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**CHINA'S ECONOMIC
GROWTH AND
REBALANCING**

By Ettore Dorrucci,
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CONTENTS

ABSTRACT	4
EXECUTIVE SUMMARY	5
INTRODUCTION	8
1 LOOKING AT THE PAST: SUSTAINED GROWTH CUM IMBALANCES	9
1.1 China's system of policy incentives	9
1.2 What did China's growth model deliver?	10
1.3 Defining China's economic imbalances	12
Box 1 Could an appreciation of the renminbi's exchange rate increase the share of employment in the services sector?	14
Box 2 Measuring the impact of financial repression on income distribution in China	17
2 LOOKING AT THE PRESENT: THE IMPLICATIONS OF EXTERNAL AND DOMESTIC IMBALANCES	19
2.1 Tensions on the external front	19
2.1.1 The current account surplus	19
2.1.2 FX reserve accumulation and its costs	20
2.1.3 Exchange rate misalignment	24
2.1.4 Capital controls and the internationalisation of the renminbi	26
Box 3 Real effective exchange rate appreciation: Adjustment via the nominal exchange rate or domestic inflation? Lessons for China from the past experience of Japan vs Germany	28
2.2 Tensions on the domestic front	27
2.2.1 Monetary policy inefficiencies	27
2.2.2 Asset and housing price boom-bust cycles	30
Box 4 Are property prices overvalued in China? Evidence from a cross-regional model	32
2.2.3 The link between fiscal sustainability and financial stability	33
Box 5 Can China outgrow its non-performing loans?	35
3 LOOKING TO THE FUTURE: ARE THE LONG-TERM FACTORS THAT HAVE BEEN SUPPORTING CHINA'S GROWTH RUNNING OUT?	36
3.1 Will China continue to over-invest?	37
3.2 Has china reached the lewis turning point?	39
3.3 How long can china's world market share keep growing?	40
Box 6 Is China climbing up the quality ladder?	42
3.4 Will protectionism against China rise?	44
4 THE THORNY PATH TO REBALANCING	45
4.1 Stocktaking of rebalancing policies	45
4.2 Is rebalancing embedded in economic development? what is the role of policy?	47
4.3 The politics of rebalancing	49
REFERENCES	51

ABSTRACT

In this paper we provide an overview of the growth model in China and its prospects, taking a medium-run to long-run perspective. Our main conclusions are as follows. *First*, the still prevailing producer-biased model of managed capitalism in China tends to engender, as an inherent by-product, serious imbalances which cannot be unwound without a fundamental overhaul of the model itself. *Second*, given the lack of a critical mass of economic reforms thus far, imbalances may (re-)escalate once global and domestic economic conditions normalise. *Third*, the fundamental factors underpinning growth in China are likely to remain supportive, at least over the medium run. Although this could help mitigate the economic costs of imbalances for some time to come, it could also reduce the incentives for policy-makers to enact much needed reforms. *Fourth*, delayed policy action and the persistence of the model of growth *cum* imbalances would increase the risk of China getting caught in the middle-income trap in the long run. Greater political will to redirect China's growth model towards a more sustainable path is therefore needed.

JEL codes: E21, E22, E25, F14, F43, O11, O53.

Keywords: economic growth, rebalancing, China, imbalances, middle-income trap.

EXECUTIVE SUMMARY

The sustainability of China's economic growth is a key element of the global outlook. There is a widespread consensus, including in China, that the producer-biased growth model which still prevails in the country is unsustainable *in the long run*. While the jury is out as to the time frame, it is widely acknowledged that a failure to implement more ambitious economic reforms would involve a tail-risk scenario of sluggish output performance, widespread corporate defaults, systemic banking sector stress and social unrest. This would bring about sizeable negative spillovers to the global economy. A critical mass of measures capable of further restructuring the Chinese economy would, on the other hand, ensure robust and less volatile long-term growth. Such measures would also entail the stronger monetary and financial integration of China into the global economy, with significant implications for the international monetary system and the euro area in particular.

Against this backdrop, we provide a detailed analysis of the “imbalances” (to be understood here not only as excessive current account surpluses, but along with a much broader definition) embedded in the Chinese growth model and the challenges they present. We then focus on the medium-term economic prospects of China by assessing the evolution of the core drivers of growth. Lastly, we explore the complex set of incentives behind rebalancing policies. Our main conclusions can be summarized as follows:

1. *Economic imbalances are an inherent by-product of the still prevailing producer-biased and export-led growth model.* While this framework has been successful in modernising China's economy, boosting GDP per capita and gaining export market shares, it has produced domestic and external imbalances which are associated with economic inefficiencies, financial stability risks, social unrest and tensions with major trading partners. These imbalances include a share of investment over GDP which is too high, a private sector which is still too small, a relatively weak services sector, financial repression, rising income inequality and inefficiencies in the use of production factors – all features that cannot be redressed without a fundamental overhaul of the current growth model.
2. *Given the lack of a critical mass of economic reforms so far, macroeconomic imbalances are likely to at least partly re-emerge once global and domestic economic conditions normalise.* The recent partial unwinding of current account imbalances has to some extent been also due to temporary factors, such as weaker global demand, policy stimuli to increase domestic demand and administrative measures implemented in the property sector, rather than a basic change in the underlying economic incentives. In the absence of decisive policy action, distortions and risks may start escalating again.
3. *The fundamental factors underpinning growth in China are likely to remain supportive, at least over the medium run. Although this could help mitigate the economic costs of imbalances for some time to come, it could also reduce the incentives for policy-makers to enact much needed reforms.* While the period of double-digit growth is over, we view China's recent economic slowdown as largely cyclical. China's potential growth is set to decelerate gradually and we do not expect a sharp downward adjustment to occur. A number of factors are likely to continue to support extensive and relatively robust growth. On the supply side, capital stock per capita remains low, industrial profit margins remain high and rural labour supply is still abundant; at the same time, inward foreign direct investment into the mainland areas, efforts to lower the costs of migration and the share of highly sophisticated exports thanks to imported technology via multinational companies are all increasing. On the demand side, there is less vulnerability

to external demand fluctuations than is widely perceived. Overall, sustained growth could help to manage the costs of renewed imbalances, at least in the medium run. It could partly compensate for the losses stemming from inefficient resource allocation, help the financial sector to outgrow its stock of non-performing loans and mitigate social unrest despite rising income inequality.

4. *Nonetheless, as potential growth gradually slows, imbalances will be more difficult to manage. In this context, postponed economic reforms and the persistence of the growth cum imbalances model would increase the risk of China getting caught in the middle-income trap.* As is the case for other catching-up economies, China's future growth perspectives are subject to multiple equilibria. Growth fuelled by the accumulation of inputs, sectorial reallocation, technological progress and low unit labour costs (extensive growth) will progressively erode and, therefore, China's upgrading to the high-income status will depend increasingly on greater efficiency in the use of production factors (intensive growth). Such a transition, however, cannot be accomplished without, for instance, enhanced market competition, sufficiently developed financial markets and a more skilled labour force. Therefore, China must succeed in shifting from extensive to intensive growth by overhauling its current model or risks eventually getting stuck in a sub-optimal, low-growth equilibrium.
5. *In the future, China is also likely to witness a "natural" shift in the composition of demand from investment and export towards domestic consumption. This implies that the most challenging policy test over the longer run will not be that of changing the composition of demand, but rather that of implementing structural reforms capable of ensuring a successful transition from extensive to intensive growth.* A change in the composition of demand would be likely to materialise under both the middle-income-trap and the intensive-growth equilibria. Historical experience indeed suggests that the exhaustion of growth that relies on the accumulation of production inputs is coupled with a "natural" change in demand composition. This is because a decline in the marginal productivity of capital limits investment, the depletion of cheap rural labour increases wages, and the ensuing higher level of consumption – often coupled with population ageing – lowers the savings rate.
6. *In order to avoid the middle-income trap and secure sustainable economic growth, a bolder and more comprehensive set of domestic reforms is required in China.* In a lower-growth environment:
 - The corporate sector will have to operate with reduced profit margins owing to the increased cost of capital and labour. Therefore, protected segments in the product market should be liberalised and deregulated, and price distortions eliminated.
 - Financial institutions will have to ensure a much more efficient allocation of capital than is the case under the current "financial repression" model, in an environment where price and information distortions may bring about significant losses and financial stability risks. Therefore, financial markets should be liberalised further.
 - The demand from large parts of the household sector for higher relative incomes and increased consumer spending will rise. Therefore, wider social security buffers and more intensive income redistribution should be pursued; this would also help avoid social unrest.

7. *From a macroeconomic policy management perspective, anchoring the exchange rate will become increasingly sub-optimal for monetary policy, since China's economic conditions are just too different from those of any anchor country.* It is therefore important not to repeat the “Japanese mistake” of trying to resist nominal exchange rate appreciation with prolonged and unsustainable monetary policy stimuli, which eventually fuel boom-bust cycles.
8. *In addition to efforts at the national level, multilateral cooperation may make its own contribution to setting the right incentives for China and its key global partners to rebalance.* These incentives would have to be set in the multilateral context of the upgrading of the G20 as the principal world forum for policy impulse. In particular, the G20 Framework for Strong, Sustainable and Balanced Growth provides a promising mechanism for potentially fostering collective action at the global level. To reach this goal, all G20 members – and the European members primarily – should respect their global responsibilities and fully honour the pledges made, most recently, in Los Cabos and Mexico City in 2012. In the case of China, this includes commitments to, inter alia, further strengthening social safety nets, continuing to promote the liberalisation of interest rates and moving more rapidly towards greater exchange rate flexibility and capital account liberalisation. In the absence of the latter preconditions, China will continue to be a global economic power without a strong global currency – an unprecedented case in history.
9. *The time has come for China to accelerate the implementation of its reform agenda.* The Chinese authorities are well aware of the challenges ahead and have an ambitious reform agenda, as testified by the 11th and 12th five-year plans. At the same time, political resistance and vested interests raise obstacles to the implementation of reforms. History suggests, however, that policy-makers should act pre-emptively. It is indeed very difficult, if not impossible, to recognise the deceleration of an economy's underlying growth in real time. Structural policies, moreover, usually require several years to have a tangible impact on the economy and should therefore start being implemented well before risks to growth materialise.

INTRODUCTION

This paper provides evidence that although the rebalancing of the Chinese economy has been making progress, it is nevertheless proceeding slowly. This is, of course, understandable. It is understandable that there is policy resistance to changing a model of growth that has delivered sustained high growth, growing GDP per capita and an impressive climb in world export market shares for the past thirty years, albeit at the cost of increasing internal and external imbalances. In addition, the slow pace of adjustment may imply genuine advantages over the short run. But it is also likely that it will imply longer-term costs, distortions and risks, given the gradual fading away of the longer-run supporting factors.

In order to make this point, the paper is structured as follows.

Section 1 takes a backward-looking perspective and briefly summarises some of the main features of the growth model that has prevailed in China over the past thirty years. We characterise it as a model that has successfully delivered strong growth, but has also engendered, as a by-product, significant imbalances that are embedded in the model itself. The notion of “imbalances” used in this paper is wide in nature, that is, we do not only refer to a share of investment over GDP which is too high. We also include, for instance, a private sector which is still too small, a relatively weak services sector, financial repression, income inequality and, most importantly, the need to rebalance the model of growth towards greater efficiency in the use of production factors.

Section 2 looks in detail into the present domestic and external imbalances and identifies some of the costs, distortions and risks that they involve, such as those originating from excess reserve accumulation and exchange rate misalignment, monetary policy inefficiencies, a bias towards asset and housing price boom-busts, and excess lending from local government financing vehicles.

Section 3 takes a forward-looking perspective and asks this central question: given the costs identified in Section 2, how long will it take before the long-term factors that have been supporting the Chinese growth model run out? Our main conclusion is that a number of supportive factors will tend to make the current tensions in the Chinese economy still manageable in the medium run. Those very same factors, however, may provide grounds for policy-makers to postpone complex reforms that are much needed and should start being implemented now if they are to be fully effective when the supportive factors elapse.

Lastly, *Section 4* briefly takes stock of what the Chinese authorities have already done to rebalance their economy thus far. In this section, entitled “The thorny path to rebalancing”, we argue that the measures implemented thus far have been too gradual in nature, mainly on account of the prevailing short-term benefits of the existing growth framework and the considerable political resistance against its reform.

I LOOKING AT THE PAST: SUSTAINED GROWTH CUM IMBALANCES

Since the end of the 1970s, China's policy-makers have had a system of *incentives* to maximise domestic economic growth by pursuing a well-identified model of economic development. This model has proved successful in delivering, for instance, increasing GDP per capita, a substantial fall in poverty and major gains in world trade shares. Also as a result of this success, the Chinese authorities have thus far resisted or postponed any fundamental adjustment of their core economic strategy. However, the very same approach has implied, as a by-product, acquiescence vis-à-vis the accumulation of serious economic and social imbalances that were inherent to the growth model. This section briefly elaborates on this interpretation.

I.1 CHINA'S SYSTEM OF POLICY INCENTIVES

Over the past three decades, the Chinese authorities have been pursuing a growth model, sometimes labelled “managed capitalism”, which can be seen as the outcome of a system of *policy incentives* that started maturing in the late 1970s. Given the country's political and economic conditions at that point in time, the new Chinese leadership strived to shape the economy along a “producer-biased” model (Rajan 2010) led by investment and exports, where the direct support of the government to firms and a systematically undervalued exchange rate were integral parts of policy-making.

The main features of this model can be briefly summarised as follows.

First of all, China was initially characterised by a total *lack of the organisational structure* necessary to deploy large quantities of physical capital effectively. For instance, the country was short of prepared management, reliable maintenance and marketing teams and an adequate supply of raw materials. In this context China, like many other countries in the early stages of development, has had an incentive to provide substantial government support to state-owned enterprises (SOEs) so that they could generate increasing profits around which they could over time build not only physical capital, but also the related organisational structure. This has taken the form, for instance, of: (i) “commanded” loans from the banking industry to SOEs and local governments, with policy-makers instructing banks whom to lend to; (ii) high reliance of SOEs on retained earnings; and (iii) the setting of very low deposit rates in order to artificially reduce the cost of credit and ensure the profitability of the banking sector.

