

CHINA'S MACROECONOMIC POLICY: A POLICY OF AMBITION AND PRAGMATISM

*Leong H. Liew**

Griffith Business School,
Griffith University, Queensland, Australia

1. INTRODUCTION

The focus of macroeconomic policy is often biased towards the short-run, implementing fiscal and monetary policies to minimise economic volatility by manipulating demand to counter unexpected demand and supply shocks. China's macroeconomic policy, on the other hand, is consciously aimed at both the short and long runs to influence the demand and supply sides of the economy simultaneously.

Government policy plays a significant role in a country's technical innovation and strategies to combat climate change and its effects. China's approach to macroeconomic policy is particularly noteworthy, as the 2018 Nobel Prize in economics was awarded to Paul Romer and William Nordhaus for their work on the supply side of macroeconomics. Romer was awarded the prize for his research on how technical innovation explains growth and Nordhaus for his contribution on the economics of climate change. China's technical innovation and climate change projects are important elements of its state developmental policy (SDP) for promoting what it regards as strategic industries. Its macroeconomic policy aims to smooth out economic volatility in the face of economic shocks and to

* Corresponding email address: l.liew@griffith.edu.au.

support SDPs that contribute to high economic growth and other strategic objectives of the state.

China's macroeconomic policy is therefore unambiguously ambitious, but it is also flexible and pragmatic. Its policymakers craft policies that are often not in accordance with conventional thinking but take into account the country's unique circumstances: China's geographical location and size, its level and stage of economic development at a given point in time, and constraints imposed by regional or global economic conditions. In reforming the country's previously planned economy, its policymakers have implemented a policy of gradual economic liberalisation, including establishing stock markets and allowing the development of a shadow banking system with fewer regulations that offers some flexibility in an otherwise tightly controlled financial environment. Nevertheless, Chinese policymakers have often been decisive and never hesitated to reassert greater centralised control when developments, such as the global financial crisis (GFC) and later massive capital outflows, threaten macroeconomic and political stability and/or undermine the country's ability to pursue its core strategic objectives.

Yet policymakers, even in the midst of increasing control over capital movements during the GFC, loosened the chains of local governments and encouraged local initiatives in a bold move to prevent the economy's growth from slowing or even falling into a recession. One could perhaps describe the yin–yang actions of policymakers during the GFC as macro tightening and micro loosening. Being pragmatic involves recognising that successful macroeconomic policy implementation is more of an art than adherence to a fixed recipe regardless of circumstances; it seeks to balance a country's often conflicting objectives given the specific nature of its economy at a particular point in time.

2. THE RENMINBI: MORE OF A MONETARY ANCHOR THAN A GROWTH DRIVER

Without underplaying the role of exports in China's economic growth, their contribution has more to do with the management and technical know-how that foreign-invested firms brought into the country than as the key driver of aggregate demand. Data from China's National Bureau of Statistics showed that from 2001 to 2004, the contribution of net exports to the country's growth was no more than 0.7% of approximate annual growth rates of 10% (Liew, 2009). The contribution of net exports peaked at 2.6% in 2007, when the country's current account surplus reached 10.1% of GDP and GDP growth reached 14.2%. But at the peak of the GFC in 2009, net exports contributed –3.5% to GDP growth; in that year, 22.9% growth in domestic investment compensated for the negative contribution of net exports to produce an overall growth rate of 9.2% (International Monetary Fund [IMF], 2012). The contribution of net exports to GDP growth never

reached +1% after the crisis and was even negative in some years (IMF, 2018; World Bank, 2011). Eswar S. Prasad (2016), a former head of the IMF China Division, emphasised this point indirectly in his opinion piece in the *Washington Post* during the 2016 US presidential election primaries, in which he labelled the idea that cheap exports have been propelling China's growth as a 'myth'. China's domestic demand – especially infrastructure investment in the past and consumption at present – instead of net exports has been the main driver behind the country's economic growth. The relative importance of domestic demand in China's growth history is consistent with standard trade theory with constant returns to scale, which states that large countries tend to gain less from free trade than small countries. This occurs because the gap between pre-trade and free trade prices is larger for small countries than for large countries, which produce larger specialisation and exchange gains for the former. Potential gains of unrestricted foreign trade to large countries can even be smaller when we account for potential gains from exploiting increasing returns and network externalities from strategic trade policy. Moreover, the introduction of market forces alone to an autarkic domestic economy would expand production from the interior towards a country's production possibilities frontier. The larger the country, the greater the size of these non-trade gains.

