CHINESE MACROECONOMIC MANAGEMENT THROUGH THE CRISIS AND BEYOND

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ABSTRACT

As in all the other major economies, China's macroeconomic policy framework was put to the test during the global financial crisis. China applied one of the world's largest stimulus packages. The package provided a very rapid boost to activity in the Chinese economy, with empirical evidence suggesting the package added around 2-3 per cent to the level of GDP in both 2009 and 2010. The stimulus package was clearly a success for China, but there are challenges in unwinding the effects of the stimulus and addressing structural imbalances. Pressures to rebalance Chinese growth and integrate China further into global capital markets will necessitate changes in China's macroeconomic policy framework.

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1. INTRODUCTION

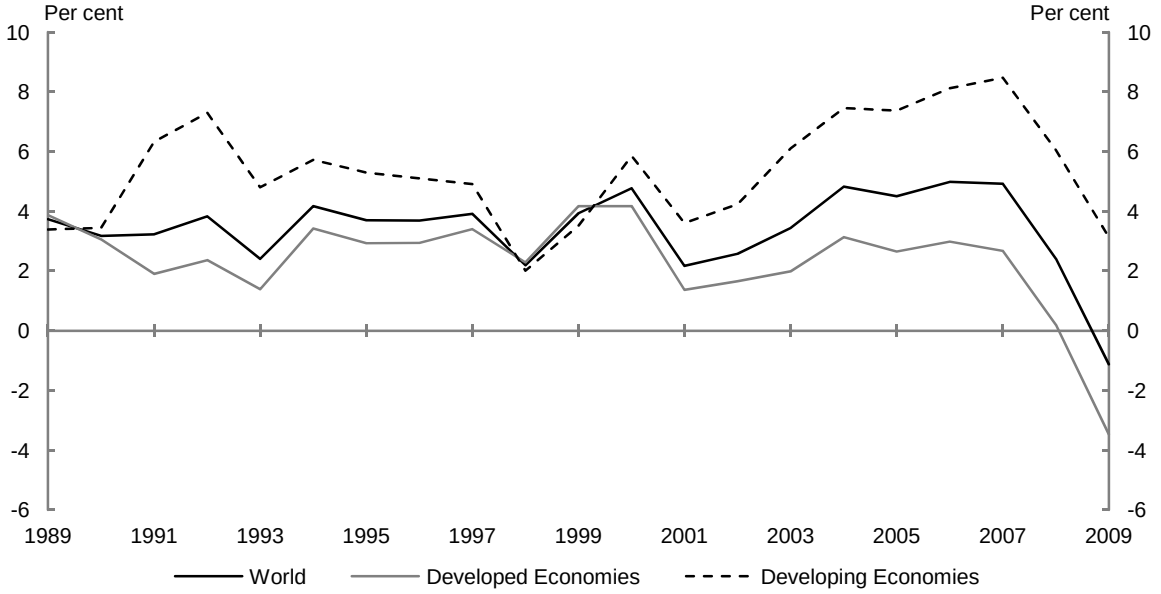
During the global financial crisis beginning in the latter half of 2008, macroeconomic stabilisation policies in most countries were put to the test. China was no exception. The stimulus applied in China was one of the largest, and arguably one of the more successful, allowing Chinese growth to continue at an impressive pace notwithstanding the substantial drag on the economy from the rest of the world.

This period provides something of a case study in the operation of macroeconomic policy in China, with most of the levers of policy being applied to maintain growth. Empirical evidence suggests that the stimulus added around 2-3 per cent to the level of GDP in both 2009 and 2010. As the world emerges from the crisis, the challenge for China is to unwind the stimulus and refocus on policies that will improve the structure of the economy in the longer term.

2. CHINA'S CYCLE VS. THE REST OF THE WORLD

During the global financial crisis, the world economy went through its worst recession since the Great Depression in the 1930s. No economy was immune to the crisis. Global GDP contracted by 1.1 per cent in 2009—the first annual contraction in six decades. Advanced economies collectively contracted by 3.3 per cent in 2009, while growth in the emerging economies slowed to 3.1 per cent (see Chart 1).

Chart 1: Real GDP growth for the world, and advanced and emerging countries



Source: IMF 1989-2009.