Second, China could and still can rely upon *huge domestic savings*, which are used to fund domestic investments. Savings are explained in the mainstream literature as the outcome of four main drivers:

1. *Demographic factors*. The dependency ratio (i.e. the ratio of people of non-working age to those of working age) has been falling from a high of around 80 dependents per 100 workers in the mid-1970s to below 40 today. This has implied that the number of people who are not able to save, but only to consume – the oldest and the youngest members of the population – has been decreasing in relative terms until recently (Ma and Wang (2010));
2. *High precautionary savings*. Despite progress made, the health, pensions and education systems, to cite a few examples, are still in their infancy (Baldacci et. al (2010), Barnett and Brooks (2010)). Factors such as a marked preference for home ownership have added to the household savings rate (Chamon and Prasad (2008));

3. *Corporate governance.* The rising retained earnings of SOEs and a dividend policy that largely prevents SOEs' wealth being shared by households are among the factors behind the unusually high corporate savings rate (Bayoumi et al. (2010));
4. *Financial underdevelopment.* This has made it comparatively more difficult for households to borrow and for firms to receive market-based financing (Aziz (2006), Aziz and Cui (2007), Dorrucci et al. (2009), Guo and N'Diaye (2010), N'Diaye (2010)). Both households and firms have thus been forced to save.

Third, rapid capital accumulation is used to promote the restructuring of the country's *abundant agricultural labour*. Enhanced labour productivity due to massive flows of employment from agriculture to the more productive manufacturing and services jobs is the main driver of China's economic growth. Moreover, the reserve army of workers keeps wages at moderate levels, providing a cost advantage in international comparison. This attracts foreign direct investment and ensures China's access to the much needed technological innovation of advanced economies.

Fourth, as low wages hinder domestic consumption, external markets play an important role in absorbing excess supply. This strategy creates an incentive *to keep the exchange rate undervalued* over time. An undervalued exchange rate has entailed an implicit tax on consumption, which has been another factor fuelling the emergence of surplus savings channelled abroad via unconstrained reserve accumulation, in a context characterised by a semi-closed capital account.

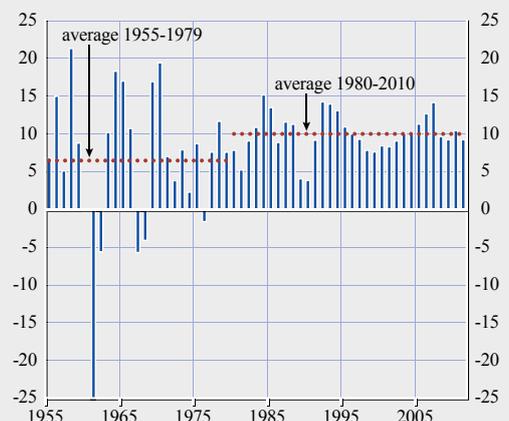
Fifth, at the international level it has been maintained that China's domestic policy incentives have matched those, in particular, of the United States, thus leading to the emergence of the "Revived Bretton Woods" international monetary system, especially in the years following the Asian crisis of 1997-98 (Dooley et al. (2003)). The distinctive feature of this system has been the US issuance of liquid assets in which China could funnel its residual savings in return for easy financing of the US current account deficits (Dooley et al. 2003). Some have argued that this system of aligned policy incentives is basically still there (Dorrucci and McKay 2011), despite the fact that the US and Chinese growth models – based on over-consumption and over-savings, respectively – have been identified as one of the factors contributing to the liquidity and savings glut which fuelled the credit boom that preceded the global financial crisis.

1.2 WHAT DID CHINA'S GROWTH MODEL DELIVER?

The post-1978 model was successful in many respects. Starting with real GDP growth, it was usually above the "political threshold" of 8% for a prolonged period and has outperformed growth in the previous (post-war) period, as Chart 1 shows. China's GDP grew by 10% on average per year during the 1990s and 2000s and the country's GDP is projected to grow by 8.6% in the next five years, according to the IMF. Chart 2 complements

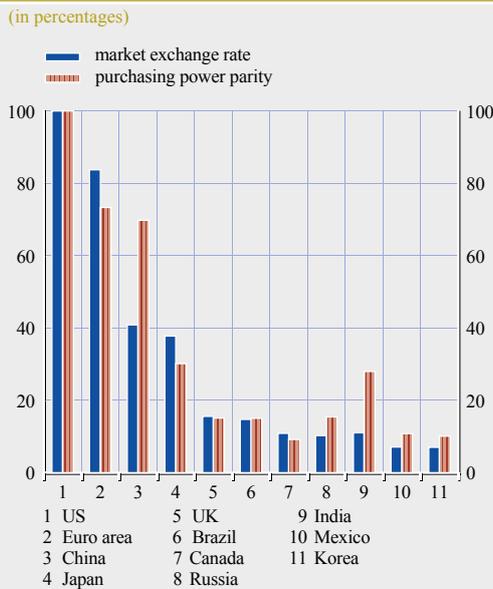
Chart 1 China's real GDP growth

(1955-2010)



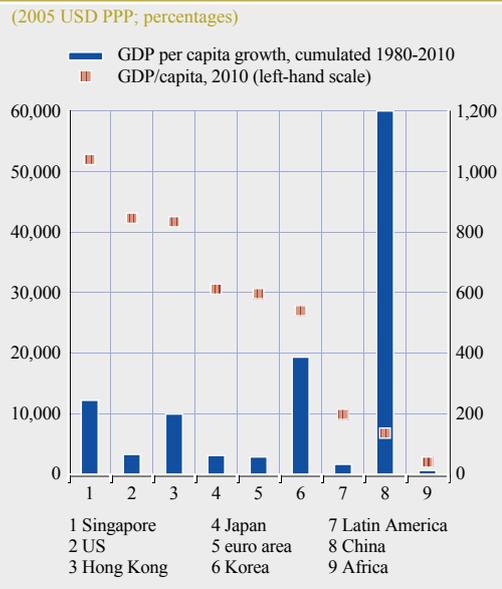
Sources: NBS and authors' estimations.

Chart 2 Top ten GDP ranking relative to the United States in 2010



Source: IMF WEO (April 2011).

Chart 3 GDP per capita growth in selected economies



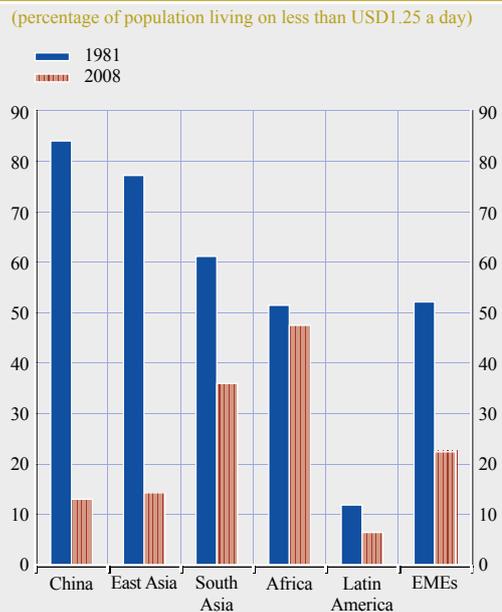
Source: WDI.

the picture by highlighting that, in terms of levels, China's GDP is currently still less than 40% of the US GDP in terms of market exchange rates (light red bars), but around two thirds of US GDP in purchasing power parity (PPP) terms (dark red bars).

Alongside buoyant GDP growth, a huge (eightfold) increase in GDP per capita has taken place in the past three decades, although the scope for further increases remains equally huge, as Chart 3 suggests when looking at the red dots. In 2010, China's GDP per capita in PPP terms was 16% of the US and 22% of the Japanese and euro area GDP per capita. Also, a major decrease in the poverty ratio – the share of the population whose income is less than \$1.25 per day – has occurred. By 2008 the poverty ratio had declined to 13% from more than 80% in 1981 (see Chart 4). China's economic development managed to lift 672 million people out of poverty during this period.

A gain in world market shares (defined as the imports of other countries in the world from China as a percentage of world imports) has been another key achievement, and is a result of comparatively higher export growth than prior

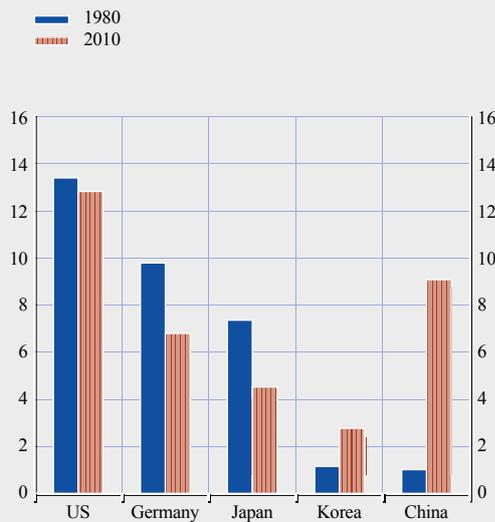
Chart 4 Poverty ratio



Source: WDI.

Chart 5 World market shares of selected economies

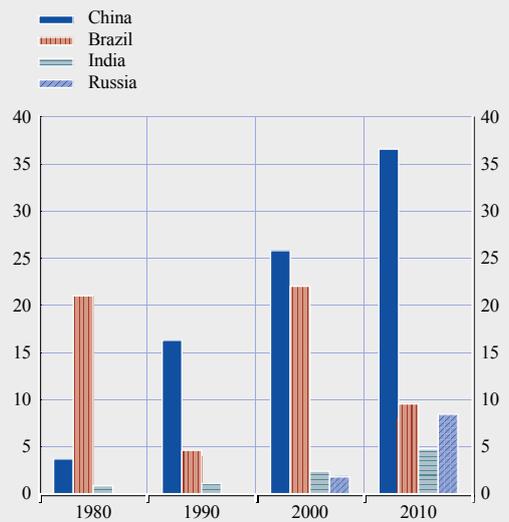
(imports from country as a percentage of world imports)



Source: IMF DOTS.

Chart 6 Inward FDI

(in percentage of total inward FDI to low and middle income countries)



Source: WDI.

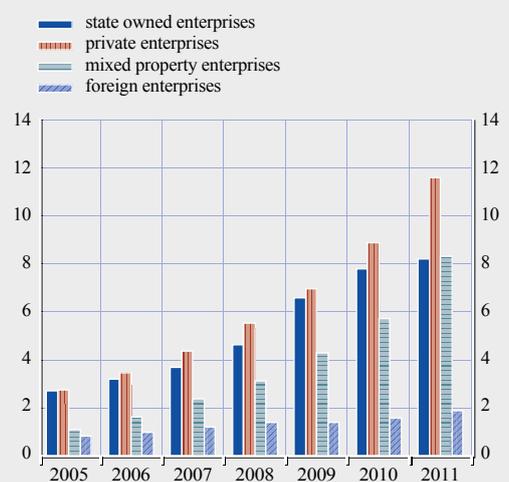
to the start of the process of economic reforms (see Chart 5). In particular, China's world market share has increased from below 1% in 1980 to 9.1% in 2010. China's opening up also provides the country access to much needed advanced technology. Net FDI inflows to China increased rapidly and by now account for almost 40% of total FDI inflows to low and middle income countries (see Chart 6).

1.3 DEFINING CHINA'S ECONOMIC IMBALANCES

China's economic imbalances can be defined along several dimensions. First, there has been *insufficient rebalancing from the public to the private sector*. This is suggested by Chart 7, which shows that investment by SOEs still equals investment by domestic private enterprises and well exceeds investment by foreign-owned enterprises. In fact, the Chinese economy looks more "commanded" now than before the global crisis that started in 2007/08, with less room for manoeuvre for private sector activities. As a response to the global financial crisis, investment has been allocated on the basis of central and local government guidelines, and mainly financed through SOEs' loans. Conversely, small and medium enterprises (SMEs), the main component of the private sector, have a more limited access to finance despite the lending expansion.

Chart 7 Investment by state-owned enterprises (SOEs) vs. private investment by domestic firms and foreign-owned enterprises

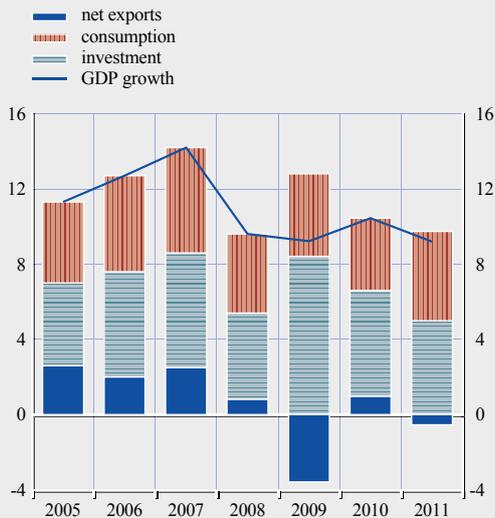
(RMB trillion)



Source: CEIC Asia database.

Chart 8 GDP growth and contributions

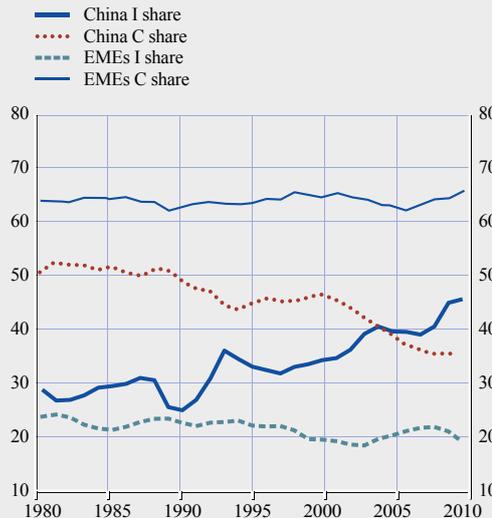
(in percentage points)



Source: NBS.

Chart 9 Household consumption vs. investment: Shares in China and other EMEs

(in percentage of GDP)



Sources: WDI, NBS.