Because economic growth is largely domestic and not export-driven, exchange rate undervaluation has not been the reason for China's high economic growth. Why is this so when the country's export-to-GDP ratios are so high? In the years before the GFC hit Chinese exports, the ratios exceeded 30%; after the crisis, the ratios were still higher than 20% (IMF, 2012). China's entry into the World Trade Organization (WTO) brought about a boom in Chinese manufacturing exports, which afforded China a reputation as the 'world's factory' and gave credence to the export-led growth thesis of China's economy. However, its domestic value-added share in manufacturing exports remains quite low, lower than that of its major trading partners (Wen, 2018). About half of China's exports are based on 'triangular trade', where the final processing and assembling of exports from China's OECD neighbours – Japan and South Korea – is performed in China for dispatch to markets in Europe and North America. A good example of this trade process is Apple products. The then highly popular iPod was assembled in China and sold in the US for US\$299; the US's trade deficit with China increased by US\$150 for each iPod imported, but assembly work in China only provided a value-add of "a few dollars" (Linden, Kraemer, and Dedrick, 2009, p. 144). Each iPhone or iPad imported into the US from China increased the US deficit with China by US\$229 to US\$275 but cost Apple only \$10 worth of Chinese labour (Kraemer, Linden, and Dedrick, 2011). Lawrence Lau and his colleagues re-estimated the 2015 US trade deficit with China after adjusting for intermediate inputs and came up with a deficit of only US\$132.7 billion compared with the initial estimate of US\$367.4 billion based on US trade data (Lau, Chen, and Xiong, 2017).

China's exchange rate was an important foreign trade policy instrument before the country's liberalisation of foreign trade and the reunification of its planned and market-

based exchange rates in 1994. Non-state firms were free to export, and state-owned foreign trading firms, which were loss-making exporting at the higher planned exchange rate, no longer had to export at the higher planned exchange rate after 1994; they could export at the lower market rate. Once firms were no longer forced to export at the higher planned rate, the dominance of triangular trade in China's exports with their low domestic value-add and a flexible labour market reduced the importance of the Renminbi exchange rate in foreign trade.

It is worth remembering that it is the real exchange rate, not the nominal exchange rate, that matters. While Chinese policymakers have control over the nominal exchange rate, they have limited influence over money wages and therefore the real exchange. China's export sector, which is dominated by foreign-invested firms, has a largely free labour market. Currency fluctuations create uncertainty and are debilitating for foreign trade transactions. When China's financial system was highly underdeveloped without well-developed forward markets and a system of currency hedging, it made sense for Chinese policymakers to peg the Renminbi to the US Dollar, the currency of its major trading partner, as the nominal anchor of monetary policy and to have the labour market, with its high degree of wage flexibility and labour mobility, provide real exchange rate flexibility.

In 2002, a year after China was admitted into the WTO, the average manufacturing wage in China was between US\$0.56 and US\$0.67 per hour and the average urban manufacturing wage was US\$0.91–US\$1.09 per hour (Banister, 2004) – about 3% of the costs in the US; a quarter of those in Brazil and Mexico; and 10% of the average costs in Hong Kong, Singapore, South Korea, and Taiwan (Banister, 2005). Chinese wages being so low clearly made Chinese exports highly competitive in global markets, regardless of the nominal exchange rate.

Money wages tend to be rigid downwards, especially in economies with strong unions. Policymakers therefore favour a currency devaluation to lower the real wage in the event of a negative economic shock that might require an adjustment in labour costs. It does not work quite the same way in the opposite direction when there is a shortage of labour and the pressure is for real wage increases. A cap on nominal currency appreciation could simply mean higher nominal wage increases, as the experience of China's export sector demonstrates. Between 2006–2015, as the demand for labour increased in response to the Chinese economy's double-digit or near-double-digit growth, the average real wage in China grew by over 100% (International Labour Organization [ILO], 2016). The average real effective exchange rate, except for a small decrease of –0.5% in 2010, increased each year (IMF, 2012, 2016). Despite the Renminbi depreciating as a result of recent US tariffs and overt political pressures on it, the US Treasury has not labelled China a currency manipulator; currency manipulation is not China's preferred instrument for export promotion.