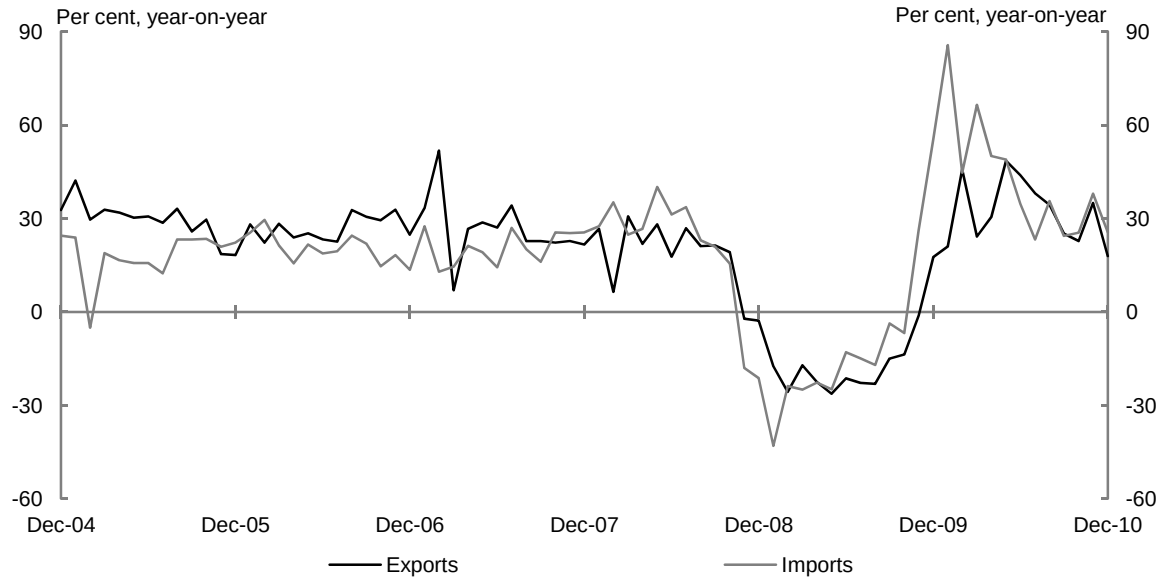
China entered the global financial crisis with a booming economy and macroeconomic policy was set to slow activity. At the Central Government's Economic Work Conference at the end of 2007, the Chinese Government was focusing on fighting inflation and preventing the economy from overheating. With China's economic cycle moving out of step with that of the USA, there was a growing debate about how far the Chinese economy had decoupled from the USA economy.

Arguments about decoupling were based on the growing trade integration in Asia, centred on China, and the large potential within the Chinese economy for domestically-driven demand. According to this argument, China and its regional trading partners increasingly represented an independent engine of growth for the world economy, less dependent on demand from the USA and the major economies of Europe. Moreover, notwithstanding the People's Bank of China's (PBoC) substantial holdings of US treasuries, China's financial sector had limited exposure to that of the USA. The counter argument was

that China's growth continued to be highly dependent on final demand for exports in the advanced economies, suggesting a severe downturn in the USA and other advanced economies would have to impact the Chinese economy.

While China's relatively closed capital markets protected it from the financial fallout from the crisis, trade proved to be a key channel for transmitting the financial crisis to the Chinese economy. The growth rate of exports and imports declined in November 2008 and continued to be negative until November 2009 (see Chart 2). The USA, the EU, and Japan account for about half of China's exports. China's exports to these regions fell substantially as demand in these economies contracted.

Chart 2: China's imports and exports



Source: CEIC Data 1990-2011.

As trade declined, China's growth rate, which had averaged more than 10 per cent per year in the period prior to the crisis, declined to 6.8 per cent over the year to the fourth quarter of 2008, the lowest annual growth rate since 2003. With the deepening of the global recession, the growth rate fell further to 6.1 per cent over the year to the first quarter of 2009.

As the effects of the global financial crisis began to bite, China was forced to shift its policy focus towards maintaining economic growth. Coming from a position of strength, China had more policy ammunition than most to offset the effects of a slowing global economy.

3. OPERATION OF MACROECONOMIC POLICY IN CHINA

China had a number of tools available for addressing the slowing effects of the global financial crisis. As these tools differ from those applied in many Western countries, it is instructive to consider the nature of these tools before discussing the specific measures adopted.

3.1 Fiscal policy

Fundamentally, fiscal policy works in the same way in China as it does in other countries: governments spend money to generate economic activity. However, China's centrally planned economy, its backlog of development and infrastructure needs, and large fiscal resources, meant that it was well placed to quickly direct large amounts of spending into the economy.

Another important feature of fiscal policy in China is that there is a particularly large vertical fiscal imbalance. That is, there is a large gap between the expenditure and revenue positions of the Central and local levels

of government. The Central Government raises about 52 per cent of revenue but accounts for only around 20 per cent of expenditure. This gives the Central Government significant control over China's fiscal resources, but it must coordinate spending with multiple layers of local government, including provincial, prefecture, county, and township governments.

Complicating the transmission of fiscal policy in China is the lack of a robust system of intergovernmental transfers to the various levels of local government. Transferring money from the Central Government to the local governments that do the bulk of the spending is potentially a limiting factor when stimulus needs to be applied quickly, although in practice the Central Government was able to mobilise investment quickly by using off-budget financing vehicles.

3.2 Monetary policy

High levels of regulation of the financial sector, and a relatively inflexible exchange rate, mean that monetary policy operates differently in China compared with western countries. The banking sector is dominated by a handful of state-owned banks. Interest rates are set by the Central Government at levels that provide a comfortable margin between deposit and lending rates. Banks are constrained in how much they can lend at these pre-determined margins by Central Government policy on the quantity of lending.

Lending guidance has been a key vehicle for controlling liquidity in the Chinese economy. The PBoC usually sets an annual overall lending quota for the banking sector (although an annual quota has not been announced

for 2011). The banking regulator, the China Banking Regulatory Commission (CBRC), disaggregates this quota, assigning lending quotas to each of the major banks and an aggregated quota for the smaller financial institutions. The CBRC then monitors banks to ensure they meet their lending quotas.

A further policy tool is the Reserve Requirement Ratio (RRR), defined as the amount of bank reserves over the sum of deposits and notes. The RRR reduces the amount of capital on the banks' balance sheets available for lending. In practice, it has impacted differently on the large and small banks. The larger banks have continued to hold reserves in excess of the RRR, suggesting that for them lending targets have been the binding constraint. As the smaller banks have smaller deposit bases, and often need to raise funds through the inter-bank market, they are likely to find the RRR a more binding constraint. In recognition of this, a lower RRR is currently applied to the smaller banks.

