and providing a nominal monetary anchor for domestic prices (to limit domestic inflation) (McKinnon 2005). In practice, the existence of a fixed nominal rate policy did not fully meet these objectives, and it does so even less with the policy shift towards nominal appreciation since 2005. Nevertheless, official sector risk pooling and price signalling are better explanations for the exchange rate regime than the alternatives. Regardless of the effectiveness of and the level of the exchange rate policy mechanism, it is a key reason for the international financial intermediary role of China's official sector.

Exchange rate management requires an institutional cross-border transactions and payments system that is enforced through capital controls and foreign exchange retention regulations. The development of a uniquely deep financial system in mainland China during the reform era, and the monetary and asset-based risks to that financial system in the 1980s and 1990s also reinforced official policy measures to strengthen official intermediation of cross border payments and transactions. The result was that official reserve accumulation took place in almost direct proportion to the sharp rise in the structural surplus from the late 1990s — as rising foreign exchange inflows were intermediated by Chinese commercial banks and were bought by China's official sector in exchange for domestic currency bonds.

China's official foreign exchange accumulation is also a two way international financial intermediary process by definition. The purchase of US dollar assets is a both a policy by-product and, at the same time, a deliberate policy decision by Chinese authorities. But the reasons for that decision are less well understood. One explanation is that China's official purchases of US dollar assets could be a quid pro quo by Chinese authorities for access to US markets. This is a reductive explanation for China's official reserve

accumulation as policy of 'trade for T-bills',[44] despite the reality that in recent years only a quarter of Chinese exports have gone to the US markets. It also suggests a narrowly politicised view of the reasons for the policy and the consequences for Chinese and US authorities. Although political-economic interests could be jeopardised as result of adverse policy moves on either side, it is not a sufficient explanation for either the development or the consequences (sustainability) of international financial intermediary processes between the Chinese and US official financial sectors.

The reasons for the Chinese policy decision to purchase US dollar assets — rather than to purchase other international financial assets — are more prosaic as well as more profound. The prosaic reason is the demand of Chinese authorities for a safe store of value, which is readily convertible, i.e., liquid and useable — that is, an asset which is also a form of official reserves. The reasons behind the demand for US dollars on the Chinese side have been discussed, but the key reason these reserves are held in US currency denominated instruments is that the US international bond market is unrivalled in providing a supply of liquid 'risk free' assets which can perform this role with deep, accessible and low cost transactions. In short, the prosaic reason for the Chinese policy decision to purchase US official assets is financial —– maintaining a liquid stock of 'risk-free' value over time. The more profound explanation concerns why US financial markets perform this role as the key international reserve centre, and why no other financial centre can provide an alternative with a comparable level of depth and scale. But that is not the primary focus of this thesis.

What this thesis has shown is that most commentators have vastly overstated the consequences of China's official foreign exchange accumulation for international financial 'stability', for both US dollar liquidity, and the prospects of an alternative

[44] The phrase 'trade for T-Bills' is used by Garret (2009), although its use by the author is more as a form of explanatory shorthand than as a developed explanation for the phenomenon.

international currency unit. The monthly reporting of US Treasury purchases by Chinese authorities has received almost exclusive attention by financial journalists and financial commentators — as if US Treasury was the primary source of international capital inflows into US securities markets. The impression is that we live in a world where all international financial transactions are officially intermediated and in which all transactions take place between China's authorities and the US Treasury. Yet the supply of Chinese official liquidity — at most US$2 trillion dollars has been a minor source of overall financial claims within the total US stock of US securities which stood at $55 trillion in July 2008 (and over two thirds of these financial assets were held by US 'residents'). The great paradox then is that despite the prominence of the China-US official financial intermediary relationship, it has been an exception to the contemporary rule of the replacement of official with private international financial intermediation.