3. PRAGMATISM IN THE FACE OF INFLATION

Macroeconomics under central planning in China appeared comparatively simple: there was nearly zero foreign investment. Monetary policy and the exchange rate played only small roles in allocating domestic resources and foreign exchange. The country's economic plan regulated the demand for foreign exchange according to available supply, and domestic prices of goods were set according to planners' choice between the level of open inflation and the amount of forced savings (Liew and Kawaguchi, 1995). It is only with economic reform and China's opening up to the global economy, especially since its entry into the WTO in 2001, that monetary and exchange rate policies have become important instruments of macroeconomic policy. Policymakers are facing a newer policy environment where decisions around foreign exchange, domestic price inflation, the interest rate, and capital flows must be considered together and are not easily treated individually.

Price inflation is a particularly sensitive issue in the People's Republic due to the role inflation played in destabilising the previous regime, which helped bring it to power. Before 1983, the People's Bank of China (PBC) acted as a commercial bank as well as the country's *de facto* central bank. Until January 1978, PBC was under the Ministry of Finance. It was only in 1983 that it officially became China's central bank, with ministry-level status. Its position as China's central bank was formally enshrined by the PBC Act of 1995. The Act specifically gave responsibility for monetary policy to the PBC; the bank was mandated to manage all financial policies under the guidance of the State Council and took over from the Price Bureau the responsibility of maintaining price stability. To conduct exchange rate policy competently, the PBC must therefore manage inflationary expectations as well as foreign trade effectively.

The Mundell–Fleming (M–F) policy trilemma states that a country can only have two of three currency policy choices: free capital mobility, independent monetary policy, and a fixed exchange rate – it cannot have all three. China did not have to concern itself with the M–F trilemma under central planning. But this changed with China's opening up and it becoming the world's major exporting country. Chinese policymakers with a pegged exchange rate had to confront the M–F dilemma in the face of substantial inflationary pressures brought about by the rush of current account surpluses after China's entry into the WTO that threatened their ability to control the country's money supply.

In 2005–07, China's current account surpluses hit heights of 7.1%, 8.6%, and 10.1% of GDP, with net exports contributing in absolute percentages (2.6%, 2.1%, and 2.6%) to then double-digit GDP growth rates (IMF, 2010, 2012). In the few years before the GFC, the Chinese economy experienced the largest shares of net export growth to total GDP growth in the first decade of the country's post-WTO entry. Expectations of Renminbi revaluation in global markets were heightened and encouraged large speculative capital

inflows into China, which bypassed capital controls. In the face of the M–F dilemma, policymakers unpegged the Renminbi from the US Dollar in 2005 and introduced a managed rate, dampening annual inflation with the industrial producer price index in 2005 increasing by a relatively modest 3.1% compared to an 8.2% increase the year before (Liew and Wu, 2007). Inflationary pressures took off again with the massive government stimulus in response to the GFC. The crisis, China’s increasing share of trade in the global economy, and the country’s attractiveness as a destination for volatile speculative capital flows soon convinced Chinese policymakers of the merits of a more flexible, rather than a pegged, exchange rate.

The PBC had, with a pegged exchange rate, sterilised capital inflows selling domestic bonds. But sterilisation of foreign asset purchases became more difficult and less effective in controlling the money supply in the face of aggressive monetary quantitative easing (QE) in developed economies in response to the GFC. Before the GFC, Chinese interest rates (as reflected by the Shanghai interbank offer rate [SHIBOR]) were generally lower than short-term US interest rates, reflected in 3-month US Treasury bill rates; this difference resulted in a profit for the PBC from sterilisation. The profit from sterilisation later became a loss for the PBC with QE; the SHIBOR–US Treasury bill rate gap changed from a positive approximate 2.5% interest difference to –6.5% (Chang, Liu, and Spiegel, 2015).

Sterilisation was simultaneously becoming less effective in controlling the money supply. There was almost complete sterilisation in 2000–06; foreign reserves had increased substantially with the monetary base mostly unaffected. But the money multiplier had increased significantly with growing marketisation, so much so that the money supply (as measured by M2) and bank credit had increased in line with an increase in foreign reserves. These developments forced the PBC to raise the reserve requirement ratio to limit expansion of the domestic money supply (Cun and Li, 2017).