When interest rates are low and the supply of credit is constrained, small movements in rates may have little effect on the demand for credit. It appears that this has been the case in China in recent years. This is an important difference from most Western countries, which rely on movements in interest rates to regulate credit from the demand side.

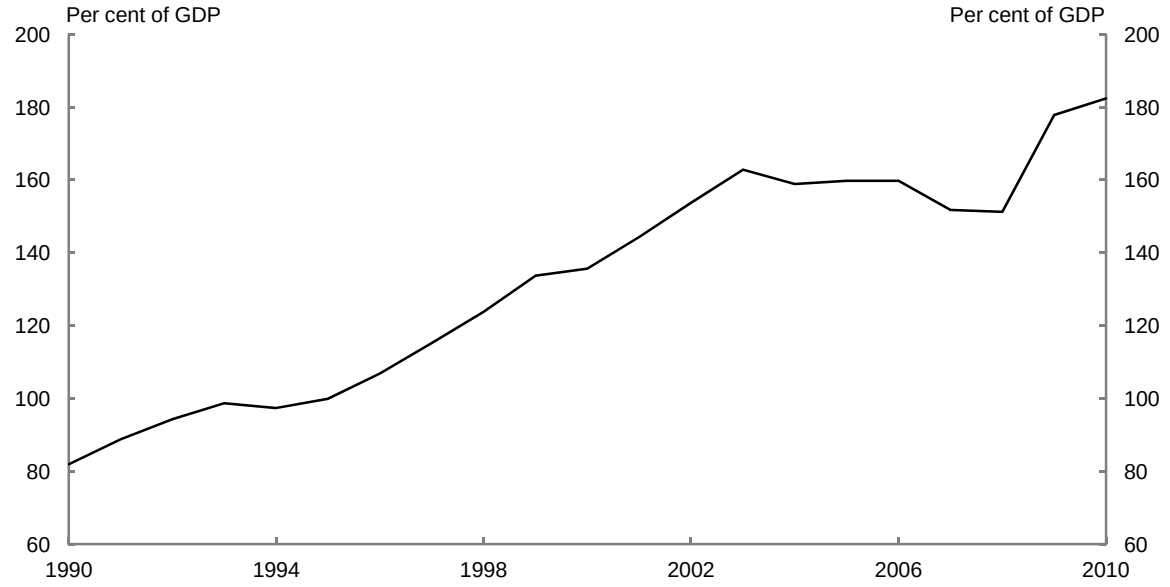
As the Chinese Government manages its exchange rate, the amount of credit in the economy is also influenced by capital inflows and efforts by the central bank to sterilise these inflows. China's foreign exchange reserves rose to US$2.85 trillion at the end of 2010. The PBoC seeks to sterilise these inflows through bond issuance and changes to the RRR. Prior to the crisis, the PBoC sterilised a large proportion of foreign exchange inflows. With the onset of the

crisis, the central bank reduced the sterilisation of foreign exchange inflows to ensure there was ample liquidity in the banking system.

China entered the crisis with a large amount of cash in its economy. The money supply (M2) as a percentage of GDP rose from 82 per cent in 1990 to around 150 per cent at the onset of the crisis (see Chart 3). This money supply to GDP ratio is significantly greater than in most other developing and developed countries, reflecting the under-development of China's capital markets. China's very high ratio is related to the dominance of the banks in the financial system — over half of private wealth exists as bank deposits. Also, M2 is boosted by high corporate deposits given the absence of a large bond market, difficulties for private corporations in obtaining bank credit, and the lack of alternative investment opportunities for excess corporate funds.

While the level of M2 is a function of China's stage of capital market development, the growth in M2 has been significant and has created a significant amount of new liquidity in the system. A significant portion of the resulting excess cash in the Chinese economy is held within the banks as reserves. As at December 2010, banks maintained about RMB 14 trillion of cash reserves, around one-third of GDP.

Chart 3: China's money supply (M2)



Source: CEIC Data 1990-2011.