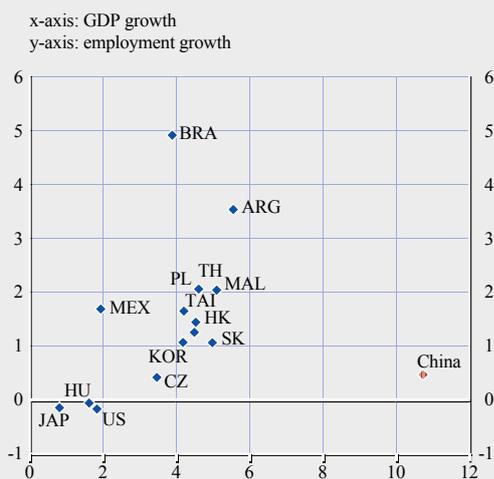
Second, there has been a *lack of rebalancing towards private consumption*, whose relative contribution to GDP growth reached historical lows in 2010, although it recovered slightly in 2011. Looking at the past twenty years, private consumption as a share of China's GDP declined from almost half to around one third between 1990 and 2011 (Chart 9). However, contrary to common perceptions, China's private consumption has been very dynamic over the same period, having grown at more than 8% per annum (Ma, McCauley and Lam 2012). The imbalance rather consists in an abnormally high contribution of investment to growth, fuelled by exceptionally high savings. Chart 8 shows that investment tends to further increase in times of crisis – as was the case in 2009, when it was driven by public expenditure and commanded loans. In the 2009-11 period consumption contributed to China's GDP growth by 4.3 percentage points, compared to the 4.8 percentage point pre-crisis average. Taking a longer time horizon, Chart 9 indicates that the share of investment in China's GDP is abnormally high if compared with other emerging market economies (EMEs), and has been increasing since the 1990s to the detriment of the consumption share. China's investment share reached 45% by 2010, while the consumption share dropped below 35%. The long-term trends have continued in very recent years, indicating that there has been no rebalancing of the two major demand components.

A third core imbalance has been *excess reliance on the manufacturing sector for output growth, to the detriment of the services sector*. The underdevelopment of the services sector is at the root of weak employment growth, as argued below, and indirectly is also responsible for the low wage share and subdued consumption growth in China.

Employment creation has been weak in the last decade or so, also as a result of China's capital-intensive growth model. Despite GDP growing at above 10% on annual average, employment increased by less than 1% per annum in the 2001-10 period. This makes China a clear underperformer

Chart 10 Employment vs. GDP growth

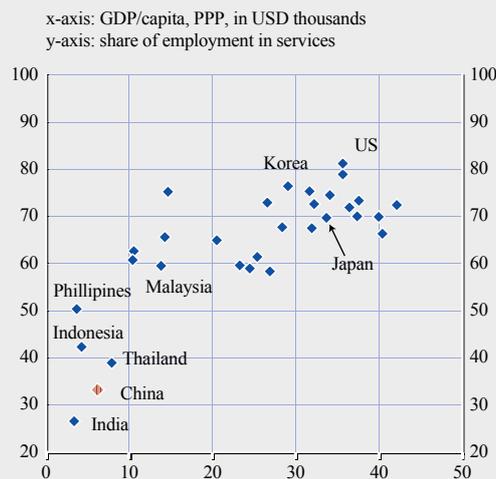
(2001-2010 average; percentages)



Source: IMF WEO.

Chart 11 Share of services employment vs. GDP per capita, 2010

(in total; percentages)



Sources: WDI and NBS.

by international comparison (see Chart 10).¹ In parallel, there has been labour reallocation across the major sectors. Since 1990, approximately 100 million people have left the agricultural sector, and 130 million have moved from the countryside to the cities. The redundant agricultural labour force has been largely absorbed by the services sector. While there has been some fluctuation in the relative contribution of the various sectors to overall employment creation, in total the services sector has created around 150 million jobs since 1991, almost twice as many as manufacturing. This clearly indicates that services are more labour intensive than manufacturing, and that a significant output shift from the manufacturing to the services sector would help spur employment growth in China. However, three main factors hinder this shift, as argued in Box 1: the undervalued exchange rate, the lack of a broad-based social security system, and financial underdevelopment. As a result, the share of employment in the services sector out of total employment was only slightly above 30% in China at the end of 2010. This is very low by international comparison, even when China's low GDP per capita level is taken into account (see Chart 11).

1 Actual employment growth is underestimated by official statistics, which do not take the sizeable underemployment level in the agricultural sector into account.

Box 1

COULD AN APPRECIATION OF THE RENMINBI'S EXCHANGE RATE INCREASE THE SHARE OF EMPLOYMENT IN THE SERVICES SECTOR?

Guo and N'Diaye (2009a) argue that one explanatory factor of the low share of services employment in China is its undervalued exchange rate. In their view, while the Chinese authorities resist substantial and long-lasting exchange rate appreciation on the ground that it would harm job creation in the manufacturing sector, they tend to largely overlook the potentially positive impact of exchange rate appreciation on employment in the services sector.

Determinants of services employment share

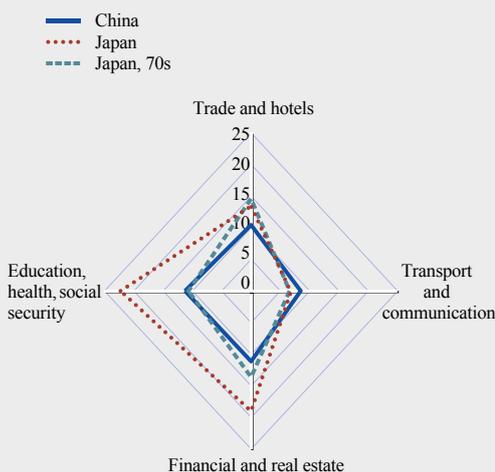
(panel estimates 66 countries, 1983-2007)

Dependent Variable: Services Sector Employment Share	(I)	(II)
Constant	2.18*** (8.13)	2.40*** (7.98)
GDP per capita (PPP)	0.07*** (4.68)	0.02 (1.1)
Relative Productivity	-0.33*** (-11.13)	-0.32*** (-10.56)
Undervaluation (USD)	-0.09*** (-3.89)	-0.08*** (-3.45)
Urbanisation	0.26*** (3.3)	0.27*** (3.21)
Tertiary Education	-	0.05*** (-2.55)
R-square overall	0.48	0.42
F-probability	0	0
Number of Countries	66	64
Number of Observations	282	261

Source: Özyurt and Pula (2012).

Major services sub-sectors: China vs. Japan

(in percentage of GDP)



Sources: National data sources.

Historical evidence based on a 66-country panel in the 1983-2007 period indeed confirms that exchange rate misalignment has a significant impact on services employment: countries with undervalued exchange rates tend to have lower services employment shares (Özyurt and Pula (2012); see the table above).

In addition to the exchange rate, there are several country-specific factors explaining the country's low services employment share. There are two services sub-sectors in which China mainly underperforms in comparison with the other BRICs and advanced economies: (i) education, health and social security; and (ii) the financial sector, including its capability of funding investment in the real estate sector. In China, these sectors account for about 20% of GDP, whereas in Brazil and India the share is around 35%. The other major export-reliant economies in the region, such as Japan and Korea, have experienced a significant transfer of labour to services alongside their development path. In Japan in the 1970s and Korea in the 1980s, the above-mentioned services sub-sectors had shares similar to China today, but then these shares grew in size dramatically, and in 2010 they accounted for 41% and 31% of GDP respectively (see the chart above for a comparison with Japan). These figures suggest that the lack of a broad-based social security system and the absence of deep financial markets are the two key additional factors that explain China's underdeveloped services sector and its low services employment share.

All in all, we can conclude that the appreciation of China's exchange rate would help increase the employment share in the services sector, but in conjunction with other structural policies. In particular, policy measures that aim at economic rebalancing through the strengthening of the services sector should also encompass reform of both the social security system and the domestic financial market.

Chart 12 Real and nominal deposit and lending interest rates in China

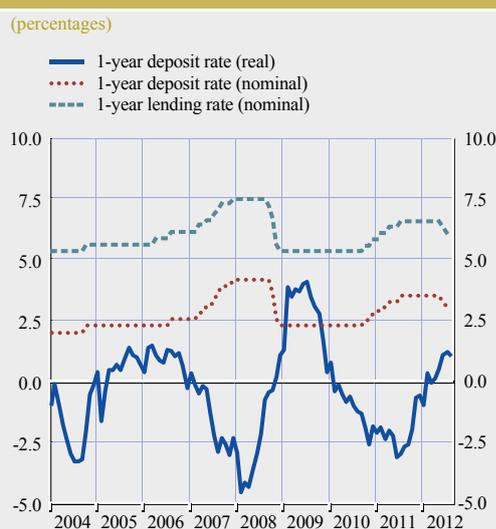
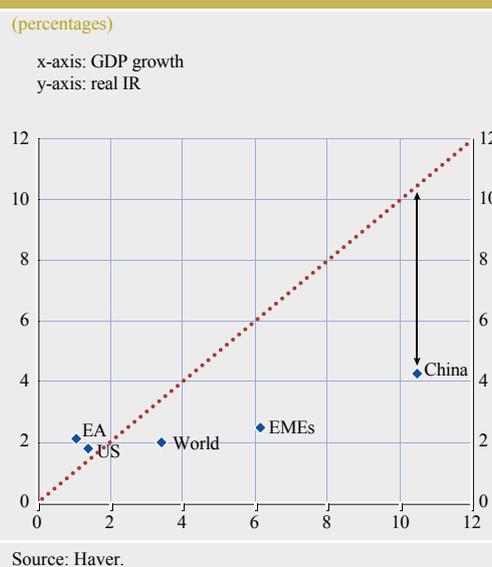


Chart 13 Real GDP growth and real long-term interest rates, average 2001-09



A fourth imbalance-creating factor embedded in the Chinese model is known as “financial repression” (Lardy 2008). This materialises, at first sight, as forced lending by banks to SOEs and local governments. A more thorough examination, however, reveals that bank depositors have been de facto subsidising the banking industry and the government, which has resulted in a major redistribution of income from households to the other two sectors via artificially low deposit rates. This is a key cause of the insufficient level of consumption in China, because income is confiscated from households and directed into capital spending.

Financial repression became particularly apparent in the early 2000s as a by-product of the banking system reform and the government’s policy of maintaining an undervalued exchange rate. Its three main ingredients are: (i) interest rates set artificially low in relation to China’s economic growth (see Chart 13), which also makes it easier to roll over the related debt; (ii) a large spread between lending and deposit rates, which sustains banks’ profitability to the detriment of an inefficient allocation of capital; and (iii) a very gradual development of financial markets, which helps maintain a stable deposit base in the banks at the expense of very limited investment and financing alternatives. The relatively low interest rate environment² also contributes to lower portfolio inflows than would otherwise be the case, thereby contributing to exchange rate undervaluation and reduced central bank sterilisation costs.

Chart 12 illustrates financial repression by evidencing: (i) the very low *real* deposit and lending rates in China, on average (with one-year real deposit rates often close to zero); and (ii) the setting by the People’s Bank of China (PBC) of benchmark nominal interest rates on bank deposits and loans, which remains an important instrument to shield the margins of commercial banks. Since the amount of household deposits is around five times higher than the amount of their bank borrowing, there is a de facto redistribution of income from households to other sectors of the economy. An attempt to estimate the extent of this redistribution is presented in Box 2.

2 The PBC suspended its program of interest rate liberalisation in the fourth quarter of 2004.

Box 2

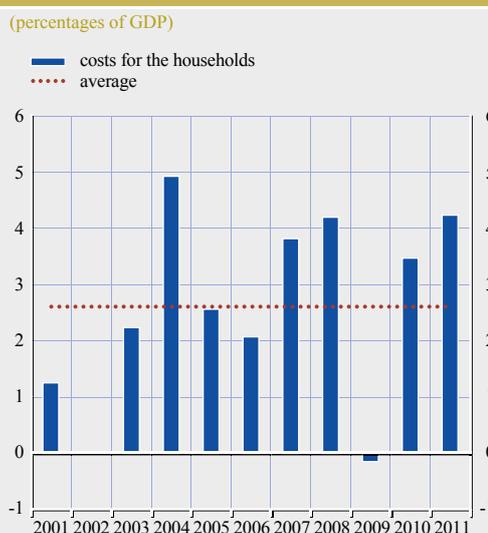
MEASURING THE IMPACT OF FINANCIAL REPRESSION ON INCOME DISTRIBUTION IN CHINA

Lardy (2008) defines financial repression as a very low or even negative real return on household deposits. One way to measure it is to look at the differential between the nominal interest rate households receive on net savings deposits and the rate of consumer price inflation. A decline in the real return on savings deposits can be interpreted as an implicit tax imposed on households. Lardy's approach is to estimate how much higher household interest income would have been if households had received the same real interest rate on their net renminbi-denominated savings deposits as in 2002. With the same methodology he also analyses who benefited from the implicit tax on households among corporates, banks and the government.

By 2008, the implicit tax imposed on households had reached around 4% of GDP. In the same period (2002-08), banks and corporates benefited from the low-interest-rate environment at an estimated amount of 1% and 0.9% of GDP respectively. Yet the government and the central bank benefited the most, thanks to a dramatic reduction in the cost of sterilising FX interventions by issuing government bills (2.2% of GDP). In the chart above, we replicate Lardy's approach by computing the implicit tax on households in the period 2002-11, and estimate that it was over 2.5% per year on average in that decade.

An important caveat in this analysis, however, is that there is no evidence that the interest rates paid by each economic agent in 2002 were close to the equilibrium rates. There may also be additional factors behind low real deposit rates.

Implicit tax on households



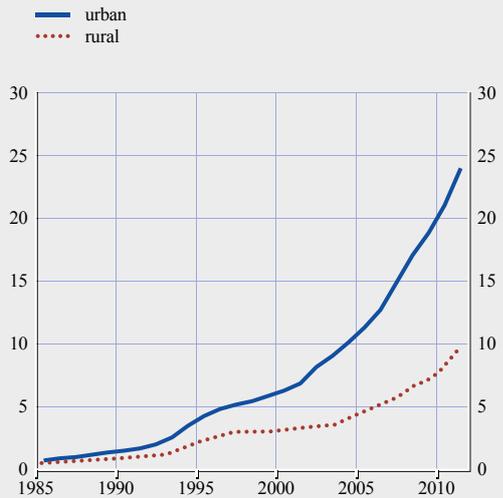
Source: Authors calculations based on Lardy (2008).

Income redistribution produced by financial repression should be seen as part of a broader *rise in income inequality* – another by-product of China's growth model. Although the Chinese authorities have not been releasing official data since 2000, the World Bank estimates that currently the Gini index may be as high as 45-50, which is one of the highest in Asia, well above the index of India (30) or Japan (25) and closer to Brazil (55) and other Latin American countries.³ Charts 14 and 15 not only show that urban income per capita has been growing more quickly than rural incomes, but also that the rise in urban income per capita has mainly been driven by the highest income group, whereas the lowest incomes have remained relatively flat. While rising income inequality has been associated with economic development and increasing GDP per capita, it has also been

3 The Gini index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality. The threshold above which income distribution starts raising concerns is usually considered to be around 40.