Sterilisation is challenging, but it does not mean that managing massive speculative capital inflows and retaining monetary autonomy would be much easier had China adopted a fully flexible change rate, as the experiences of many emerging economies during the QE policy of the advanced economies demonstrated. China’s exchange rate and foreign capital flow policy has many objectives and is constrained by a global financial system dominated by the US and European Union. China’s management of its exchange rate symbolises the pragmatism of its policymakers.

4. MONETARY POLICY AGAINST REGIONAL/GLOBAL CRISES

China’s use of monetary policy is ambitious, pragmatic, and at times aggressive. Preserving the country’s monetary autonomy is the bedrock of its monetary policy and an important reason for China’s capital controls. Chinese policymakers want to have the freedom to influence domestic interest rates to achieve the country’s strategic long-term

economic and security objectives. The impossible M–F trinity of international economics has long been accepted by policymakers; this insight had won the Nobel Prize for Robert Mundell. But according to Helene Rey, because of potentially massive global speculative capital flows of international banks in the US and European Union, a flexible exchange rate is insufficient to guarantee a country an independent monetary policy. The US, especially, is at the core of the global economic system; the rest of the world cannot inoculate themselves with their flexible exchange rates against the unfavourable consequences of US monetary policies. They face a ‘dilemma’ – a country can have an independent monetary policy if and only if its capital account is managed, ‘directly or indirectly’ (Rey, 2013). Thus, when the US responded to the GFC aggressively with QE, emerging economies could not insulate themselves even with flexible exchange rates against excessive expansion of their money supply from massive capital inflows. Rey’s ‘dilemma’ has found support in the research of Blanchard (2016), which examined the policy effectiveness of emerging economies responding to advanced countries’ extreme low-interest-rate policy during the GFC. In Blanchard’s analysis, emerging economies relied chiefly on capital controls in their foreign exchange interventions to shelter their financial systems from the QE policies of advanced economies.

China faced Rey’s dilemma during the GFC along with heavy pressure in the opposite direction on currency depreciation from capital outflows on two other occasions: (a) during the Asian financial crisis (AFC); and (b) now, with lower growth expectations reinforced by China’s trade war with the US. In the M–F model, large capital outflows are moderated by depreciation of the domestic currency, which allows lower domestic interest rates that would have been the case with a higher exchange rate. But Rey’s ‘dilemma’ suggests that in the presence of large speculative capital outflows, the potency of the depreciation of domestic currency in moderating domestic interest rate increases might be seriously compromised, resulting in massive currency depreciation and unacceptably high domestic interest rates.

The IMF’s prescription for affected Asian countries during the AFC was deflation. These countries, with the notable exception of Malaysia, tightened interest rates to stem massive capital outflows. Malaysia’s introduction of capital controls during the AFC offered clear support for Rey’s ‘dilemma’. Malaysia’s introduction of capital controls, which the IMF criticised at that time, saved the country from a severe economic recession. Its close Southeast Asian neighbours, Indonesia and Thailand, did not impose similar capital controls and were badly hit. The IMF uncharacteristically issued a *mea culpa* when it revaluated Malaysia’s capital flow intervention after the crisis.

China had low foreign currency debt; its problem during the AFC was speculation against its currency driven by economic uncertainty in Asia, even though its increasing growth of exports to the US and European Union at that time overcompensated for the decline in its growth of exports to Asia, and its aggregate export growth had not slowed. Its efforts to discourage capital outflows were complicated by the higher interest rates of

Asian countries. It would be difficult for China to continue with its relatively lower domestic interest rates without its then long-standing capital controls.

China's capital controls have the support of many of its economists. They were previously sceptical of the IMF's push for Chinese capital liberalisation, and their scepticism was vindicated by the experience of Malaysia. Sun Guofeng, director of PBC's Finance Institute, and his colleague Li Wenzhe spoke approvingly of Rey's Jackson Hole paper and pointed out that Chinese policymakers' New Macro-Financial Policy Framework – using selective capital controls, partial liberalisation of the exchange rate, and coordination with foreign central banks – was drawn from insights from Rey's research (Sun and Li, 2017).