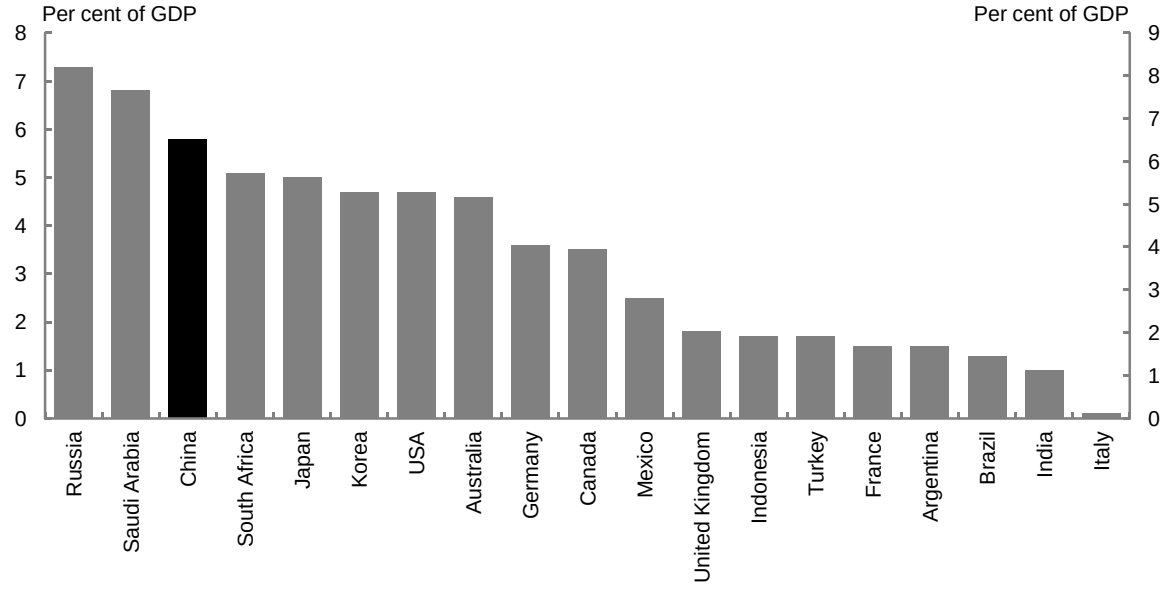
4. CHINA'S STIMULUS PACKAGE

The global financial crisis came at a time when China's economy had been growing strongly and the Central Government had been seeking to moderate activity to contain inflationary pressures. Fiscal policy settings were prudent, with a modest fiscal deficit and relatively low levels of Central Government debt. Credit conditions had been tightened through lending targets, higher RRRs, and higher interest rates. With the banks constrained in their lending, there was the potential to release a significant amount of cash reserves into the system. China was therefore well placed to switch the levers to stimulus mode when global conditions deteriorated.

The RMB 4 trillion stimulus package was announced in November 2008. The amount of new spending was somewhat below this figure, making it difficult to determine the actual level of the 'stimulus' in China's stimulus package. For example, the figure includes infrastructure projects that would have proceeded in any case, most notably the RMB 1 trillion Sichuan earthquake

reconstruction. The IMF estimated that the total size of new stimulatory measures was about RMB 2 trillion, equating to 3.1 per cent of GDP in 2009 and 2.7 per cent in 2010. On these IMF estimates, China's stimulus was the third largest package implemented by any country (see Chart 4).

Chart 4: Combined 2009 and 2010 stimulus, by country



Source: IMF 2010.

The package was predominantly investment-focussed, in contrast to the packages announced in many advanced economies, which had significant upfront consumption elements. In Western countries, the first response was to put money into the pockets of consumers to get stimulus spending into the economy quickly. In many cases, investment spending came later, given implementation lags. In China's centrally planned, investment-orientated economy, investment was seen as the most direct and effective method of stimulating activity. Consumption-based measures played a relatively minor role in China's stimulus package, although there were some tax-related policy measures implemented and direct consumption subsidies introduced.

Table 1: Breakdown of the RMB 4 trillion stimulus package (RMB)

Infrastructure	2.87
General Infrastructure	1.50
Reconstruction of Sichuan earthquake area	1.00
Rural area infrastructure	0.37
Technology & Environment	0.58
Technology & structural adjustment	0.37
Energy savings & emission reductions	0.21
Social Measures	0.55
Construction & renovation cheap houses	0.40
Social security & health	0.15

Source: NDRC 2009.

Infrastructure made up the majority (72 per cent) of the stimulus package (see Table 1). The main components of the infrastructure section are the RMB 1 trillion of re-construction of the Sichuan earthquake area, and an estimated RMB 1 trillion spent on developing high-speed railways. Most of the spending occurred through local governments, which were able to quickly mobilise activity on infrastructure projects.

This spending was financed in part through the Central Government budget. The budget deficit was expanded from around ¾ per cent in 2008 to 2¾ per cent in 2009, before narrowing to 1¾ per cent in 2010. This was a relatively modest turnaround in the budget position given the size of the package. The USA, which introduced a smaller package (as a share of its economy), had a turnaround of nearly 7 per cent of GDP in its budget balance (Congressional Budget Office, 2011). In China, most of the spending was financed through the expansion of credit.

The Central Government directly funded around 30 per cent of the stimulus package. The remainder of the fiscal stimulus was funded through borrowing by local governments. While local governments are prevented by

Central Government legislation from borrowing directly, they were able to set up local government financing vehicles (LGFVs). LGFVs are local government-owned entities that are typically provided with land as an asset. Using the land as collateral, LGFVs obtain loans from banks to finance infrastructure projects. This mechanism is estimated to have funded the majority of the RMB 2.8 trillion local government part of the stimulus package.

With around two-thirds of the stimulus package funded through borrowing, expansion of credit was a critical element of the stimulus package. The most important means of expanding credit was the increase in new lending targets, from RMB 4.7 trillion in 2008 to RMB 10 trillion in 2009 (the actual amount of loans totalled RMB 9.6 trillion in 2009). RRRs were also significantly lowered, from 17.5 per cent to 13.5 per cent for smaller banks and 15.5 per cent for larger banks. The lending interest rate was reduced from 7.47 per cent to 5.31 per cent. The deposit rate was reduced from 4.14 per cent to 2.25 per cent.