Chart 14 Income per capita

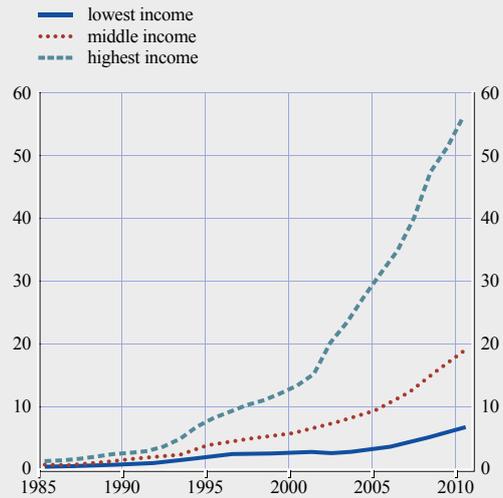
(in RMB thousands)



Sources: WDI and NBS.

Chart 15 Urban income per capita

(in RMB thousands)



Source: NBS. Lowest income: income per capita of the first decile of households; middle income: fifth and sixth deciles; highest income: tenth decile.

related to certain characteristics of the Chinese growth model, such as the underdevelopment of services, excess rural labour, and the limited redistribution of income by the government. Increasing tensions between the top and bottom income groups may exacerbate social conflict if the problem is underestimated. This may further escalate in the future, eventually hindering economic development in China.

Last but not least, on the supply side Chinese growth has been fuelled by the accumulation of inputs, sectorial reallocation, technological progress and low unit labour costs (extensive growth), a the detriment of increasingly greater efficiency in the use of production factors (intensive growth). We will come back on this issue in Section 3.

2 LOOKING AT THE PRESENT: THE IMPLICATIONS OF EXTERNAL AND DOMESTIC IMBALANCES

In this section we analyse the implications of China's external and domestic imbalances more thoroughly. We focus on two related questions: (i) to what extent imbalances undermine the sustainability of the current growth model; (ii) why some of the imbalances have receded lately, and whether we can expect them to re-emerge again. Regarding the future evolution of imbalances, we argue that the recent decline in the current account surplus, FX intervention, the investment share, or even the stabilization of property prices, are to a significant extent due to a combination of temporary factors, such as weaker global demand, the partial withdrawal of domestic policy stimuli, and sector specific administrative measures. Imbalances are a by-product of the Chinese growth model, and, as long as the underlying economic incentives remain unchanged, they will tend to persist.

Would a renewed escalation of imbalances bring the export-led and produce-biased growth model to an end? Not necessarily, or, at least, not in the short run. As our analysis points out, the Chinese authorities have been successful in managing the economic costs of domestic and external imbalances in the past, mainly on account of robust growth and the centralised macroeconomic management system. As long as these factors prevail, the Chinese model can be sustained.

2.1 TENSIONS ON THE EXTERNAL FRONT

2.1.1 THE CURRENT ACCOUNT SURPLUS

While China had been accumulating large external surpluses since 2004, following the global shock triggered by the Lehman bankruptcy in September 2008 the current account surplus started to shrink. By 2011, the current account surplus was 2.7% of GDP, well below the peak of 10.3% reached in 2007. The Chinese authorities have welcomed this development, claiming that China has made a substantial contribution to more balanced and sustainable growth in the global economy.

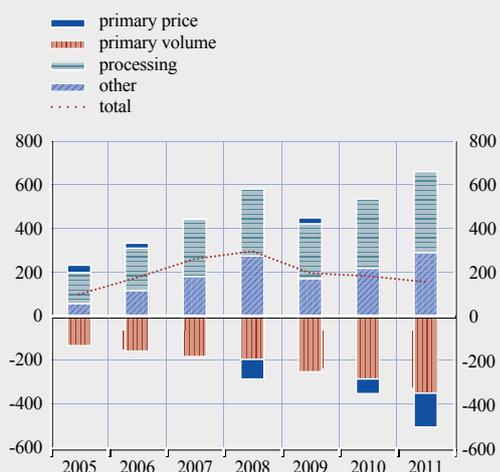
However, available evidence suggests that a significant part of the decline in China's current account surplus may be due to temporary factors. Such a decline can indeed be largely explained by four main drivers: the cyclical movement in external demand, strong commodity demand due to a surge in investment, unfavourable evolution of the terms of trade and the appreciation of the exchange rate. Out of these factors, strong commodity demand and the deterioration in the terms of trade seem to have been the most important. Ahuja et al. (2012) estimate that the terms of trade deterioration and the increase in investment demand explained -3.8 and -2.6 percentage points (p.p.) respectively, of the total -7.3 p.p. decline in China's current account per GDP ratio between 2007 and 2011. The role of external demand and the real effective exchange rate was more muted, but still significant, at -1.4 and -1.3 p.p. respectively.

All in all, these factors are considered to be, to a large extent, temporary in nature. An analysis of the trade balance by main product categories indicates that China's non-commodity trade surplus, which includes both heavy and light manufacturing goods, has exceeded its pre-crisis level by now, following a temporary crisis-related weakness (see Chart 16). The stimulus-related acceleration of public infrastructural investments, which triggered the upsurge in commodity demand, is expected to weaken in the future, in line with the authorities' intention to move away from investment-driven, material-intensive growth. Along with the country's economic development productivity, differentials between the tradable and non-tradable sectors are also expected to decline, thus providing less room for future appreciation of the real effective exchange rate.⁴

⁴ One development that may have a more permanent downward impact on China's current account surplus could be the deterioration of the terms of trade in the event that factors such as the very strong demand for commodities stemming from emerging economies keep their prices elevated over a longer horizon.

Chart 16 Current account and trade balance, price adjusted

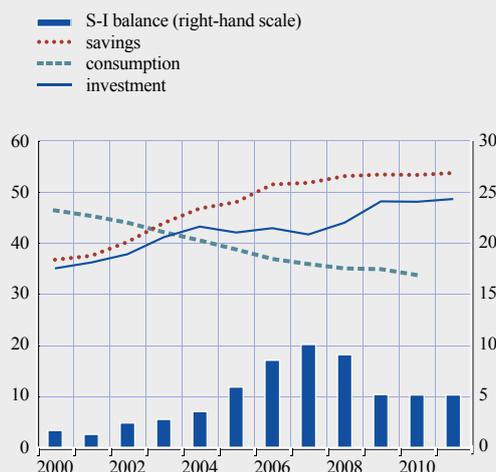
(base year 2007, percentage of GDP)



Source: NBS.
Note: The chart disentangles processing trade (i.e., assembling of imported intermediate goods) from primary trade (broken down into price and volume effects) and other components of trade.

Chart 17 Savings and investment shares

(percentage of GDP)



Source: IMF WEO.

Taking the perspective of the savings-investment balance, data available up to 2010 indicate that the current account surplus has been reduced via an increase in investment rather than a drop in savings (see Chart 17). The increase in the investment ratio reflects in turn the impact of the major policy stimulus enacted in 2008-09. This set of measures was needed because China is always at risk from the materialisation of excess capacity, and the impact of the “Lehman shock”, coupled with the burst of a domestic housing bubble, was so big that in the absence of strongly countercyclical macroeconomic measures a significant output gap would have materialised. The lack of adjustment in the savings ratio points, conversely, to the limited success of the authorities’ policy efforts to increase the share of domestic consumption over GDP. With the withdrawal of the policy stimulus and in the absence of major changes in the savings pattern of domestic agents, China’s current account surplus would likely re-emerge in the coming years.

There is no clear evidence of a critical mass of rebalancing measures so far either. As will be discussed in greater detail in Section 4, although reforms in relation to social security, labour markets and social housing have been making some progress, they are advancing slowly. Taking into account that structural measures may need several years to have a long-lasting impact on the saving behaviour of households, the recent reform measures are likely to have played only a limited role in reducing China’s current account surplus, especially since most of them only came into force in 2008 or later. This, once again, suggests that structural factors played only a limited role in China’s current account adjustment.

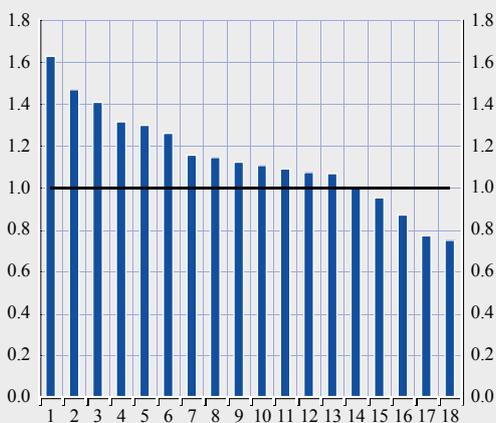
2.1.2 FX RESERVE ACCUMULATION AND ITS COSTS

Another indicator of external imbalances is the rapid accumulation of China’s FX reserves, which testifies for the sizeable (one-sided) exchange rate interventions aiming to prevent the appreciation of the renminbi. Here we argue that: (i) the level of FX reserves is well above what can be justified

Chart 18 Foreign exchange reserves in selected emerging market economies compared to pre-crisis maximum

(ratio; 1 = pre-crisis maximum)

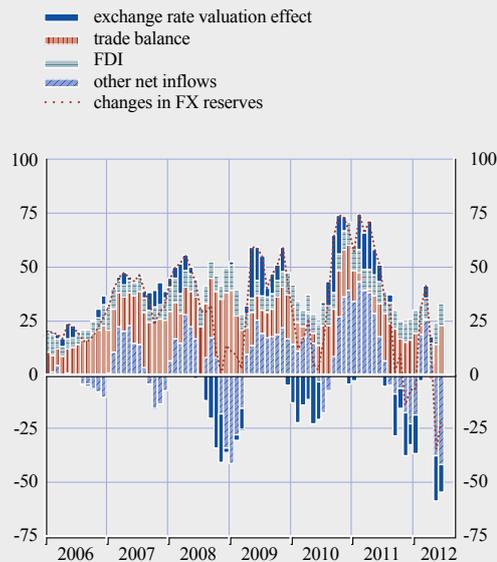
1 Hong Kong	7 Singapore	13 Korea
2 Thailand	8 S. Africa	14 Turkey
3 China	9 Mexico	15 Argentina
4 Brazil	10 Colombia	16 India
5 Indonesia	11 Peru	17 Malaysia
6 Philippines	12 Chile	18 Russia



Sources: Haver Analytics, IMF IFS and ECB Staff calculations. Note: The observations refer to September 2010, except for Chile, Peru, Hong Kong S.A.R., Indonesia, South Korea, Philippines, Singapore and South Africa, which refer to August 2010.

Chart 19 Changes in reserves and non-FDI inflows

(USD billion, 3-month maturity)



Source: CEIC Asia Database. Notes: Last observation refers to June 2012. Valuation effects are calculated assuming that the shares of the euro, yen and pound are 25%, 5% and 5% of Chinese FX reserves respectively.

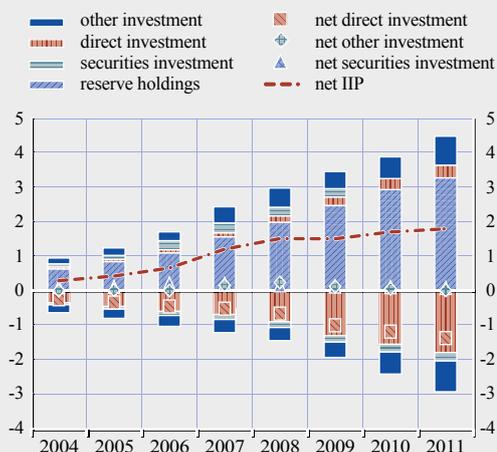
by a precautionary motive and (ii) that excessive FX reserve accumulation introduces distortions and risks to the global economy on the one hand, and entails significant opportunity costs for the Chinese economy on the other.

In September 2012, China's FX reserves had reached USD 3.3 trillion and were 70% above their pre-crisis level (see Chart 18 for a cross-country comparison). Interestingly, in contrast to most other emerging economies, even the global financial crisis failed to reverse the process of reserve accumulation in China, as FX reserves decreased by only 0.2% at the peak of the crisis, i.e. in the period from the fourth quarter of 2008 to the first quarter of 2009. As a result of strong capital outflows, FX reserve accumulation has come to a halt more recently (see Chart 19), but once the global economic and financial conditions normalise, the pace of FX reserve accumulation can be expected to pick up again.

FX reserves in China are well above the levels widely considered optimal in the available literature (see Chart 21), and this is difficult to

Chart 20 China's International Investment Position

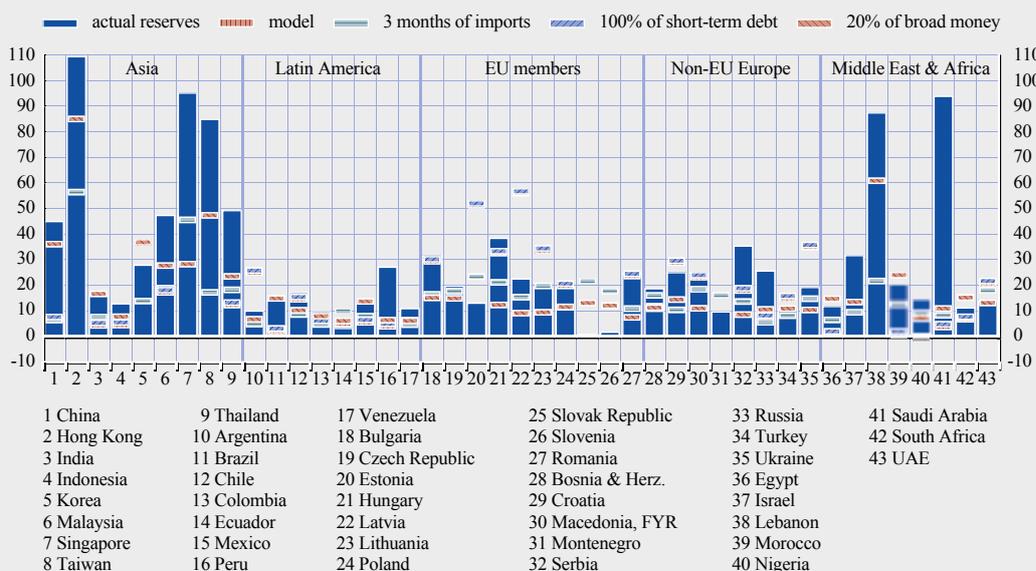
(USD trillion)



Source: CEIC Asia Database. Last observation 2011.