9.2 **Thesis contributions to knowledge**

This thesis makes three main contributions to knowledge. One is specific to the 'China' case and the other, to ways in which financial relations can be better studied within IPE. The contribution to knowledge about the 'China' case is a developed critique of recent international policy discourse and the prevalent disciplinary interpretations of China's international financial policies, as well as an alternative analysis of their development and consequences. More substantially, this alternative account has been developed through an explanatory critique of the intellectual problematic that has guided the prevalent international economic and IPE approaches to international finance. The study of international finance has been developed through the conceptual prism of nationally-determined 'payments imbalances' on the one hand, and inter-national 'power relations' on the other hand. What the conventional problematic lacks is a positive analysis — as distinct from an analysis of aberration and national or state-centred dimensions — of the

dynamics, processes and forms of financial relations, including their cross-border dimensions. The conventional problematic as such generates a misleading understanding of international financial relations. In response, this thesis has sought to redefine some of the theoretical objects of analysis used in the study of international finance, by incorporating a theory of financial intermediation as a value-chain process of institutional transformation. Such a theoretical and analytical innovation provides a relatively more open framework for the study of financial relations within IPE than many existing alternatives.

The first main claim of this thesis is that it advances IPE scholarship by developing an alternative research agenda in the field of international finance. Recent research by critical IPE scholars in the field of international finance has sought to improve the study of international financial relations by developing broader inquiries into the conceptual objects, such as the institutions, relations and ideas which constitute 'the foundations' of financial relations. These studies have sought to integrate conceptual innovations with critical general theoretical approaches to social science; indeed, broader theories have often helped to generate these innovations in the first place. Because the objects we study 'are concrete in the sense that they are the product of multiple forces and determinants' (Sayer 2000, 21), the potential for ever closer conceptual and empirical specification is relatively open.

Nevertheless, advances in the study of financial relations within IPE have often required the use of concepts and analyses that are form and process specific. Among these is an understanding of credit systems, or money, which had initially been developed by scholars from outside political science. As Germain (1997) has argued, greater inter-disciplinary learning is needed to advance the study of international political economy. In this respect, the methodology adopted in this thesis has been to approach the study of China's official reserve accumulation largely as a general social science problem. This

has been necessary because despite the political attention the subject of China's foreign exchange reserves has received in the world at large, and increasingly in IR/IPE, many of the substantive issues, concepts and analysis have been generated outside of academic political science.

This has left politically minded IR/IPE scholars with a choice. One path would be to centre on the definition of the issues and their basic problematic as already apparent, and then move on to analyse the problem from an orthodox IR/IPE disciplinary standpoint. This choice accurately characterises recent mainstream and some 'critical' IR/IPE approaches to the study of 'the politics of balance of payments adjustment', by scholars such as Cohen, Andrews, Helliener and Chin, as well as Bowles and Wang. It also accurately describes recent international security studies of Chinese financial power, such as those presented in the work of Drezner (2009). This choice broadly mirrors the problematic in the standard economic approach, except in that it restricts its analysis to 'the politics' of the debate. The alternative path taken by this thesis is one that seeks to open up the terms of inquiry to critical analysis of the economic and political issues at hand in order to better understand the substantive issues, as well as their inter-relations. This seems to be a richer path for the study of international political economy.

This thesis has sought to develop an alternative theoretical and analytical framework for understanding international financial relations. The standard international economic, and IR/IPE approaches have tended to focus on the one hand, on the view that international financial aggregates should conform to coherent nationally-centred stories, and on the other hand, on the analysis of state-state relations, especially in terms of nation-state financial power relations. Now, in the case of China, where there is extensive official (state) intermediation of international financial flows, both these attributes of international financial relations have some coherence. But we should note that both these dimensions of 'national' finance will not necessarily behave in harmony, and that even in

the case of China, international financial flows will not necessarily amount to a coherent, let alone strategic, national story. These tensions are apparent in the relationship between recent proposals for financial reform in China, and in the ambiguous potential effect of these reforms on international financial flows.

In summary, this thesis has made three main contributions to knowledge. First, it has contributed to the problematisation and development of an explanatory critique of the popular, standard international economic and conventional IR/IPE approaches to understanding international financial relations. Second, it has offered a substantive redefinition of the theoretical objects of study in international financial relations, incorporating and augmenting a value-chain approach to the processes, dynamics, and institutional forms of financial intermediation, including and especially its cross-border and cross-currency dimensions. Third, by applying this theoretical and analytical framework, the thesis has developed an initial but distinctive alternative analysis of the development and consequences of China's recent official foreign exchange reserve accumulation as a problem in understanding international finance.