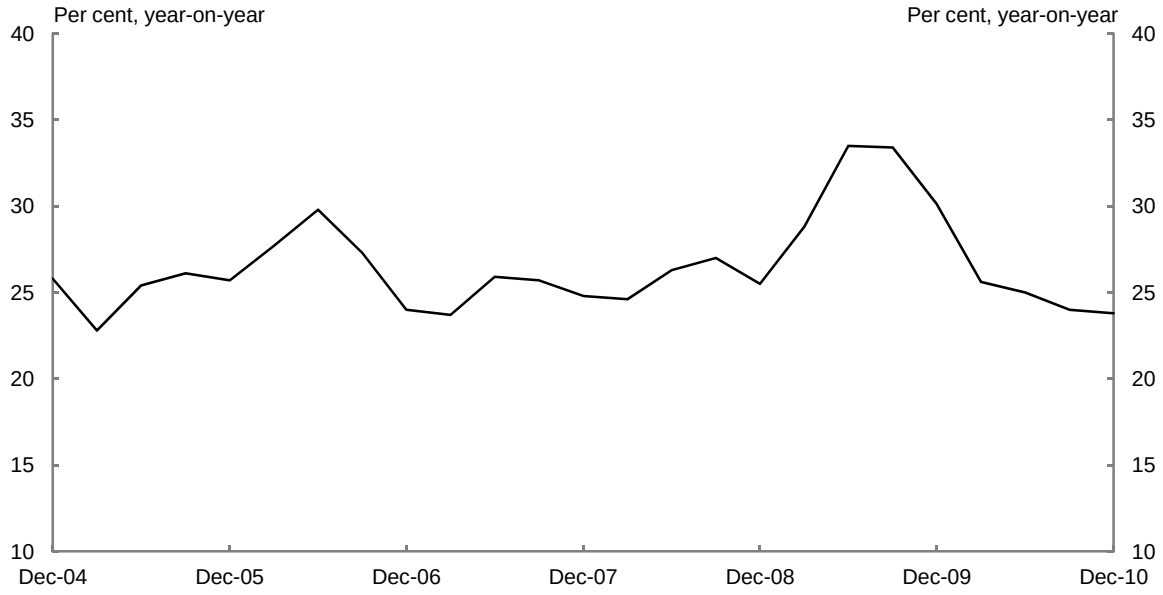
The stimulus strategy revolved around turning on the credit tap to access the large amounts of cash reserves sitting within the banking system. Providing local governments a means of accessing this credit allowed the stimulus to be directed towards infrastructure projects considered worthwhile by the Central Government. It allowed the Central Government to do this in a way that did not blow out the headline budget deficit (which stayed within the Ministry of Finance's 3 per cent target), and reduced the need to physically transfer funds to the various other layers of government. The monetary and fiscal elements of the package were therefore well integrated and crafted to meet a range of policy objectives.

5. EFFECTIVENESS OF THE STIMULUS

The stimulus package played a key role in supporting the Chinese economy in the wake of the global financial crisis. As a result of the stimulus, China was one of the first countries to emerge from the crisis, with China's GDP growth starting to recover during the second and the third quarters of 2009.

The stimulus created a surge in fixed asset investment (see Chart 5). The growth rate of investment in fixed assets accelerated rapidly, exceeding 30 per cent (through the year) in the latter half of 2009. The speed with which the Chinese Government was able to stimulate investment would have been helped by the existence of a large pipeline of viable projects. Streamlined decision-making and planning processes in China, and government actions to ensure financing was readily available, also helped the process of getting investment into the economy quickly.

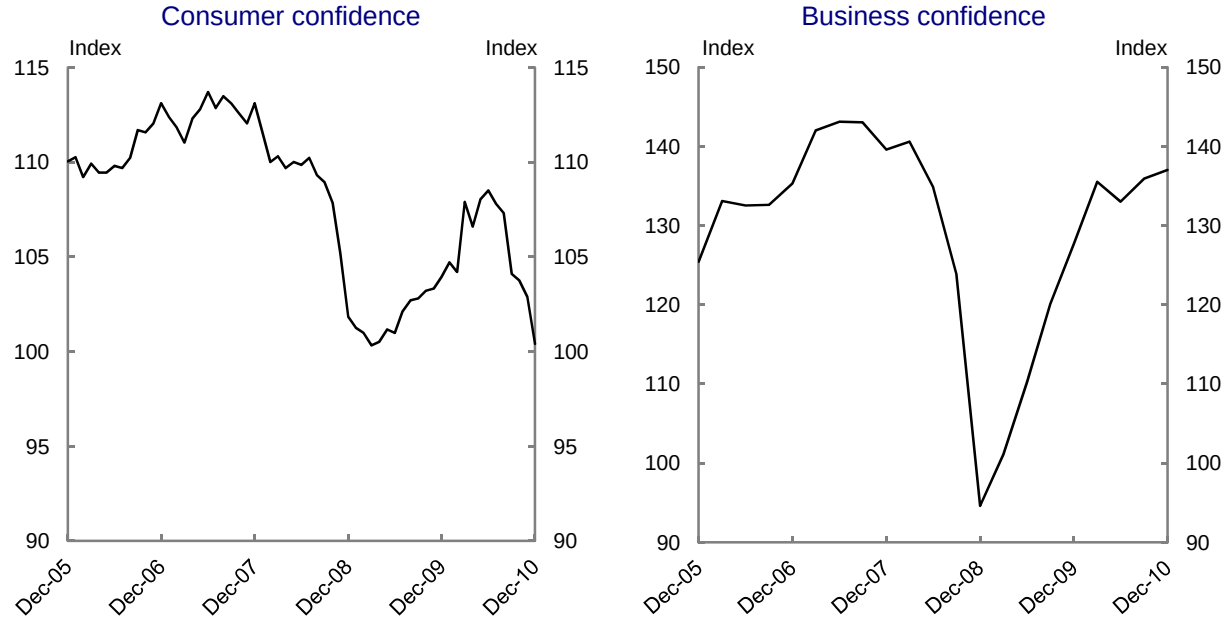
Chart 5: China's fixed asset investment



Source: CEIC Data 1990-2011.