Chart 21 Foreign reserve adequacy ratios vs. actual reserves in emerging economies (2011)

(percentages)



Sources: Mileva (2010) and subsequent update for 2011.

Notes:

(1) Model calculations based on Jeanne and Ranciere (2008). This is a dynamic general equilibrium model in which: (i) official reserves are held not only for debt rollover during financial crises but also to alleviate potential output losses; (ii) the opportunity cost of holding reserves is calculated as the difference between the interest rate on long-term external debt and the return on US dollar reserves.

(2) Short-term debt is on a remaining maturity basis, except for the countries marked with (*).

(3) It should be noted that the M2 benchmark is currently not relevant for China as this country has strong controls on capital outflows. Rather, the benchmark indicates the *potential* domestic drain on reserves in case of an episode of capital flight *after* China liberalises its capital account.

explain in terms of purely precautionary motives. Also, while the size of FX reserves have helped emerging economies to weather the negative impact of the global crisis and mitigate capital flow retrenchment (Fratzscher (2009)), FX reserve accumulation has its own costs, both domestically and globally (see Table 1 for a summary).

An important opportunity cost of reserve accumulation is given by the fact that China and, more generally, the Asian economies are the main counterpart, with negative sign, to the “exorbitant privilege” which the United States enjoys as the issuer of an international currency and as the main financial centre of the world (Habib 2010). The exorbitant privilege can be measured, in the simplest way, by the positive difference between the real (i.e. deflated with domestic CPI) return on foreign assets that is enjoyed by US residents investing abroad and the real return on US liabilities that is paid to foreigners investing into the United States. Following this definition, the balance-of-payments income balances show that: (i) the exorbitant privilege of the United States averaged around 1.5 percentage points in the period 1990-2008; and (ii) several Asian reserve accumulators experienced a “negative” differential between real returns on foreign assets and returns on foreign liabilities (see Chart 22, left-hand side).

When including the capital gains stemming from asset price movements and exchange rate changes,⁵ the excess return on net foreign assets of the United States surged to almost 5% in the

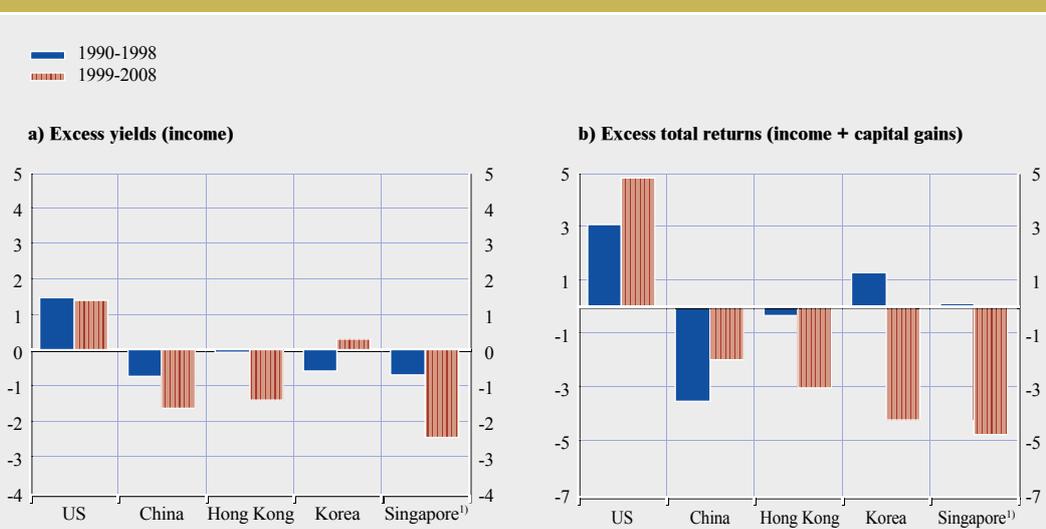
5 The United States indeed benefits from currency depreciation, which does not affect its USD-denominated liabilities but increases the value of foreign currency denominated assets.

Table I Distortions, risks and costs of reserve accumulation

	Distortions, risks and costs
Global level	Reserve accumulation corresponds to a large-scale re-allocation of capital flows organised by the public sector of the accumulating countries. This produces major distortions in the global economy and international financial markets and can have negative implications for: <ul style="list-style-type: none"> (i) global liquidity conditions, by possibly contributing to an artificially low yield environment (ii) the potential for build-up of asset price bubbles, to the extent that reserve accumulation is not sufficiently sterilised (iii) global exchange rate configurations, including the risk of misalignments (iv) trade flows, to the extent that reserve accumulation becomes the equivalent of a protectionist policy subsidising exports and imposing a tariff on imports
Regional level	Reserve accumulation by a major economy in one region may contain currency appreciation in competitor countries in the same region when this is needed. This: <ul style="list-style-type: none"> (i) constrains the degree of flexibility of the other currencies in the region, (ii) may magnify capital flow volatility in the other region's economies in a context of misaligned exchange rates
Domestic level	Reserve accumulation can: <ul style="list-style-type: none"> (i) undermine a stability-oriented monetary policy if the monetary policy of the anchor country is more expansionary than domestically required (ii) hampers the market-based transmission of monetary policy impulses and the development of the domestic financial market (iii) be costly as reserves have a relatively lower return and involve sterilisation costs (iv) distort resource allocation, impede service sector development and constrain consumption and employment by unduly favouring the tradable sector at the detriment of the non-tradable sector (v) affect income distribution and consumption growth by unduly damaging the household sector as a result of artificially low interest rates on deposits in a financially underdeveloped economy

period 1999-2008. The capital losses of Asian reserve accumulators were, conversely, particularly large in those years (see the dark blue bars in Chart 22, right-hand side). This was due to negative valuation effects caused by (i) the relative underperformance of official investment in low yield foreign assets, as confirmed by the negative differentials from the income balance in Chart 22 on

Chart 22 Difference between real returns on foreign assets and foreign liabilities in selected economies



Source: Habib (2010).
Note: 1) Until 2007 for Singapore.

the left-hand side; and (ii) the inevitable real exchange rate appreciations. Although resisting such appreciations by means of foreign exchange interventions can reduce losses over the short run, it exacerbates the problem over the longer run.

2.1.3 EXCHANGE RATE MISALIGNMENT

China's exchange rate policy is a key element of the existing growth framework. While a faster renminbi appreciation should not be seen as a panacea for all economic woes, it has implications for almost all the external and domestic elements of China's economic imbalances. In this section we provide a detailed description of the exchange rate system. We argue that its design still lacks the flexibility needed to ensure the renminbi's alignment with its equilibrium value. Once global economic and financial conditions normalise, appreciation pressures are expected to return. Resistance to these pressures will again complicate monetary policy management and fuel external and domestic imbalances. Promoting stronger exchange rate flexibility is the starting point in the series of measures that are necessary to ensure the sustainability of economic growth in the long run.

De jure, since the 21 July 2005 reform China's exchange rate system has been (i) a managed floating system, (ii) based on market supply and demand, (iii) with a reference to a basket of currencies. The PBC stated in 2005 that the basket was mainly composed of the US dollar, the euro, the Japanese yen and the South Korean won. However, the weights are undisclosed. Overall, the de jure system should allow for a high level of inter-day and intra-day flexibility.

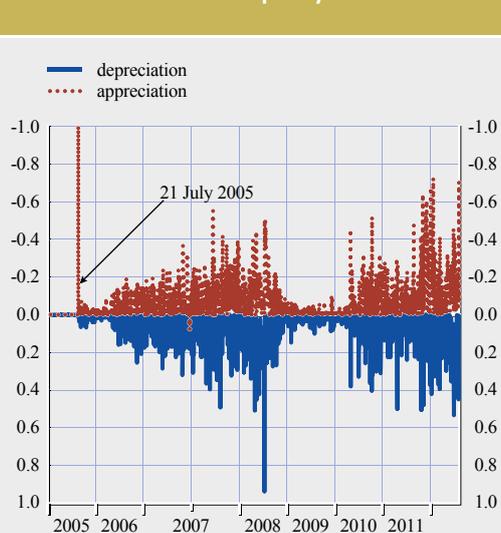
De facto, however, the renminbi exchange rate has been strictly managed against the US dollar. The accumulation of FX reserves is a clear sign of one-sided FX market interventions. Moreover, the observed co-movements of the renminbi with the US dollar imply that the dollar's actual share in the hypothetical basket is above 90% (see Chart 23). The fact that the intra-day volatility in the renminbi/dollar exchange rate, with very rare exceptions, does not exceed the limits of the daily fluctuation band (see Chart 24), suggests that the PBC actively conducts intra-day interventions

Chart 23 Implicit weight of the US dollar in the renminbi basket



Source: Authors' estimates based on a 3-month rolling OLS regression of $d \ln(JPY / RMB) = \alpha + \beta \times d \ln(JPY / USD) + \gamma \times d \ln(JPY / EUR) + \varepsilon$.

Chart 24 Intra-day volatility of the renminbi from central parity



Source: Bloomberg.

on the FX market. Inter-day interventions are also visible in certain periods. In particular, between July 2008 and June 2010 the PBC kept the closing price and the central parity at the same level within each day and, by doing so, also fixed the RMB/USD inter-day rate.

The renminbi's de facto exchange rate system has in our view two main shortcomings: (i) the renminbi is managed vis-à-vis the US dollar and little attention is paid to its nominal effective rate and (ii) the system creates the possibility of one-sided bets against the renminbi, thereby inducing speculative capital inflows and making monetary policy management more difficult.

Given that the renminbi is managed against the US dollar, its appreciation in effective terms is just a side effect of the evolution of the dollar's bilateral exchange rate vis-à-vis other major currencies, in particular the euro. Between July 2005 and July 2012 the renminbi's CPI-based real effective exchange rate appreciated by a cumulative 27%, or by 4% per annum. This is a substantial appreciation and, with the current account surplus-to -GDP ratio dropping and exchange rate appreciation expectations moderating, the Chinese authorities see the renminbi as being fairly valued today. However, the significant appreciation of the renminbi should be assessed against China's steadily appreciating equilibrium rate estimated at 2% per annum (Cheung et al., 2007). Moreover, half of the renminbi's 27% real effective appreciation between July 2005 and June 2012 occurred in the last 12 months, mainly due to a strong depreciation of the euro against the US dollar. The authorities' main policy target, the exchange rate of the renminbi against the dollar, has instead been kept stable since August 2011, indicating that the real effective appreciation of the renminbi was largely unintentional.

Owing to the steady appreciation pressures on the renminbi until recently, the system has also provided a one-way bet against the exchange rate, inducing speculative capital inflows and hampering the effectiveness of monetary policy. Historically, the magnitude of PBC interventions is positively related to the pace of appreciation of the renminbi vis-à-vis the US dollar. An increasing pace of appreciation enhances appreciation expectations, which boost "speculative" inflows and, in turn, larger PBC interventions. Under the current regime, monetary policy independence is hindered by the lack of exchange rate flexibility.

Since end-2011 appreciation pressures on the renminbi have declined, thereby allowing for greater two-way volatility in the renminbi's bilateral exchange rate vis-à-vis the dollar. Appreciation expectations have moderated significantly, which has contributed to a reversal of capital inflows. To the extent that these capital flows are driven by increased risk aversion and expectations that the authorities hold off the renminbi's appreciation until external demand is recovered, the decline in appreciation pressures can be considered only temporary. A resurgence of capital inflows would force the authorities to resume the appreciation of the renminbi, which, if done under the current regime in a gradual and predictable way, would fuel appreciation expectations and induce further capital inflows.

Besides eliminating the possibility of one-way bets, greater exchange rate volatility is also necessary to promote the development of foreign exchange markets and increase the ability of private agents to hedge against FX risk. In general, a more flexible exchange rate regime would ensure that the renminbi fluctuates around its long-term equilibrium value, which would be beneficial for both the domestic and the global economy. It would enable a more efficient management of domestic liquidity conditions. It would help rebalance the Chinese economy by boosting the purchasing power of households and eliminating the price disadvantage in the services sector. It would also promote the development of the domestic financial sector and be a necessary pre-requisite for China opening up its financial account. Finally, a more flexible exchange rate could make a significant

contribution to the orderly unwinding of global imbalances, also indirectly via the de facto role which the renminbi plays as a shadow anchor currency in Asia. Evidence indeed suggests that after 2008 other Asian countries maintained their competitiveness against China by implicitly pegging their currencies to the renminbi (Fratzscher and Mehl (2011)). Consequently, China's exchange rate policy has widespread effects on exchange rate developments in the whole emerging Asian region (see Chart 25).

2.1.4 CAPITAL CONTROLS AND THE INTERNATIONALISATION OF THE RENMINBI

The closed capital account is also a source of significant tension. Capital controls are necessary to (i) secure that domestic savings do not flee abroad despite low real returns enforced by financial repression, and (ii) to ensure that domestic liquidity conditions are set freely under the fixed exchange rate regime. Capital controls, however, hinder competition and prevent the much-needed deepening of domestic financial markets. To ensure a more effective allocation of financial resources, capital controls need to be relaxed.

The closed capital account is also at odds with the authorities' objective of achieving a large degree of internationalisation of the renminbi. The strategy of internationalisation of the renminbi via its promotion in offshore markets allows the Chinese authorities to experiment with financial market reforms. This promotes a wider international use of the renminbi in a controlled manner, without exposing the domestic markets to global financial flows. Although the authorities opened onshore inter-bank bond markets to foreign central banks and renminbi trade settlement clearing banks, cross border flows between the offshore and onshore markets remain closely managed.

With capital controls in place, the authorities expect to face increasing challenges in the process of internationalising the renminbi. The core limitation in the current international use of the renminbi is the very small size of, and limited potential for, a deep offshore renminbi market. If the role of the renminbi is to be facilitated not only as a means of exchange and unit of account, but also as a store of value, a much wider access to the onshore market will have to be granted to foreign investors. In other words, a more open capital account remains the key precondition for the renminbi to become a widely used international currency. Lacking this precondition, China will continue to represent an unprecedented case in history, that is, the case of a global economic power without a strong global currency.

Capital account liberalization in turn requires further reforms. Historical experience suggests that the reform of the banking and financial system is a crucial first step in a series of measures to be taken with a view to financial account liberalisation. Until the authorities fundamentally address the key reform areas of exchange rate and interest rate liberalisation coupled with domestic financial market development, the international use of the renminbi is expected to remain limited in scope.