Five years before the AFC, the increasing prominence given to monetary policy in China's macroeconomic policymaking became clear with the government's decision in 1992 to replace fiscal subsidies with bank loans to state-owned enterprises (SOEs). That policy was both ambitious and pragmatic – ambitious because bank loans in theory must be repaid, and the policy could only be successful if SOEs could either be reformed into profitable enterprises or otherwise sold off or closed. The first proposition is economically challenging, and the latter is politically difficult. Nevertheless, it was a pragmatic decision because subsidies to some comprise a tax on others, and persistent subsidies in the long run are a drag on the economy. Concessional bank loans to SOEs provided short-term assistance, but as they had to be repaid, they provided SOEs with the incentive to perform better under the threat of potential bankruptcies.

The important role assigned to monetary policy in China was demonstrated by the Chinese government's actions to counter the effects of the GFC. Roubini (2009) calculated that the crisis had hit China hard and that China's growth in the fourth quarter of 2008, on a quarter-to-quarter basis, was close to zero. The Chinese government acted fast and hard, implementing an aggressive RMB4 trillion stimulus package. If an economic shock is isolated to one country or a small number of countries, there is a strong argument that, especially for a small economy, monetary policy with currency devaluation is the right policy. As long as domestic costs are contained, demand can be switched towards the domestic economy. But during a global recession, every country's currency cannot be depreciating simultaneously. China did not devalue, but it did not want its currency to appreciate either. There should be a universal global demand expansion instead of each individual country attempting to switch demand – inflation, not deflation, should be the way. China's stimulus in response to the crisis was definitely bold and unconventional in comparison to the relatively meek policy responses of Germany, the UK, and the US, whose initial stimuli were prematurely weakened when conservative politicians in these countries were later able to reframe the financial crisis into a fiscal crisis supposedly caused by profligate government spending, when in fact much of the spending was used to bail out failing private banks (Tooze, 2018).

Bank credit in China increased by 31.7% in 2009, representing two-thirds of the total government's investment stimulus package. Half of the increase in credit went to new medium- and long-term infrastructure investments in the first six months of 2009, resulting in a year-on-year increase of 42% in lending to infrastructure. Government spending, representing one-third of the total stimulus investment package, increased by 24% in the first nine months of 2009 and created a fiscal balance deficit of 3.1% GDP for that year (IMF, 2012; World Bank, 2009).

Central government spending on its own would not have been sufficient to generate the stimulus required; local governments and the non-state sector had to join in as well. The fiscal capacity of local governments was generally weak. As policymakers tightened capital controls, in a bold move, they loosened their control over local governments by allowing them to establish local government financing vehicles (LGFVs) to raise funds to lend to private investors or to invest themselves. Policymakers expected these funds to earn a positive rate of return and therefore the stimulus would not be used to invest in unproductive 'white elephants'. The government's aggressive stimulus policy was clearly bold: it sought to prevent an economic slowdown, but it also wanted the stimulus to be highly productive, an ambitious goal not easily realisable.

5. MACROECONOMIC POLICY AND DEVELOPMENTAL STATE POLICIES

China had the advantage in its early reform years as it shifted slowly away from a planned economy of having a large number of local profitable SOEs so it could avoid having insufficient demand in the economy. If the central authorities could not collect enough tax revenues from localities, local governments did not hesitate to spend the taxes these governments avoided delivering to the centre or non-budgetary revenues of the SOEs they controlled. The state's fiscal capacity has not deteriorated with a growing decentralised and market economy; it has managed to reform its taxing powers accordingly. In 1996 China collected 11% of GDP in taxes, which was below the average for low-income countries. By 2015 China's taxes at 21.8% of GDP were about equal to the OECD average and above the middle-income average of 18.7%. This proportion was also above that of the US at 18.9%. If social contributions of 6.8% of GDP were included, China's 2015 budgetary revenues would be 28.6% of GDP – below the 2012 average of 30 OECD countries but high for a middle-income country (Naughton, 2017). Moreover, as Naughton pointed out, China's current population is still relatively young. As a result of its low level of elderly dependency, China's social security fund has a large and growing surplus.¹

¹ Surplus in 2015 was 1% of GDP.