Limits and qualifications

This thesis is a provisional statement. The conceptual and analytical framework developed in this thesis has sought to provide an alternative to the standard international economic and IR/IPE approaches to the study of international financial relations. However, the approach this thesis adopts in understanding international financial relations — an approach centred on understanding the value-chain processes, dynamics and institutional forms of financial intermediation — necessarily remains open to the insights of the standard and other more critical approaches to international finance. In other words, the approach developed here provides a different view of international

financial relations, but recognises that elements of existing approaches also have relevant insights and have made important contributions, which may be usefully incorporated at distinctive and also synthetic, levels of analysis. Indeed, to understand international financial intermediation more clearly, we also need to critically examine the interrelations between IFI and the more commonly understood dimensions of international financial relations which existing standard and critical approaches have highlighted.

Furthermore, this thesis has sought to advance the study of international financial relations through an analysis of some of the particularities of the 'China' case in a way that bridges the domestic and international dimensions of China's recent official reserve accumulation. There are obvious limits to this initial application. These include the limited scope of analysis with regard to the development of international financial intermediation, and its international consequences. A problem identified in chapter two of this thesis: is that in seeking to understand the development of any phenomenon, it may in the first instance also be rationalised. The thesis has sought to minimise such a problem through an extensive critical treatment of alternative conceptual and empirical propositions about the development of China's recent official reserve accumulation, and more broadly through a critical analysis of finance as a social phenomena.

Further study

At the same time, this initial analysis of both the tensions which have generated this process of international financial intermediation, and the tensions which have been internal to its processes and forms, provides a basis for further analysis of its dimensions and applicable counterfactuals. The development of large scale processes of international financial intermediary in and by China's authorities raises a number of questions about the internal relationship between the recent and prevailing growth model, its socio-historical and political foundations — especially low levels of social provision — and the

recent financial surpluses. Further analysis is required of the tensions between the process of official (state dominated), international financial intermediation, and the recent and potential development of the onshore financial institutions and markets. And, due to restrictions in scope, this thesis has not been able to analyse the recent US side of the international financial intermediary process in depth, especially those issues regarding the impact of the flow of funds from the Chinese official sector, the overall supply of funds to the US mortgage and fiscal sector, and the impact on long-term US interest rates — despite these being key questions in the 2008-09 financial crisis. These are questions for further research.

Another path of analysis which this thesis has not fully explored because of constraints of resources, time, and institutional access, is the recent reserve accumulation by authorities elsewhere, notably in East Asia after the 1997-98 financial crisis. Similarly, the thesis has not analysed more extensively the subsequent development of regionalisation processes in financial and monetary relations, through bodies such as the Executive Meetings of East Asia and Pacific Central Banks (EMEAP).

This thesis also raises new theoretical and empirical paths of inquiry. Theoretically, the potential intersection, overlap and points of departure between IFI and existing conventional and more critical approaches to international finance from across disciplinary fields suggests a rich path of investigation. The study, for instance, of institutional diversity in the global political economy, could usefully be incorporated into the analysis of international financial intermediation at distinctive and synthetic levels of analysis. IFI is a value process which is mediated through and by financial intermediary institutions, and these institutions also have agency. At the same time, value chain processes also have structural properties, in that they persist and are reproduced over time, and therefore condition the relations within which financial agents operate.

Further clarifying the relationships between domestic and international financial intermediary processes and their internal relationships to wider socio-historical relations, including requirements of political and social legitimacy, would also be an important avenue for research. Although these remain in some sense problems of macro-analysis, they would also be complemented by research with a local and more pragmatic mid-range scope. This is especially the case with regard to the realm of local credit and financial relations in mainland China, where the scope for study is vast. These relations reveal very much about the wider macro-analytical problems and socio-historical transformations taking place. Several instances, from related but quite different directions, can be identified here: the sources, flows, and allocation of credit and finance through the Rural Credit Cooperatives, i.e., localised financial intermediaries; the financial relations between local state authorities, state and nascent private banking systems and the transformation of state and private enterprises. These instances raise important questions and suggest lines of further research. This thesis has not been able to thoroughly develop these paths of inquiry; nonetheless, it has provided a basis for further scholarly explorations into those questions' significance and implications.