Chart 25 Co-movements of Asian currencies with the renminbi

(bilateral rates with the USD, 01/2004=100)



Source: ECB.
Note: Last observation 31 August 2011. Positive (negative) sign = appreciation (depreciation) of the Asian currency vis-à-vis the USD.

2.2 TENSIONS ON THE DOMESTIC FRONT

2.2.1 MONETARY POLICY INEFFICIENCIES

Given China's system of incentives and the fact that its growth model has on the whole proved successful thus far, the macroeconomic policy framework underlying China's monetary policy remains basically unchanged. The solution to the "Impossible Trinity" dilemma continues to consist of three mutually consistent pillars as depicted in Chart 26:

- (i) free trade with the rest of the world coupled with financial repression in both the financial account and the domestic financial markets;
- (ii) exchange rate and monetary policy management aiming at a systematic undervaluation of the real effective exchange rate; and
- (iii) the pursuit of some degree of monetary policy autonomy through administrative measures and limited reliance on the interest rate channel in the mechanism of transmission.

However, anchoring the exchange rate has clearly become *sub-optimal for monetary policy* since the underlying emerging economy conditions are just too different from those of the anchor country. When the Chinese inflation rate picks up (see Chart 27), and in the presence of a much higher growth rate than in the United States, this tends to fuel new waves of carry trades and search for yield, potentially fuelling new bubbles in financial asset and property prices and increasing financial fragility. The reserve build-up is often coupled with excess net portfolio inflows, often referred to by Chinese policy-makers as "speculative inflows of hot money". The authorities seek to resist appreciation by means of foreign exchange intervention. But this does not discourage – and in certain phases may even *encourage*, by preventing the emergence of two-way risks and leading to one-way bets in local currency markets – the upsurge in speculative net portfolio inflows. While China's policy-makers claim that the problem lies in US monetary policy conditions, which they consider have been "too accommodative for too long", it is also true that only *local* solutions can address the problem of these excess portfolio inflows.

Moreover, there is ample evidence of phases when the extent and pace of reserve accumulation has made it increasingly difficult to sterilise the impact of foreign exchange intervention. Sterilisation, moreover, has its own costs.

Chart 26 The macroeconomic policy framework underlying China's system of incentives has remained unchanged

(bilateral rates with the USD; 01/2004=100)

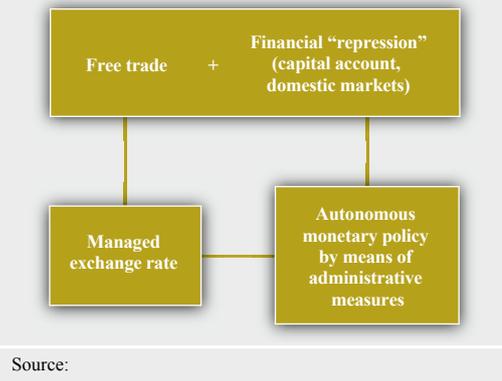
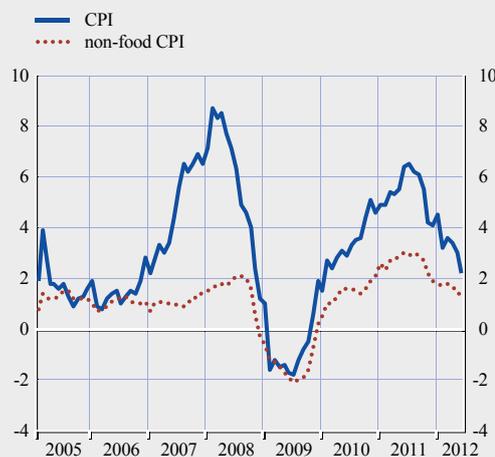


Chart 27 CPI inflation

(year-on-year growth rates)



Source: NBS. Last observation refers to September 2012.

Lastly, as insufficient sterilisation may eventually result in higher inflation and/or asset bubbles, one way to prevent these risks from materialising has consisted, as shown in Chart 26, in the adoption of (i) *capital controls* to curb portfolio inflows and/or (ii) *administrative “quantitative” measures* to contain money and credit growth. In theory and sometimes even in practice, this may make sense for some time (Ostry et al. 2010), though many questions arise with regard to what an effective and “not-too-distortionary” system of controls would look like. But when capital controls and the transmission of monetary policy via administrative measures become an intrinsic *permanent* feature of an economy, as in China’s case, the cost may become too high over the long run. The development of a modern financial system is hampered, with negative implications for both resource allocation and also, eventually, financial stability. Underdeveloped financial markets are not capable of channelling savings into the most efficient investments. And they are characterised by the inability of market participants to properly price assets and liabilities, potentially becoming even more speculative than in a context of developed and highly liquid markets. Over the long run, “financial repression”, if not linked to liberalisation, creates more problems than solutions even from a financial stability point of view, becoming one of the main sources of domestic fragility.

In June 2012, amidst lower domestic liquidity pressures caused by the reversal of capital flows, the People’s Bank of China slightly relaxed its control over retail interest rates by allowing banks to deviate more freely from the centrally set benchmark lending and deposit rates. In parallel, reverse repos have become the main instrument of short-term liquidity management, thus establishing a shift towards a more market-based monetary policy toolkit. These steps definitely go in the right direction, but their impact remains contained.

An illustration of monetary policy inefficiencies under a heavily managed exchange rate is given by Japan’s experience in the 1970s and 1980s. Japan’s “lost decade” was not only due to factors such as productivity slowdown, unfavourable demographics, labour market inefficiencies, a highly protected services sector and disruptions in financial intermediation, but also to monetary policy failures. In the 1970s the Japanese authorities had resisted the appreciation pressures on the Japanese yen by means of increased sterilisation and expansionary policies. As a result, inflationary pressures escalated and, therefore, Japanese CPI increased significantly in the 1970s relative to its competitors (Box 3). In the second half of the 1980s, after the Plaza Accord, the same policy inflated an asset price bubble, the burst of which was followed by a decade of economic stagnation.

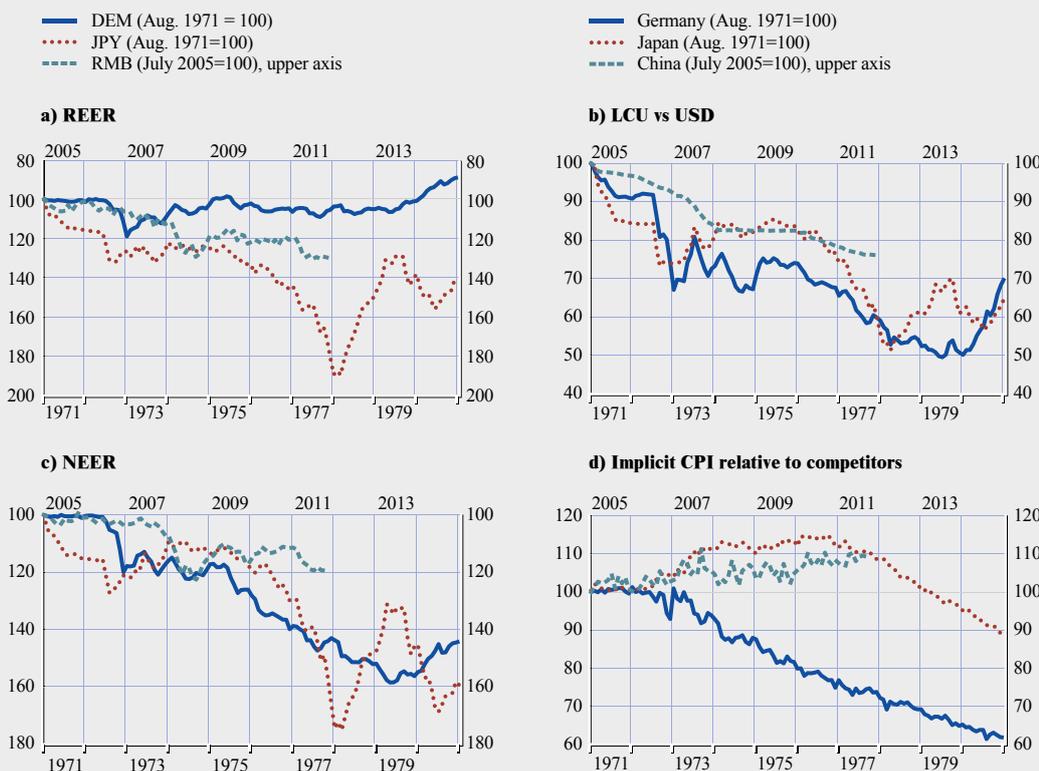
Box 3

REAL EFFECTIVE EXCHANGE RATE APPRECIATION: ADJUSTMENT VIA THE NOMINAL EXCHANGE RATE OR DOMESTIC INFLATION? LESSONS FOR CHINA FROM THE PAST EXPERIENCE OF JAPAN VS GERMANY

The Balassa-Samuelson effect predicts that in the longer run the real effective exchange rate (REER) has to reflect productivity differentials between the tradable and non-tradable sectors. As such, the REER is, at least in principle, a variable that in the longer run is determined by the structural features of an economy, and cannot be influenced by short-term policies. Policy-makers can only choose how they want to achieve the unavoidable REER adjustment: either (1) via adjustment of the nominal exchange rate, or (2) via adjustment of domestic inflation.

The experience of Japan and Germany from the post-Bretton Woods period in the 1970s testifies for this relationship. The Japanese authorities resisted the appreciation of the nominal exchange

Over the long run, the real effective exchange rate is determined by structural factors: policy-makers can only choose to adjust via either the nominal exchange rate or consumer price inflation



Source: BIS, authors' calculations.

rate – exactly as China does today – but had then to accept adjustment via inflation. Germany, on the other hand, allowed a nominal appreciation of the Deutsche Mark (DEM) as part of a tight monetary policy designed to pursue price stability.

The difference in approaches is illustrated in Chart 26, which can be read clockwise starting from the top left. All sub-charts compare Japan and Germany in the period 1971-81 – that is, after the collapse of Bretton Woods – with developments in China after the exchange rate reform of 2005. At the top, one can see the REER and then, clockwise the local currencies' bilateral exchange rates against the US dollar, the nominal effective exchange rate (NEER), and the implicit CPI relative to competitors. In all cases, downward movement indicates appreciation.

The first chart shows that in the 1971-1981 period productivity growth differentials and other structural factors induced a significant appreciation in REER terms of the Japanese yen (JPY), whereas there was a very muted appreciation of the REER of the DEM. However, in the third chart one can see that in the period 1973-77 the nominal effective appreciation of the JPY was weaker than that of the DEM, which shows the resistance of Japanese authorities to appreciation pressures. As a result of increased sterilization and expansionary policies, inflationary pressures increased and, therefore, Japanese CPI increased significantly in the 1970s relative to its competitors (fourth sub-chart). In Germany, on the contrary, the authorities allowed for a stronger

appreciation of the currency in order to keep inflation at low levels. As a result, Germany gained price competitiveness vis-à-vis its major competitors.

Coming back to China today, the question we are confronted with is: which path have the Chinese authorities been following since the 2005 reform; the Japanese or the German path of the 1970s? The answer which emerges from the charts is: China has been following the Japanese path.

This may entail some risks for the sustainability of China's future economic growth. It is well known that at the end of the 1980s and early 1990s Japan kept interest rates very low, partly in order to prevent capital inflows and a further appreciation of the yen, and partly to provide a monetary stimulus to offset the impact of losses in external competitiveness. In Japan, the low interest rate environment was an important factor that contributed to the asset price bubble and, as claimed by many, to the lost decade of the 1990s. In that sense the German policy model, i.e. adjustment via the nominal exchange rate, can be considered more successful.

Our conclusion is that the Chinese authorities may risk drawing the wrong lessons from Japan's experience. There is a widely held view in China that, first, the mistake Japan made in the late 1980s and early 1990s was to strongly appreciate against the US dollar, and second, that China should not repeat that mistake (McKinnon (2006)). But according to a number of scholars the Japanese mistake was different: it was resisting appreciation for too long by keeping interest rates too low (Ito and Mishkin (2006), Corbett and Ito (2010)). This is precisely what the Chinese authorities have been doing. Unlike in Japan in the 1980s, price pressures in China are still dampened by a persistently negative output gap, but in a low growth environment increasing supply constraints are expected to make prices more responsive to domestic demand conditions.

2.2.2 ASSET AND HOUSING PRICE BOOM-BUST CYCLES

In China, the stock and property markets tend, as Chart 28 suggests, to be subject to booms and busts, given both real interest rates that are systematically too low (financial repression) and insufficient investment alternatives (financial underdevelopment). Empirical evidence indeed confirms that the loose monetary conditions have caused equity and property prices to rise above sustainable levels in the past (de Bondt et al. (2010), and Santabárbara (2011)). Such sharp asset and housing price movements may also affect the soundness of the banking system. In this section we will mainly focus on housing prices, but partly similar considerations would also apply to the stock market.

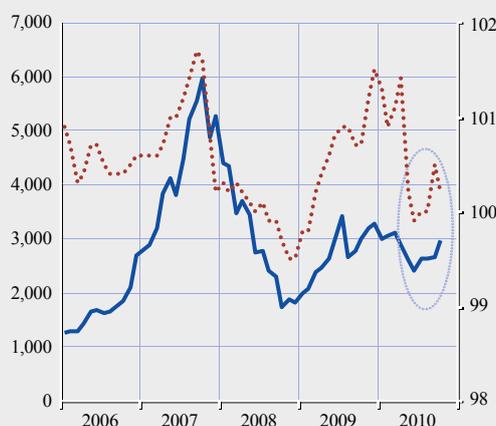
The preferred approach of the authorities in tackling housing bubbles is to resort to administrative measures. Such measures, however, sometimes prove to be too "draconian"

Chart 28 Stock and property prices

(month-on-month growth rates and levels)

y-axis: 1990 December = 100 (left-hand scale)
y-axis: previous month = 100 (right-hand scale)

— Shanghai composite (left-hand scale)
..... property price index (right-hand scale)



Source: CEIC Asia database.

in nature, as was the case with the property market measures taken at the end of 2007, which turned out to be one of the drivers of the subsequent market bust themselves. In other cases, the measures adopted seem instead to have succeeded in smoothing market volatility, as may have been the case with the property market measures that were taken from the end of April 2010 onwards. The policies implemented on that occasion helped stabilise housing prices at the time by restricting speculative demand while, at the same time, increasing social housing supply to sustain residential investment.⁶

The ultimate direct implications of a sharp decline in housing prices on activity could be very significant in China, especially on the real side of the economy. The property market occupies a central position in the Chinese economy. The construction and real estate sectors account for 15% of GDP and 25% of total investment respectively. The impact on real economic activity stems from the strong linkages between the real estate sector and other industries. Real estate developments directly affect related industries such as construction, steel, cement, furniture, etc. In this context, the challenge authorities are confronted with is how to curb prices and speculation activity without impairing real activity. The most obvious way to pursue this objective is to offset any possible negative impact of restrictive administrative measures by extending investment in public housing.