Consumer and business confidence were boosted by the fiscal stimulus. Consumer confidence fell by 7 per cent in the six months following the onset of the financial crisis. From March 2009, consumer confidence slowly but steadily rebounded. Business confidence, measured using the entrepreneur confidence index, fell by around 24 per cent between the third quarter and fourth quarters of 2008[1]. However, by the third quarter of 2009, business confidence had returned to be above the pre-crisis level (see Chart 6).

Chart 6: China's consumer and business confidence



Source: CEIC Data 1990-2011.

Empirical studies suggest that China's stimulus package added around 2-3 per cent to the level of GDP in both 2009 and 2010 (Table 2). This expansion was the direct effect of the package; expansion of credit to the private sector would have added further to GDP.

1 The entrepreneur confidence index measures the understanding, views and projections of entrepreneurs.

Countries that are key exporters of commodity and capital goods to China, such as Japan, South Korea, Australia, and Brazil, were in a good position to benefit from the boost to China's domestic demand as a result of the package, although the effects were likely small. Based on an estimated import leakage from the package of about 30 per cent, or US$94 billion, the effect on the exports of Japan and South Korea would have been 2-3 per cent of their exports and 1-2 per cent for Australia and Brazil. Dynamic computable general equilibrium (DCGE) modelling work by Cova et. al. (2010) also suggests that flow-on effects to the rest of the world were modest.

Table 2: Empirical analyses of the effects of China's stimulus

A few studies have attempted to quantify the impact of China's fiscal stimulus. He et. al. (2009) analysed the effects of China's stimulus package on output and employment, based on two independent models, an input-output (I-O) model and the Global Integrated Monetary and Fiscal (GIMF) model calibrated to China.

The I-O analysis considers the structure of the Chinese economy and includes 17 production sectors. The model suggests that the announced fiscal spending of RMB 2 trillion in 2009 would lead to a direct increase in output of RMB 1.7 trillion, implying a fiscal multiplier of around 0.84 in the short run, and could potentially generate 18-20 million new jobs in non-farming sectors. However, the I-O approach has its limitations since it is a static analysis and does not take into account the second-round effects on components of final demand.

The GIMF is a dynamic, stochastic general equilibrium multi-country model with overlapping generations, which integrates domestic supply, demand, trade, and international asset markets in a single theoretical structure, thereby allowing transmission mechanisms to be fully articulated. The model in the study consists of eight regions. Simulations using the GIMF model showed that the fiscal multiplier on output ranges between 0.80 and 0.84 in the short run, and it is about 1.1 in the medium run as government fiscal spending leads to higher household consumption and corporate investment, which will take time to fully materialise.

Diao et. al. (2010) use a DCGE model to determine the impact of the recent global recession and the Chinese stimulus package on China's economic growth. The study finds that China's economy could have been more negatively affected by the global recession than actually occurred in late 2008 and early 2009 without the introduction of the stimulus package. The stimulus package not only ensured China avoided a long-term decline in economic growth, it also provided China with a different engine for future growth through an enhanced domestic market. According to this model, the cumulative gains of the stimulus package measured by the increase in China's GDP will be about RMB 76 trillion over 2009-2015. The authors noted that this number is about three times China's 2007 GDP but it may still underestimate the expected long-run impact of public investment on growth through further stimulation of structural change and productivity increase, which is not considered in the analysis.

Another study that used a DCGE model to evaluate the macroeconomic impact of the fiscal stimulus is Cova et. al. (2010). The model is calibrated to China, the USA, Japan, the euro area, and the rest of the world. The analysis indicated that, absent fiscal stimulus, China's GDP would be 2.6 percentage points and 0.6 percentage points lower in 2009 and 2010, respectively. Compared to the baseline scenario, the fiscal stimulus package would induce an increase in China's imports equal to roughly 3.0 per cent and exports would decline by slightly more than 1.0 per cent on average over 2009 and 2010. The increase in China's imports is driven by higher aggregate demand. Exports from Japan and the rest of the world would benefit from the stimulus to a lesser extent than those of the USA and the euro area, given that China's trade composition is mainly biased towards the former two regions. The increase in exports for China's trading partners equals, on average, 0.6 per cent for Japan and the rest of the world, while it only amounts to 0.15 per cent for the USA and the euro area. The overall impact of China's stimulus on GDP in the rest of the world is limited.