Appendix

Selected data analysis

Official foreign exchange data reporting discrepancy (chapter 6)

The data here were compiled by the author from publicly reported monthly data from the SAFE and the PBC. SAFE reports China's 'Monthly Foreign Exchange Reserves' stocks in billions of US dollars from the end of January 2000 onwards and end year stocks from 1950-2000. The PBC's 'Balance Sheet of Monetary Authority' also reports foreign exchange stocks on a monthly basis (PBC 2009b). There is a discrepancy between the SAFE and the PBC data on monthly stocks of foreign exchange reserves. The stocks reported by the PBC on its 'Balance Sheet of Monetary Authority' are greater than the SAFE's report foreign reserve holdings for the period from January 2000 to January 2002, this situation is then reversed and the SAFE's reported foreign exchange stocks exceed those of the PBC until December 2006. After that the PBC stocks exceed the SAFEs. At end-June 2009 the PBC's reported foreign exchange stocks exceeded SAFE's by US$200 billion. The data used for figure 6-1 (p. 175) are the PBC's data.

There could be a number of reasons for this discrepancy. SAFE manages the bulk of China's stocks of foreign exchange reserves on behalf of the PBC. This suggests that the PBC holds a small amount of additional reserves directly and records the foreign exchange holdings of other subsidiary agencies on its balance sheet. This is consistent with the excess of the PBC's reserves. The $200 billion excess is large which suggests that the PBC's reported foreign exchange holdings include a portion held on behalf of the PBC by the SOCBs, the CIC, or some other agencies.

Following Setser and Pandey (2009), the study agrees that the SOCBs are the most likely holders of the additional assets recorded on the PBCs 'Balance Sheet of Monetary Authority'. As can be seen in the figure below the PBC's 'Other Foreign Assets' statistics correspond very closely with the reported 'Purchases and Sales of Foreign Exchange' which is a line item on the PBC's reported 'Sources and Uses of Credit Funds of Financial Institutions' for each year since 2006 (PBC 2009c).