The Chinese government therefore has the fiscal capacity to pursue its economic and strategic objectives, but it has also increasingly relied on a targeted monetary policy. After establishing itself as the world's major producer of low-technology, low-skilled labour manufacturing products, China launched an ambitious two-pronged programme to be competitive in world markets for high-technology products: first, the country focused (by the standards of advanced countries) on relatively low but higher-knowledge products that it could be competitive in global markets based on its relative factor endowments²; then, it sought to develop more ambitious plans to exploit the production economies of scale and network externalities available to its large domestic market to move into producing cutting-edge technology products to compete with advanced countries. Ironically, the ability to exploit these scale economies and externalities in a large domestic market to be competitive abroad also meant China could be less reliant on international markets.

Protection of the domestic market and direct state subsidies and preferential loans to 'potential winners' are instruments of a SDP. Renewable energy to combat the impacts of climate change is one of China's targeted sectors for preferential treatment, but another sector where its SDP has clearly been a global success is internet commerce and mobile payments. Alipay and WeChat have become global firms in this sector with support from the Chinese government. They dominate the mobile payment business in China, which in 2016 had 502 million mobile payment users, 389 million of whom were urban and 104 million rural (Aveni and Roest, 2017). These companies are also rapidly expanding their business overseas.

The use of state support to promote domestic industry in strategic sectors is nothing new and finds theoretical justification in the theories of strategic trade (Krugman, 1986). More than 20 years ago, US policymakers were alarmed by the rapid progress of European and Japanese high-technology firms in global markets made possible by state support. Tyson's (1992) highly influential book documented the serious challenges to US high-technology industries from these firms and made a series of policy recommendations to US policymakers. China has ambitious plans to fund research and development investments in strategic and basic and applied research to the tune of 2.5% of GDP by 2020 so as to transform China into a world-class, high-technology manufacturer, where advances in science and technology would contribute 60% of economic growth (Li, 2016); these plans have caught the attention of US policymakers and politicians from both major US political parties. Officials in the Trump administration who have labelled China a strategic competitor of the US often refer to China's '2025' project (Wubbeke, Meissner, Zenglein, Ives, and Conrad, 2016), which is the Chinese government's plan to deliver these goals, as a major threat to US security.

China's SDP complements its One Belt, One Road (OBOR) initiative, which has a more strategic security focus. Given China's geographic location, a land route from its

² Developing countries can be competitive in exports that embody a wide range of technology. Bangladesh had similar factor endowments with China, but its exports encompassed lower levels of technology (Rodrik, 2006).

borders to Europe would certainly improve its geostrategic position. As of 2015, China had committed over a trillion US\$ to OBOR (Godement, 2015). Chinese policy banks raise funds from commercial banks and then lend them to mostly major SOEs to invest in OBOR projects (John, 2017). OBOR and '2025' projects receive preferential loans, which carry higher lending costs and leave less credit available to other, especially private investors. These projects do not have to be funded fully in foreign currencies; many items related to such projects will be sourced from China and paid in Renminbi, whereas other items will be paid in foreign currencies and a depreciating Renminbi exchange rate will raise the Renminbi investment cost associated with these projects. Although Chinese policymakers have not said so explicitly, the state-directed '2025' and OBOR initiatives each require foreign exchange, and China's capital controls and restrictions on specific outward investments are consistent with these initiatives.

The absolute level of Chinese outbound acquisitions remains very low. In 2015, for example, Chinese companies spent around 0.9% of GDP on outbound acquisitions. By contrast, European Union companies spent 2%, and US companies spent 1.3%, but they have grown dramatically: from \$49 billion in 2010 to \$227 billion in 2016 (Cogman, Gao, and Leung, 2017). China has drawn important lessons from Japan's overseas investment experience in the 1980s. A report commissioned by Liu He, Director of the Office of the Central Small Leadership Group on Finance and Economics, warned of the risks of allowing Chinese firms to mimic the investment behaviour of Japanese multinationals in the 1980s when the latter paid over-the-top prices, indiscriminately buying up foreign assets like the New York Rockefeller Center with little regard for their potential economic rates of return or strategic value (Zhai, Luo, and Hamlin, 2017). Major Chinese corporations like Anbang, HNA, and Wanda similarly have in recent years gone on a global expansion funded by massive domestic and foreign borrowings. Like the heyday of Japanese corporations' frenzied acquisition of foreign assets in the 1980s, Chinese corporations paid extravagant prices for many of their foreign assets with little concern for their future economic returns.