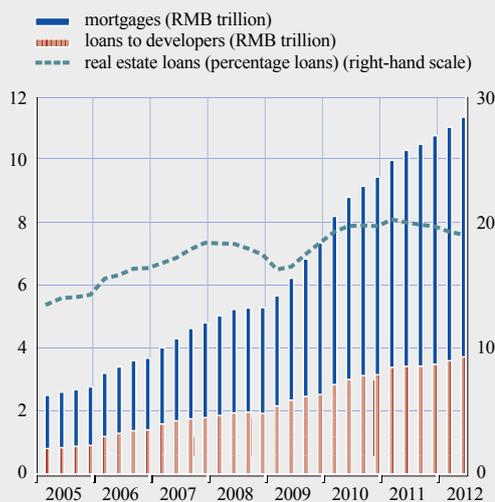
On the financial side, the impact of a housing bust tends to be more limited. First, bank mortgages (see Chart 29) still account for a relatively low share of total loans, i.e. approximately 20%. In the same vein, household indebtedness stood at only around 40% of disposable income in 2010 (well below international standards), indicating that the main source of funding of housing purchases is not lending. Second, household mortgages (only 13% of total loans) have been granted with an average loan-to-value ratio of below 50%. This implies that the collateral is large enough to buffer major falls in prices. The riskiest activity is related to lending to property developers, which, however, accounts for less than 10% of total lending.

Two factors, however, could amplify the financial implications of a decline in housing prices. The actual overall exposure of banks could be larger than the direct exposure suggests, given the above-mentioned linkages between the real estate sector and other industries. Moreover, a significant share of total loans has been created by using properties as collateral, as in the case of loans provided to local government financing vehicles. We will discuss this in greater detail in Section 2.2.3.

In order to determine the explanatory role of structural factors and policies in property market developments, thereby estimating the degree of misalignment of housing prices from their fundamentals, we model residential house prices across Chinese regions. The main findings are summarised in Box 4.

Chart 29 Real estate lending by sector

(RMB trillion (left-hand scale), year-on-year in percentages (right-hand scale))



Source: CEIC Asia database.

6 Under its 12th Five Year Plan, the Chinese government plans to build up to 36 million houses.

Box 4

ARE PROPERTY PRICES OVERVALUED IN CHINA? EVIDENCE FROM A CROSS-REGIONAL MODEL

We model house prices as a function of structural determinants (income per capita and urbanization), financial conditions (loans per capita, interest rates) and speculative behaviour (lag of the log of stock of houses). The dependent variable considered is the implicit residential property price, measured as the value of sales divided per square metre sold. Speculative behaviour and inventories are taken into account by including the changes in the stock of houses in the previous period.

The results show that the structural determinants of the model explain the evolution of residential property prices in the Chinese regions reasonably well (see the Table and the Chart), but part of the increase in housing prices is also due to loose monetary conditions. Specifically:

- Structural factors, namely disposable income growth and the urbanization process, accounted for a “natural” annual real growth of house prices by 6% from the fourth quarter of 2005-to the second quarter of 2011;
- Financial markets and monetary conditions also play a role in explaining house prices: higher access to lending and lower real interest rates significantly drive prices up (by around 5% annually in 2009 and 2010). Since mortgage finance is increasingly relevant in China (see Chart 29), this channel is becoming more influential, especially in an environment of very low real lending and deposit rates;

Model estimates

(quarterly: Q4 2005-Q2 2011)

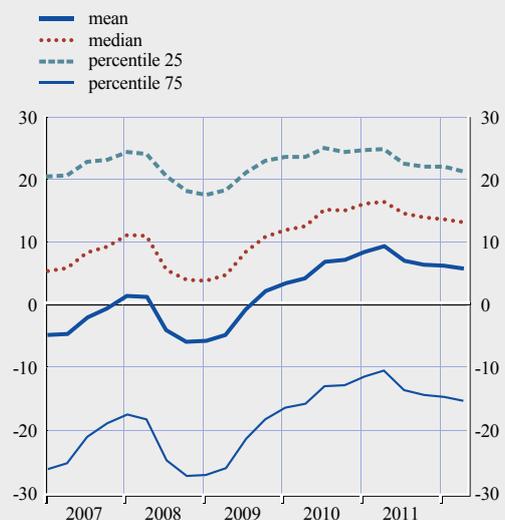
Dependent variable: Log implicit house price index	GMM estimator
Log disposable income per capita ¹⁾	0.508*** (0.000)
Log ratio of urban population	0.815*** (0.001)
Log loans per capita ¹⁾	0.150*** (0.000)
Lending rate ¹⁾	-0.0117*** (0.000)
Changes in the log stock of houses (-1)	-17.68** (0.023)
Constant	-2.784*** (0.000)
Observations	398
Number of regions	28
R2	0.71
Hansen test	(0.809)

Source: Authors’ estimates.
Notes: Regions fixed effects are also included. All variables are expressed in real terms.

Robust p values in parentheses.
* significant at 10%; ** significant at 5%; *** significant at 1%
1) These variables are instrumented with the first lag.

Regional misalignment from structural determinants

(percentage 1 year ma)



Source: Authors’ estimates.
Note: Last observation refers to Q2 2012.

- In mid-2012, there was no clear sign of a nationwide property bubble, but property prices could have been overvalued by 10% on average and several large cities, including Beijing and Shanghai, showed overvaluation exceeding 30% (under the assumption that real disposable income and urbanization are the only structural drivers).

2.2.3 THE LINK BETWEEN FISCAL SUSTAINABILITY AND FINANCIAL STABILITY

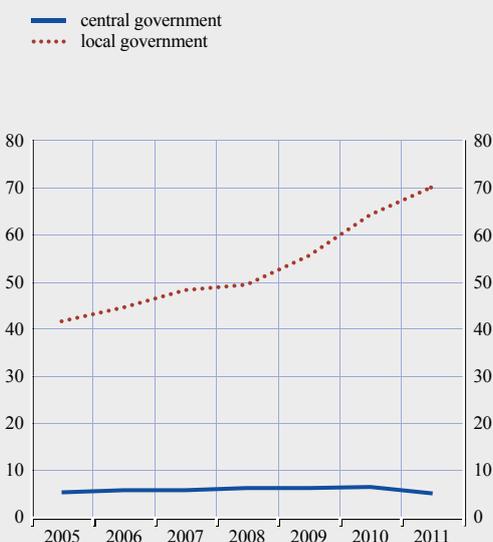
From a financial stability perspective, a major concern is that the surge in domestic loans to finance investment in infrastructure as part of the already mentioned stimulus package of 2008-10 could result in a surge in non-performing loans (NPLs) and, therefore, the contingent liabilities of the official sector (see Box 5 for analytical detail).

Lending by local government financing vehicles (LGFV) was an essential part of the stimulus package implemented from late 2008 to 2010. At the end of 2008, as a substitute to public spending, the Chinese authorities urged – and even ordered – banks to finance investment plans, mainly in infrastructure. The bulk of such investment stemmed from local government (see Chart 30) and was financed mainly through land-collateralised bank loans extended to around 10,000 LGFV that had been created to circumvent the balanced budget constraint of local governments (see Chart 31). Such vehicles did not have official backing from local government, but rather an implicit guarantee.

According to the PBC, LGFV-related lending had reached RMB 14.4 trillion at the end of 2010 (36% of 2010 GDP), whereas according to the National Audit Office it accounted for only RMB 8.5 trillion, or 21% of 2010 GDP. The difference between the two sources lies in the fact that the National Audit Office only considers LGFV borrowing that is directly backed by local governments. If the central government were to recognise all LGFV borrowing, local government indebtedness

Chart 30 Investment driven by central/local governments

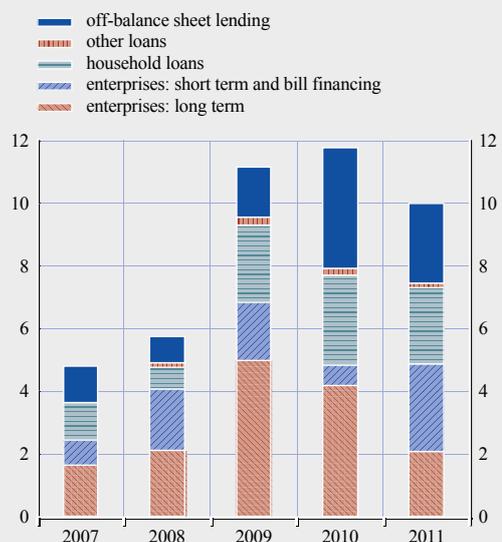
(percentage of GDP)



Source: CEIC Asia database.

Chart 31 Changes in outstanding loans by sector

(RMB trillion)



Source: CEIC Asia database.

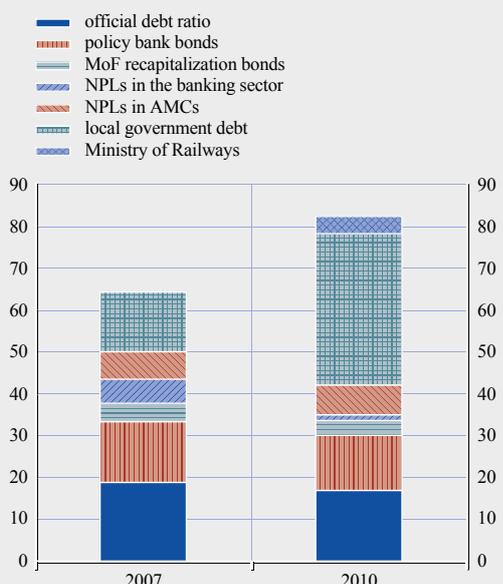
and other liabilities, it is estimated that the public debt-to-GDP ratio could increase to as much as around 73%, i.e. more than four times the official figure (18% in 2010; see Chart 32).

A major concern is that most of the loan growth in China has been associated with very loose credit standards, i.e. loan pricing that has not been properly assessed and implicit guarantees that are not enforceable. In addition, local governments – the entity ultimately responsible for such projects – have not improved their finances in the last few years (the balanced budget constraint has not been effective) and, therefore, might not be able to guarantee all LGFV liabilities. There are two reasons for this: first, the expenses of local governments have been increasing not only as a result of infrastructure spending but also of wider provisions for health, education and pensions. Second, their revenues have become increasingly dependent on land sales, whose prices could be negatively affected by the 12th Five Year Plan, which aims to build 36 million new affordable housing units. Given this situation, official sources have reported that 26% of LGFV loans will be very difficult to recover and another 50% could only be paid back by using external sources of finance (see Chart 33).

While the lack of local government funds and the stimuli-driven nature of lending are at the root of current problems, it is unlikely that the burden will be borne by commercial banks alone. To avoid financial and real spillovers, the central government could guarantee LGFV debts, provide local governments with additional resources or revenues or move debt from the balance sheet of commercial banks to that of a “bad bank”, as has happened in past restructuring waves. However, since China now has a more open and developed banking system than it did during previous banking crises, the materialisation of significant NPLs would seriously damage the credibility of reform policies and the modernisation of the banking system.

Chart 32 Public debt and contingent liabilities

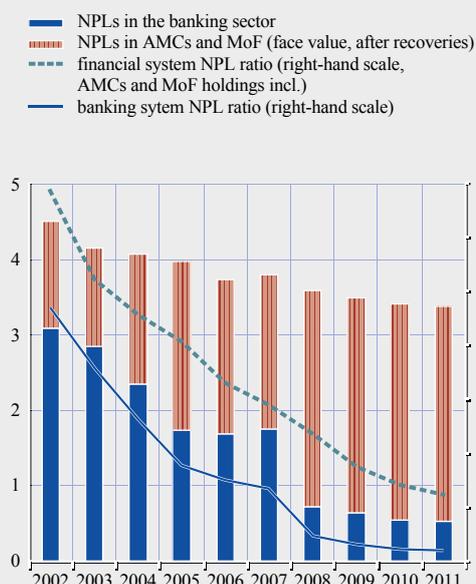
(percentage of 2010 GDP)



Sources: Authors' calculations based on PBC, National Audit Office and Dragonomics (2011).

Chart 33 NPLs and NPL ratio

(RMB trillion, percentage of outstanding loans)



Sources: Authors' calculations based on Dragonomics (2009) and CEIC Asia database.

Box 5

CAN CHINA OUTGROW ITS NON-PERFORMING LOANS?

To determine the size of bad loans, García-Herrero & Santabárbara (2012) build three scenarios based on alternative assumptions on default loss rates and nominal GDP growth. The assumptions are as follows: the default ratio is assumed to range between 26% and 39% of loans to LGFVs, in line with the figures reported by the Chinese authorities and with the default ratio observed after the 1997-98 Asian crisis. In addition, nominal GDP growth in the subsequent decade – which determines the basis for which the bad loans’ burden is reduced over time – is assumed to range between 9% (no inflationary pressures and low real GDP growth) and 16% (inflation and fast growth).

This simple exercise shows that, under non-extreme scenarios, the burden would be between 9 and 14% of 2010 GDP. In any event, as has already happened in the past, the bad loans problem will shrink as a consequence of high nominal GDP growth. In 2020, the burden of new default loans is estimated to be around 2-4% of GDP and the NPL ratio will have increased by 2 to 3%. These figures are significant, but manageable. Even under a more pessimistic scenario the new NPLs would be below 8% of GDP in 2020, although such simple extrapolations may of course mask many significant downside risks.