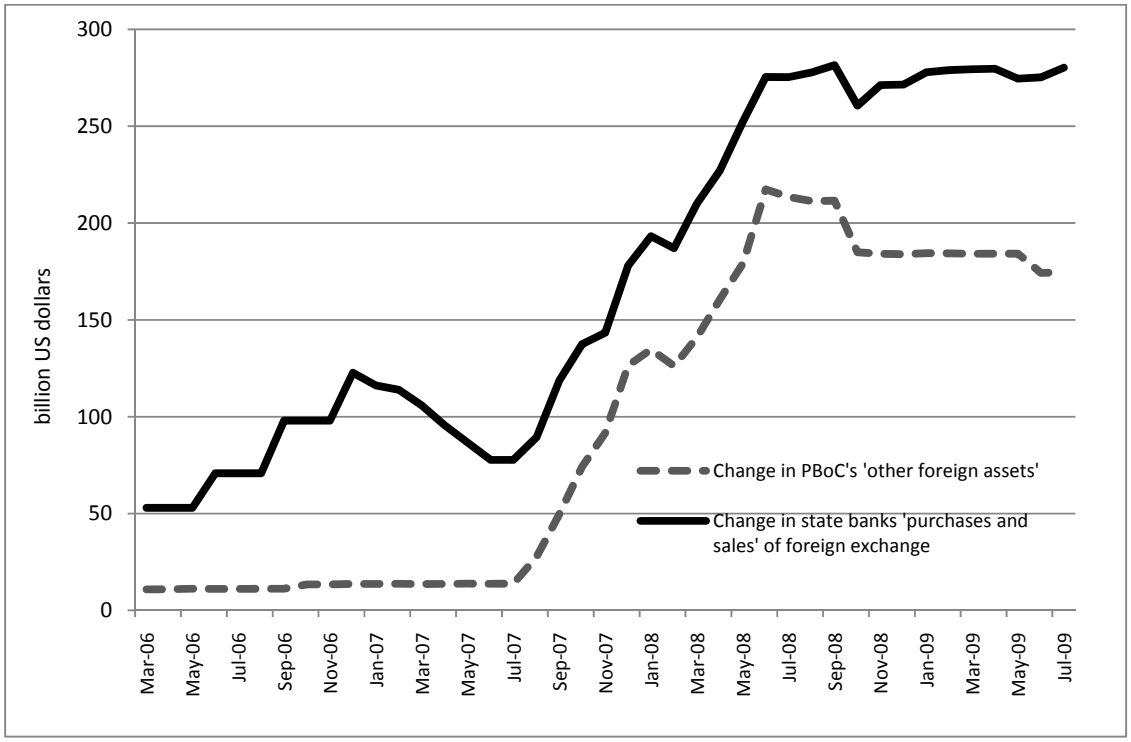

Figure A-1 Change in PBOC 'Other Foreign Assets' and change in state commercial banks 'Purchases and Sales of Foreign Exchange', 2006-2009.
Data: Authors calculations on data compiled from the PBoC http://www.pbc.gov.cn/english/diaochatongji/tongjishuju/gofile.asp?file=2009S04.htm
Source: Updated data and based on original by Setser and Pandey (2009).

Figure A-1 is based on the PBCs reported monthly data compiled by the author. The close relationship between these two series suggests that the PBC's balance sheet item 'Other Foreign Assets' are SOCB holdings of foreign exchange assets. These totalled between $200 and $275 billion at the end of June 2008.

The rapid rise in both series, over $200 billion from July 2007 to June 2008, shows that monetary authorities have moved a sizeable foreign exchange balance off their reported foreign exchange reserves and onto the 'Other Foreign Assets' balance sheet item, or held newly accumulated foreign exchange on the SCOB's balance sheets. This shift corresponds with the decision of monetary authorities in August 2007 that the banks had to hold a portion of their reserves with the central bank in foreign exchange, i.e. in dollars. According to Setser and Pandey (ibid, 4):

These funds are counted as external assets in the PBoC's balance sheet and are managed by SAFE — not by the central bank. As a result, they are, for all intents and purposes, foreign exchange reserves. When the reserve requirement rose, the PBoC's 'other foreign assets' rose, and now that the reserve requirement is falling, 'other foreign assets' are falling.[45]

As discussed below, this shift coincides with a huge rise in China's overall pace and level of foreign exchange accumulation. The shift in the balance sheet holdings suggests that Chinese monetary authorities responded to a sharp hike in the rate of foreign exchange inflows by making a decision which reduced the reported level of 'foreign exchange' reserves. There is a further discrepancy of $50 to $100 billion between the data sets. This could be extra reserve holdings that are simply not reported. More likely, the item 'Purchases and Sales of Foreign Exchange' suggests double counting of foreign exchange transactions, which could reflect the SOCBs purchases and sales in the RMB foreign exchange swap market (ibid, 4-5).

[45] PBOC is the People's Central Bank (PBC).

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total International Reserves (minus gold)	29.6	43.7	20.6	22.4	52.9	75.4	107.0	142.8	149.2	157.7	168.3	215.6	291.1	453.2	659.5	866.5	1113.5	1575.3	2039.3
Foreign Exchange Reserves	28.6	42.7	19.4	21.2	51.6	73.6	105.0	139.9	145.0	154.7	165.6	212.2	286.4	403.3	654.9	863.9	1111.3	1528.3	1947.2
Increase in International reserves	12.0	14.5	-2.1	1.8	30.5	22.5	31.7	35.9	6.2	8.7	10.7	47.4	75.2	116.6	206.2	207.3	246.9	461.7	419.0
Current account balance	12.0	13.3	6.4	-11.6	6.9	1.6	7.2	37.0	31.5	21.1	20.5	17.4	35.4	45.9	68.7	160.8	253.3	371.8	426.1
Trade balance	9.2	8.7	5.2	-10.7	7.3	18.1	19.5	46.2	46.6	36.0	34.5	34.0	44.2	44.7	59.0	134.2	217.7	315.4	360.7
Services trade balance	1.5	2.9	-0.2	-0.8	0.3	-6.1	-2.0	-3.4	-2.8	-5.3	-5.6	-5.9	-6.8	-8.6	-9.7	-9.4	-8.8	-7.9	-11.8
Net investment balance	1.1	0.8	0.2	-1.3	-1.0	-11.8	-12.4	-11.0	-16.6	-14.5	-14.7	-19.2	-14.9	-7.8	-3.5	10.6	15.2	25.7	31.4
Net transfers	0.3	0.8	1.2	1.2	0.3	1.4	2.1	5.1	4.3	4.9	6.3	8.5	13.0	17.6	22.9	25.4	29.2	38.7	45.8
Capital account balance	3.3	8.0	-0.3	23.5	32.6	38.7	40.0	21.0	-6.3	5.2	1.9	34.8	32.3	52.7	110.7	63.0	6.7	73.5	19.0
FDI, net	2.7	3.5	7.2	23.1	31.8	33.8	38.1	41.7	41.1	37.0	37.5	37.4	46.8	47.2	53.1	67.8	56.9	121.4	94.3
Portfolio, net	-0.2	0.2	-0.1	3.0	3.5	0.8	1.7	6.9	-3.7	-11.2	-4.0	-19.4	-10.3	11.4	19.7	-4.9	-67.6	18.7	42.7
Other investment, net	0.8	4.3	-7.3	-2.7	-2.7	4.0	0.2	-27.6	-43.7	-20.5	-31.5	16.9	-4.1	-5.9	37.9	-4.0	13.3	-69.7	-121.1
Errors and Omissions, net	-3.2	-6.8	-8.2	-10.1	-9.1	-17.8	-15.5	-22.1	-18.9	-17.6	-11.7	-4.7	7.5	18.0	26.8	-16.4	-13.1	16.3	-26.1
Non-FDI capital account balance (including errors and omissions)	-2.6	-2.2	-15.6	-9.7	-8.2	-13.0	-13.6	-42.8	-66.3	-49.4	-47.3	-7.3	-6.9	23.5	84.4	-25.4	-67.4	-34.7	-104.5