Chinese policymakers were initially relaxed with the massive outward capital flows. These flows lowered the pressure for Renminbi appreciation and provided an outlet for domestic savings seeking higher rates of return. But policymakers acted when market pressure was no longer on Renminbi appreciation and corporate debt approached levels that could potentially negatively impact the stability of China's financial system. They enacted regulations restricting investments in non-strategic and speculative assets, which the government perceives to be against the national interest. Notable restricted investment areas include real estate, hotels, cinema, entertainment, and sports clubs. Investments in the gambling and sex industries are banned outright. Infrastructure investments supporting OBOR, high technology, and other strategic investments such as those in agriculture and mining have continued to be encouraged (Office of State Council, 2017). They are assumed to continue to offer high social, if not economic, returns. But corporations like Anbang,

HNA, and Wanda, which had huge debt exposures acquiring non-strategic assets, were forced to divest and deleverage.

6. DEBT EXPOSURE FROM POLICY INTERVENTIONS

China's central government's bold GFC stimulus has left a legacy of local government debt, often parked in LGFVs. To obtain a more accurate valuation of government debt in China, the IMF began to include market borrowings of LGFVs in calculations of China's public finance.³ The augmented fiscal balance showed a government budget (combining the central government and local governments) deficit of around 10–12% of GDP, compared with roughly 5–6% of GDP when market borrowings of LGFVs are excluded. Including these borrowings increased total government debt to 56.6% of GDP in 2015 and 62.2% GDP in 2016, compared with 41.1% and 44.3% of GDP when these borrowings are excluded (Table 1). China's total government debt remains low relative to that of many industrial countries and is manageable according to the IMF, but government debt is a serious issue in some localities.

More worrying for the Chinese government is corporate debt and the unproductive use of credit. China's corporate debt at the end of March 2017 was 135% of GDP (Lam, Schipke, Tan, and Tan, 2017). Highly leveraged SOEs, including real estate developers and those in sectors with excess capacity, continued to have access to credit; banks still consider them to be credit worthy because of perceived continued government backing. The general preferential treatment given to SOEs and that specifically given to '2025' and OBOR projects have disadvantaged private firms, especially those of small scale. The latter are often profitable but find it difficult to access credit. SOE debt stood at 72% of GDP and accounted for 60% of the rise in corporate debt between 2008–2016, despite experiencing a decline in their shares of output and employment from over 40% in the late 1990s to 15–20% in 2015 (Lam, Schipke, Tan, and Tan, 2017). One RMB increase in China's GDP now requires four RMB credits (Miner, 2016). In the first quarter of 2016, China had the highest credit-to-GDP gap among 23 economies. Its gap of 30.1 is more than double that of Canada (12.1) and more than seven times that of Japan (4.1). Germany, the US, and the UK all had below-trend credit-to-GDP ratios (Bank for International Settlements, 2016).⁴

³ Calculations exclude government assets and therefore measure only gross debt. Calculations do not include the liabilities of SOEs and other state entities. See Zhang and Barnett (2014) for a more detailed explanation.

⁴ Defined as the difference between the credit-to-GDP ratio and its long-term trend (Bank for International Settlements, 2016).

Table 11.1. Government fiscal balance and debt

	2015 Percent of GDP	2016 (estimated) Percent of GDP
General government fiscal balance	-4.6	-5.7
Augmented fiscal balance	-10.2	-12.4
Central government debt	15.0	16.0
Explicit local government debt	38.8	41.9
General government augmented debt	56.6	62.2
General government debt	41.1	44.3

Source: IMF (2017).

According to one estimate, China's total debt is about 240% of GDP. Its debt is comparable to those of advanced economies like Japan and the US but much higher than those of emerging economies (Miner, 2016). Clearly, much credit in China has not been used productively, but it is difficult to evaluate how much preferential credit allocated to SDP and OBOR projects is wasted. Preferential loans and other forms of government support are allocated for many reasons other than SDP and OBOR purposes. For example, many SOEs that are uneconomic are kept solvent with government support for social stability reasons. Nevertheless, the government has devoted great effort to persuading high-debt firms to deleverage and relies on capital controls to prevent interest rates from rising and the Renminbi from depreciating too much. Rising interest rates make deleveraging more difficult, and excessive currency depreciation increases the Renminbi costs of the government's SDP and OBOR projects.