6. UNWINDING THE STIMULUS

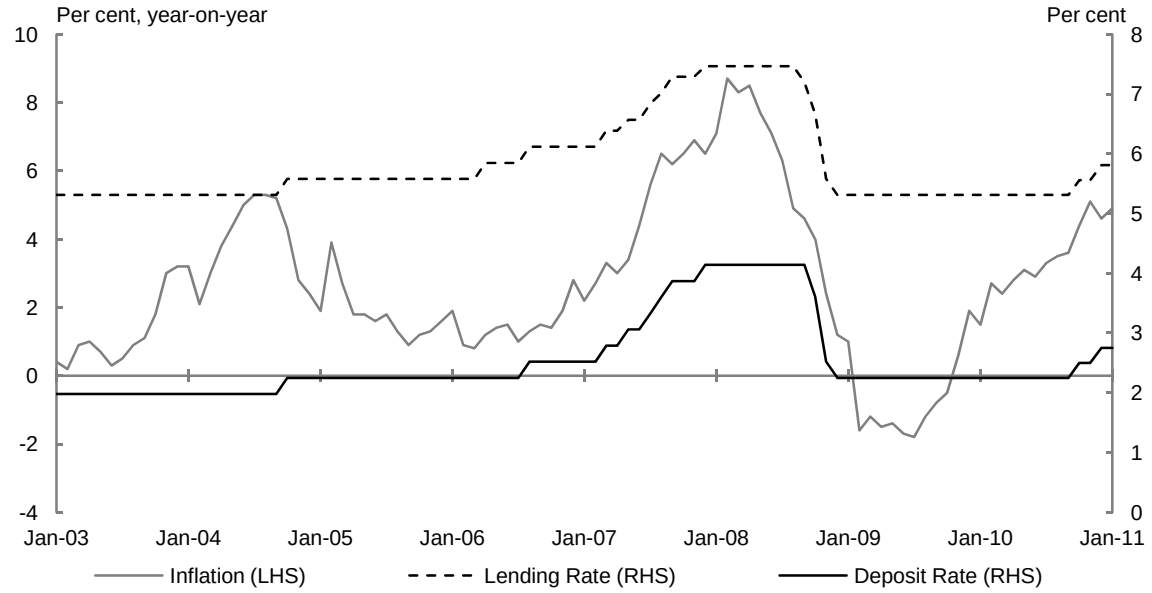
The stimulus supported growth through the crisis; but, as China unwinds the 2-3 per cent boost to GDP from the package, the challenge is how to maintain growth. Continuing to pull on the levers that supported growth over 2009 and 2010 would likely exacerbate growing imbalances in the economy.

While pumping liquidity into the economy supported China through the crisis, there are increasing signs of excess liquidity. Property prices have reached levels well beyond the reach of average income earners in some of China's major cities, such as Beijing and Shanghai, leading to concerns of a property price bubble. Speculative investment has appeared in areas as obscure as tea and garlic as investors seek returns through capital gains across the economy.

Consumer price inflation exceeded the 3.0 per cent target for 2010, reaching 4.6 per cent year-on-year in December 2010. It is clear that the Central Government will need to quell the tide of excess liquidity in the economy if it wants to avoid excessively high inflation and over-inflated asset prices. In response to these pressures, monetary policy has already been tightened to unwind the amount of stimulus. RRRs have been raised to record levels and interest rates are being raised gradually.

The Central Government began to raise interest rates in late 2010. However, interest rates for deposits remain below the rate of inflation—a situation that has existed for a number of years (see Chart 7). While real deposit rates remain negative, there will be incentives to invest in assets in pursuit of capital gains, particularly in the property sector.

Chart 7: Inflation, lending, and deposit rates



Source: CEIC Data 1990-2011.

Exchange rate policy will also be important. China's real effective exchange rate is adjusting, but much of the adjustment continues to be through domestic prices and wages. The Central Government is carefully controlling the pace at which the nominal exchange rate appreciates. The cost of a gradual nominal exchange rate adjustment is that China will continue to accumulate foreign reserves, making it even more difficult to control liquidity, fuelling inflation pressures. It also makes China susceptible to speculative capital flows attracted by expected appreciation of the RMB. To help combat inflation, the Central Government may need to reassess the speed at which it allows the nominal exchange rate to adjust.

In respect of fiscal policy, the Central Government continues to have fiscal room to support growth, although there may be limits on the ability of local governments to continue to fund investment. Local governments must continue to pursue property sales as a source of revenue growth or increase debt if they are to maintain momentum in infrastructure investment. Relying

on property sales has its limits and could add fuel to the overheating property sector. Excessive reliance on debt leads to concerns about the possibility of non-performing loans (NPLs). The CBRC has indicated that RMB 1.76 trillion out of RMB 7.66 trillion of the local government financing vehicles loans in June 2010 were at risk of default (www.chinanews.com, 2010).

NPLs are likely to increase, with most outstanding debts ultimately falling upon the Central Government. This is because the NPLs will largely belong to government banks offering loans to LGFVs. With the Chinese Government working under a single hierarchy, any debts in the government-owned banks and local governments will ultimately be passed to the Central Government.

While the Central Government can monitor most large debts by its agencies, some debts are harder to keep under surveillance. Major categories of government debt that can be monitored through government sources or bond markets include Central Government debt (17 per cent of GDP), local government financing vehicle debt (19 per cent of GDP), policy bank debt (13 per cent of GDP), and the Ministry of Railways debt (1.3 per cent of GDP). These debts sum to about 50 per cent of GDP. While other smaller debts are expected to exist within the Chinese Government hierarchy, it is difficult to determine their size. That said, these debts are not believed to be large, and overall total government debt is estimated to be in the range of 60-70 per cent of GDP.

While Central Government debt is small, the growth in contingent liabilities from other forms of public debt could ultimately become a constraint. This does not appear to be the case at present and fiscal policy will continue to support activity in the short term. During the Central Government's Economic

Work Conference in December 2010, the Chinese leadership stated that their priority for 2011 is to 'actively and properly handle the relations between maintaining steady and relatively fast economic growth, economic restructuring and managing inflation expectations'. The Central Government said that this priority will be achieved in 2011 through implementing prudent monetary policy and pro-active fiscal policy.

7. WHERE TO FROM HERE?

The current economic framework served China well through the global financial crisis, although this episode is yet to reach its conclusion. We can see imbalances emerging in the Chinese economy reflecting, among other things, low interest rates, a low exchange rate, and a low wage share. There will be policy challenges in ensuring these imbalances do not derail growth.