Table A-1 China's Balance of Payments, 1990-2008 (in billions of US dollars).
Note: 1. At the end of 2003 US $45 billion in foreign exchange reserves were used for domestic bank recapitalisation, and a further $200 billion of reserves was used to establish the China Investment Corporation, China's sovereign wealth fund, in 2007. Half of the CIC's foreign exchange funds have been used for domestic bank recapitalisation, and 87.5 percent of the remaining assets are held in foreign exchange. This additional $245 billion in foreign exchange between 2004 and 2007 does not appear in these balance of payments figures as it is unclear whether these funds appear in the reported figures or should be considered additional. Source: International Financial Statistics (Online), IMF, and author's calculations.

	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007
Labour force	501.0	653.2	688.5	739.6	744.3	753.6	760.8	768.2	778.8	782.4	785.5
Total employment	498.7	647.5	680.7	720.9	730.3	737.4	744.3	752.0	758.3	764.0	769.9
Urban employment	128.1	170.4	190.4	231.5	239.4	247.8	256.4	264.8	273.3	283.1	293.5
State-owned enterprises	89.9	103.5	112.6	81.0	76.4	71.6	68.8	67.1	64.9	64.3	64.2
Collectively-owned enterprises	33.2	35.5	31.5	15.0	12.9	11.2	11.7	10.9	10.0	9.4	8.9
Foreign-funded enterprises	0.1	0.7	5.1	6.4	6.7	7.6	4.5	5.6	6.9	8.0	9.0
Limited-liability corporations	..	..	..	..	..	..	12.6	14.4	17.5	19.2	20.8
State-holding corporations	..	..	..	..	..	..	5.9	6.2	7.0	7.4	7.9
Privately funded enterprises	0.8	6.7	20.6	34.0	36.6	42.7	25.5	29.9	34.6	39.5	45.8
Residual	4.9	23.1	16.9	81.6	91.6	96.4	145.9	151.2	157.0	161.9	165.5
Rural Areas	370.7	477.1	490.3	489.3	490.9	489.6	487.9	487.2	484.9	480.9	476.4
Township and village enterprises	69.8	92.7	128.6	128.2	130.9	132.9	135.7	138.7	142.7	146.8	150.9
Privately owned enterprises	..	1.1	4.7	11.4	11.9	14.1	17.5	20.2	23.7	26.3	26.7
Self-employed	305.7	14.9	30.5	30.5	26.3	24.7	22.6	20.7	21.2	21.5	21.9
Residual	288.4	368.4	326.4	326.4	321.8	318.0	312.1	307.7	297.3	286.3	276.9

Table A-2 China: Labour force and employment (millions).
Source: Athukorala, Fukao, Yuan (2009, table 10.2, 188). Data: National Statistical Bureau (NBS) various years, China Statistical Yearbook, China Statistics Press, Beijing.

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