Shadow banking, which was pushed by the GFC, has injected much flexibility into China's otherwise highly centralised and slowly liberalising financial system. It is able to channel savings into underserved and potentially riskier but more profitable sectors of the real economy. It provides private firms access to credit they could not obtain easily from formal banking and offers investors a range of wealth management products and trust products that offer higher rates of returns than they could otherwise receive from conventional saving instruments. However, regulation in the sector is relatively weak despite growing linkages between it and the formal banking sector. The reason is neither regulatory capture nor regulatory starvation; financial regulators are only lately recognising the rapid expansion of the sector and the risk it can pose to China's financial stability. They have now introduced measures, such as controlling the expansion of riskier parts of the system, to ensure more accurate pricing of risk in the sector while limiting the growth of wealth management products.

CONCLUSION

China's macroeconomic policy has been ambitious and at times bold, but pragmatic. It has also been flexible and does not always follow the conventional approach favoured by international institutions and many Western-trained economists. Its capital controls, criticised by the IMF and many economists until the IMF re-evaluated its approach to financial crises in light of lessons learnt from the AFC, is a good example of China's pragmatic approach to policymaking. So too is its nominal exchange rate policy that recognises it is the real exchange rate that matters, and rising wages in a tight labour market with a fixed exchange rate appreciate the real exchange rate. The nominal rate does not need to appreciate for the real exchange rate to appreciate. Until well-developed forward foreign currency markets are available to hedge currency risks, it is sound policy for a country to peg its currency to the currency of its major trading partner, especially when it has flexible labour markets.

The focus of conventional macroeconomic policy is on the short run and the demand side of the economy, despite the policy having a significant influence on long-run economic growth. Paul Krugman famously said that only productivity matters in the long run, but his words do not seem to have inspired many questions about investment allocation decisions when deciding macroeconomic policy. The market alone, it is often assumed, would make the right investment decisions given appropriate macro policy settings. By contrast, both the supply and demand sides of the real economy are the focus of China's macroeconomic policy. The country's macroeconomic policy is interconnected with its OBOR and SDP, which takes into account China's ability to use its large domestic market to exploit production economies of scale and network externalities. China's capital controls, besides being used for maintaining general economic stability, are an important tool in its OBOR and SDP. Capital controls allocate scarce capital and foreign exchange away from what policymakers perceive to be non-strategic projects or projects of low profitability to what they consider to be strategic projects with high potential social rates of return.

China's policymakers have been bold during the GFC, going in hard with a massive and sustained stimulus that dwarfed that of advanced countries, whose policymakers seemed divided and overly cautious. These countries' stimuli were ended prematurely and replaced in some cases with austerity, with conservative politicians reframing the financial crisis as one due to undisciplined and overgenerous government spending. The legacy for China from the GFC and continuing SDP is unfortunately a debt problem with the potential to threaten the country's financial system.

The GFC has left many advanced countries with a high-debt problem; China is not an anomaly. No policy is without its downsides; it is challenging to fine-tune policy when a

country has multiple objectives. Waste is difficult to avoid when the policy imperative, such as during the GFC, is to avoid a severe economic downturn. Uncertainties in economic returns from projects in such a policy environment are often amplified. Similarly, there are uncertainties around SDP and OBOR projects. There is no perfect information or foresight, and any potential returns from SDP and OBOR projects are only realised well into the future. SOEs are behind many SDP and OBOR projects, and their debts are a part of China's debt problem. In addition, despite widely publicised enterprise and social welfare reforms, SOEs in some localities – especially if they are prominent employers – are expected to continue to carry a heavy share of the local government's burden of social welfare responsibilities that theoretically should no longer be theirs.

China's policymakers have been reforming the country's policymaking institutions since its decision to transform its economy from one that is planned to one that is market-based. Their conduct of macroeconomic policy has been more of an art, applying selective economic principles and learning by doing as new problems emerge, than an exact science. So far, one could conclude that Chinese policymakers – with their ambitious and sometimes bold but pragmatic approach – have been generally successful in conducting macroeconomic policy to meet their country's economic and strategic objectives. Whether they can continue to do so, relying on a mixture of rules and discretion, is an empirical question that can only be answered in the future.

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