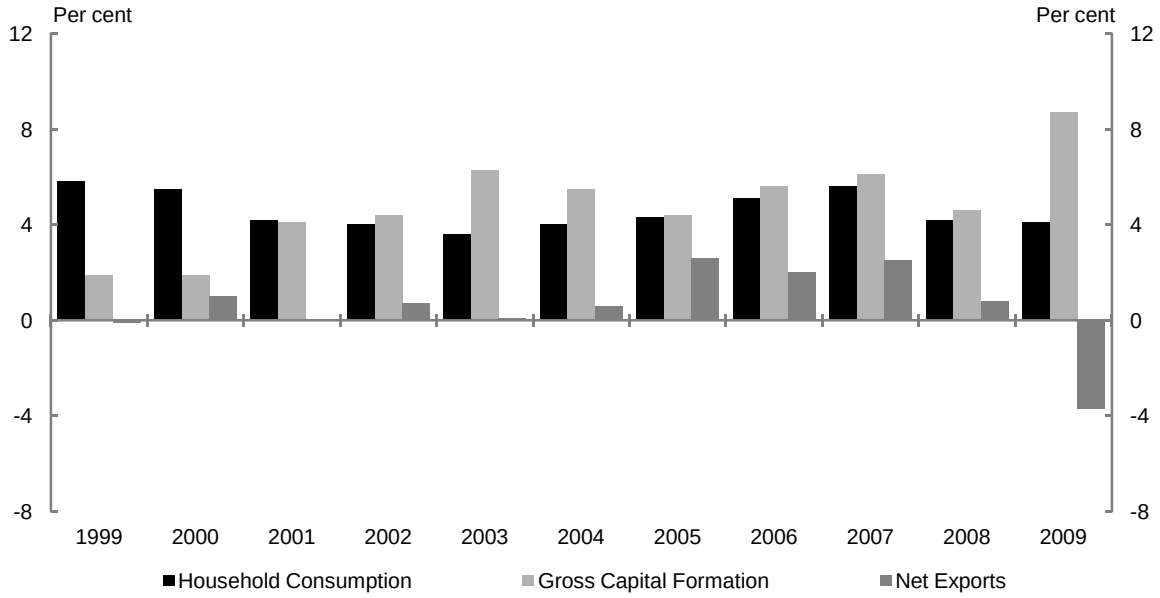
There are three broad drivers of growth in the Chinese economy: consumption, investment, and net exports. The Central Government is committed to raising the consumption share of the economy. However, consumption is a relatively stable contributor to economic growth, and it will take many years for policy to raise the consumption share substantially. It will require reforms to raise household incomes, including social security and health reforms, and policies aimed at raising the wage and capital incomes of households. It will also require a reduction in the savings rate at a time when the aging of the population will raise the dependency ratio and increase incentives for households to save.

Net exports declined significantly as a contributor to growth during the global financial crisis (see Chart 8). In the short term, relative weakness in the major

advanced economies will mean Chinese export growth will likely remain subdued. In the longer term, China recognises the need for domestic demand, rather than net exports, to make a larger contribution to growth if growth is to be sustainable.

Investment supported growth during the global financial crisis and will continue to be an important driver of growth in the short term. China faces a difficult balancing act as public investment seeks to continue to support growth while credit is being reined in to control inflation, with a dampening effect on private investment.

Chart 8: Consumption, investment, and net exports contributions GDP



Source: CEIC Data 1990-2011.

It appears likely that China will continue to have significant fiscal room to support the economy if necessary, although local government liabilities will be an area to watch. Local government NPLs could turn out to be large but should be manageable. Longer term, however, local governments will need a firmer financing basis that is less dependent on property sales and debt. Fiscal

reform will need to address the revenue base of local governments and the system of Central-local government transfers.

As Chinese capital markets mature, there will be implications for the operation of monetary policy. China has ambitions for greater integration with global capital markets, but this will require the introduction of more market-based mechanisms for managing the financial sector. Interest rate liberalisation, relaxation of capital controls, and further exchange rate flexibility are all necessary steps towards greater capital market integration.

In a more liberalised financial sector, monetary policy based on attempts to regulate the supply of credit is less likely to be successful. In fact, the PBoC already has difficulty managing credit as banks resort to off-balance sheet financing vehicles to circumvent restrictions on bank credit. The use of market-based mechanisms, in particular movements in interest rates, will become more important tools of monetary policy in this environment.

The Chinese Government recognises the significant economic challenges faced by the Chinese economy and these are acknowledged in the 12th Five Year Plan. The Plan makes broad commitments to restructure the Chinese economy, with a continued focus on administrative measures. While there is some movement towards market-based policy solutions, such as expanding the use of RMB in cross-border trade and investment, with a stated aim of ultimately making the RMB convertible, reform in this direction remains gradual.

8. CONCLUSION

China has, so far, successfully steered its economy through the most difficult global economic conditions since the Great Depression of the 1930s. On this count, China's macroeconomic policies have been a resounding success.

However, China faces significant challenges in the medium term to address growing imbalances in its economy, with growing consumer and asset price inflation the main symptoms of these imbalances. China's macroeconomic levers will need to evolve to ensure the current growth trajectory is sustainable. This is recognised by Chinese policy makers. The period of the next five year plan may prove a pivotal one for the Chinese economy.

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