Impact of the loan financing of the stimuli package

(RMB trillion, unless otherwise indicated)

	Official data		Scenario A Optimistic	Scenario B Baseline	Scenario C Pessimistic
	PBC	National Audit Office			
Assumptions					
Recognized loans to LGFVs (as of December 2010)	14.4	8.5	14.4	14.4	14.4
Default ratio (percentage of LGFV loans)	26%	26%	26%	39%	50%
Nominal GDP growth (2010-2020)	11%	11%	16%	13%	9%
Results					
Loans default	3.7	2.2	3.7	5.5	7.2
New NPLs (percentage of 2010 GDP)	9.4	5.6	9.4	13.9	18.1
New NPLs (percentage of 2020 GDP)	3.3	2.0	2.1	4.1	7.6
Δ NPL ratio (2015)	4.6	2.7	3.7	6.3	9.8
Δ NPL ratio (2020)	2.8	1.6	1.8	3.4	6.3

3 LOOKING TO THE FUTURE: ARE THE LONG-TERM FACTORS THAT HAVE BEEN SUPPORTING CHINA'S GROWTH RUNNING OUT?

In the previous section we argued that, given the lack of a “critical mass” of structural reforms, the recent decline in external and global imbalances is likely to prove only temporary, and imbalances are to re-emerge once global and domestic economic conditions normalise. Imbalances can be considered as losses to efficiency, and as such, a drag on economic growth. Moreover, in a low growth environment these inefficiencies are more likely to create systemic shocks. In this respect, China’s growth outlook is a key element in assessing the sustainability of the export-led and producer-biased growth model.

Ultimately, China’s growth will decelerate as the economy gradually depletes its extensive sources of growth and transits to the phase of intensive growth. The question which remains regards the time horizon over which we can expect that to occur. China’s recent slowdown has led several analysts to conclude that the fundamental factors of growth are running out, capital investments are turning sour, the rural “cheap” labour force has dried up, FDI is moving out of the country, and export market shares have peaked. Based on our analysis, we hold a more optimistic view. We expect fundamental growth factors to remain supportive to growth in the foreseeable future, thus ensuring a smooth deceleration of growth in the medium run. In our view, robust growth can be as much of a blessing as a curse, as it could mask the increasing costs of imbalances and provide grounds for policy-makers to postpone much needed reforms.

In the last three decades, China’s sustained economic growth has been supported by three major domestic factors:

1. robust capital accumulation, which is a feature of China’s investment and producer-biased growth model;
2. a strong increase in labour productivity due to the migration of workers from the rural to the industrial sector, which also sustained downward pressure on wages and, therefore, unit labour costs; and
3. rapid total factor productivity (TFP) growth as a result of the progressive liberalization of the state-controlled economy after 1978.

Recent literature on growth accounting in China, for instance Kuijs (2009) and Park and Park (2010), sheds further light on the main determinants of China’s growth. Despite the commonly held view that China’s growth has been chiefly driven by capital accumulation due to the high investment-to-GDP ratio, recent evidence suggests that TFP growth has also been playing an important role in more recent years. According to Park and Park (2010), the contribution of TFP growth picked up dramatically in China after the Asian crisis and has been by far the most important factor behind economic growth since 2002⁷ (see Table 2), although this conclusion has been questioned by other academics.

The prominence of TFP growth as a driver of economic development is also observable in other emerging Asian economies, as Table 2 confirms. Both in the more advanced newly industrialised

7 While Kuijs (2009) doesn’t give evidence for the strong TFP dynamics (the comparison is problematic due to the different time frame), his estimates also suggest a significant contribution from TFP growth in the 1993-2009 period.

Table 2 Contribution of capital, labour and TFP to GDP growth

(percentage points)

	China				NIEs Asian EMEs	
	Kuijs (2009)		Park & Park (2010)		Park & Park (2010)	
	1978-1994	1993-2009	1997-2002	2002-2007	2002-2007	2002-2007
GDP growth	9.9	9.6	7.7	12.2	5.5	6.6
Employment growth	3.3	1.0	0.6	0.7	0.9	0.5
Labour productivity growth	6.4	8.6	7.1	11.5	4.6	6.1
TFP growth	3.0	2.7	2.5	7.0	2.6	2.7
Human capital	0.5	0.3	1.0	0.4	0.5	0.5
Capital accumulation	2.9	5.5	3.5	4.3	1.5	1.4

Sources: Kuijs (2009), Park and Park (2010).

Note: NIEs (Newly Industrialized Economies): Hong Kong, Korea, Singapore, Taiwan P.C, Asian EMEs: India, Indonesia, Malaysia, Pakistan, the Philippines, Thailand and Vietnam.

economies (NIEs) and the developing economies in the region, the growth contribution originating from TFP was almost double the contribution from capital accumulation in the 2002-2007 period.

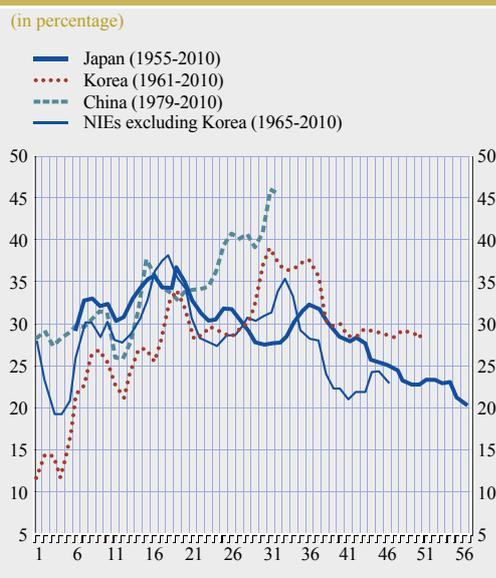
China's TFP growth has two main determinants. First, it stems from labour productivity gains due to the shift of the workforce from the low productivity agricultural sectors to services and manufacturing. This factor is estimated by He and Kuijs (2007) to have accounted for 40% of China's TFP growth in the 1978-2005 period. The remaining part of TFP growth can be ascribed to the gradual economic restructuring of China after 1978, with two major achievements: (i) the reform of SOEs starting in the mid-1980s and (ii) WTO accession in 2002. While there is still plenty of room for market mechanisms to play a larger role in the economy, the marginal impact of further reforms is expected to decline in the future as pockets of inefficiencies recede. The potential for TFP increase via labour restructuring is also limited owing to the gradual depletion of cheap rural labour. Historical experiences and the anecdotal evidence on China's accumulating overinvestment suggest that capital accumulation should weaken in the coming years, thus limiting China's extensive sources of growth. The question, of course, is how abruptly this would happen, i.e. whether we should expect China's growth to slow significantly in the coming years. We look into this issue in the next sub-sections.

3.1 WILL CHINA CONTINUE TO OVER-INVEST?

Economic growth in China has been partly driven by an extensive build-up of capital. China's investment-to-GDP ratio stood at 46% in 2010, well above that of advanced economies or any other economies in the Asian region. While part of the recent increase in the investment share was due to the 2008-10 policy stimulus and, thus, is expected to be reversed in the short run, China's rate of capital formation was already very high before the crisis by any international standards. Anecdotal evidence from certain segments of the economy (in particular steel and construction) suggests that China has been overinvesting in certain sectors. Historical experience with the industrialisation of other economies also tells us that the marginal return on capital diminishes as countries grow richer and accumulate more capital per worker. Japan's investment-to-GDP ratio peaked at 36%; that of Korea and the other NIEs reached its peak slightly below 40% (see Chart 34). This raises the question of whether China's capital accumulation is bound to slow in the near future, with the marginal return on capital diminishing rapidly.

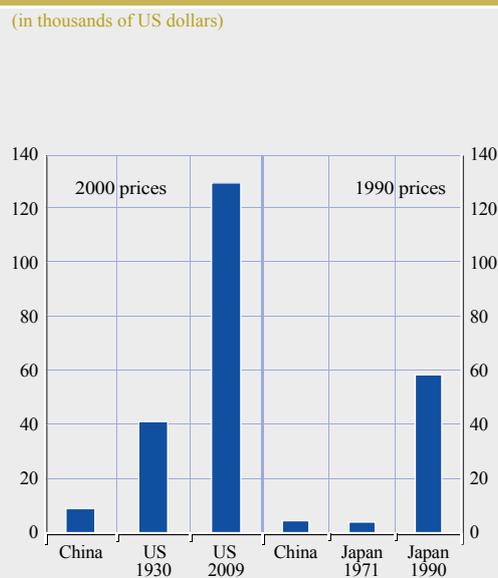
Yet there are two main counter-arguments that support the view that China's rapid capital accumulation may still be sustained for some time. First, China's capital stock is still small relative

Chart 34 Investment/GDP ratio since growth took off (selected countries)



Source: WDI.

Chart 35 Capital stock per capita



Sources: Dragonomics, U.S. Bureau of Economic Analysis, Japan Cabinet Office.

to its population and economic development. Based on estimates by Dragonomics (2010), in 2010 China's capital stock per capita was only 7% of the current US level at market exchange rates (see Chart 35), or about 13% at purchasing power parity. In a historical comparison, the current Chinese capital stock pro capita stands at 25% of the US level in the 1930s, and it is close to the level reached by Japan in the early 1970s. China's capital-stock-to-GDP ratio is estimated at 2.4 in 2010, somewhat below the average in a larger country sample. Overall, these indicators suggest that China still has room to accumulate capital as it keeps developing.

Second, the available empirical evidence does not suggest that the efficiency of China's capital would decline rapidly. While the capital-stock-to-output ratio is increasing in China, which means that the new capital is accompanied by lower GDP growth than in the past, this process is gradual and reflects the shift from labour-intensive agriculture to capital-intensive manufacturing. Bai et al. (2006) found that the return on capital was steadily above 15% in the 1993-2005 period. Looking through conjunctural fluctuations, industrial profit margins have been growing steadily at 6% per year since the early nineties, indicating that, on average, there has been no increase in losses owing to unproductive investment.

These arguments, of course, do not mean that all of China's investments are efficiently allocated. As argued by Dollar and Wei (2007), investment by SOEs presents lower marginal returns to capital than investment by private or foreign firms (by 23 to 54 percentage points in the mid-2000s). If SOEs were investing financial resources more efficiently, the country could work with up to 8% less capital without this negatively affecting its GDP growth.

Nonetheless, the low level of China's capital stock and the steady marginal returns to capital suggest that the current pace of China's capital formation could continue in the short-to-medium run.

3.2 HAS CHINA REACHED THE LEWIS TURNING POINT?

Shifting the focus to total factor productivity growth stemming from labour restructuring across sectors, the turning point also seems to be further off. This is due to three main reasons: (i) China's still abundant rural labour supply, (ii) inward FDI to the mainland areas, and (iii) the authorities' efforts to lower the costs of migration.

As experience has shown in Western Europe in the 1950s and 1960s, in their early stages of development economies with large agricultural sectors and underdeveloped manufacturing and services industries can achieve rapid growth via the reallocation of their labour force to higher productivity non-agricultural activities. At the beginning of the process, non-agricultural wages are kept low by the excess labour supply from the agricultural sector, despite significant increases in labour productivity. However, as labour supply from the agricultural sector tightens, the marginal products of labour in the agricultural and non-agricultural sectors converge and agricultural wages start to increase, putting an upward pressure on wages in the non-agricultural sector as well. This is what is known as "the Lewis turning point".

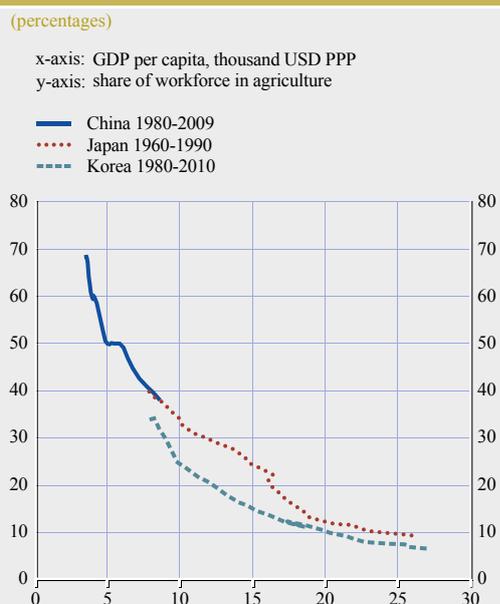
Empirical evidence on whether China has reached the "Lewis turning point" is highly controversial. By investigating various statistics on rural labour force, Cai and Wang (2008) suggest that the turning point is now approaching in China. Zhang et al. (2010) use micro-level wage data in six provinces and conclude that the turning point in China was already reached in 2003. Minami and Ma (2009) claim, conversely, that the turning point is still far off. They draw this conclusion by comparing marginal productivity with real wages in China's agricultural sector. While there are recurrent concerns about, and some evidence of, rising manufacturing wages in China, there is still inconclusive evidence, at least for the time being, suggesting a clear break in the structural trend of labour costs.

Historical evidence on other Asian economies would suggest that China still has a sufficient pool of rural labour supply to support labour productivity growth in the coming years. As Chart 36 confirms, China's agricultural labour share is relatively high compared to other emerging economies, i.e. slightly below 40%. This level is not unprecedented: both Japan and Korea's share was also around 40% in the early stages of their development, but has now declined to below 10%. Therefore, there is still, most probably, room for further labour restructuring and productivity gains.

In relation to the still oversized primary sector, China's urbanization rate is only at 50%. This is the same level as Japan in the mid-1960s and Korea in the mid-1970s (see Chart 37). If economic history is to be a guide, China's urbanization process could continue at the current pace for more than a decade before slowing down. According to the UN's 2011 revision of world urbanization prospects, China's urbanization is expected to continue at the current pace until 2025-30. Urbanization of that scale would create a sustained demand for infrastructural and housing investment, and ultimately contribute to rapid economic growth.

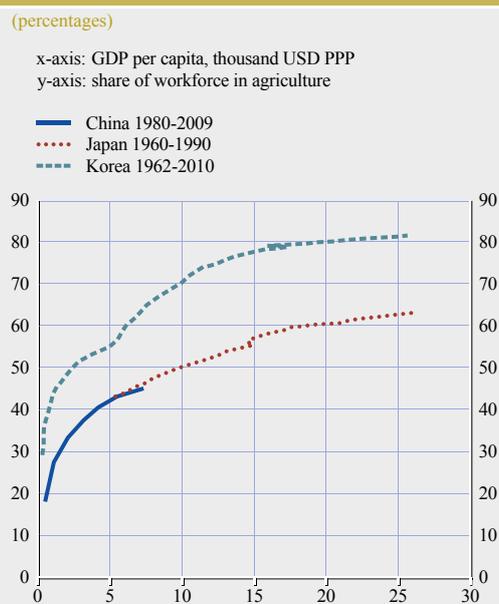
Another important aspect to be taken into account is China's unfavourable demographic developments. The share of young workers available to migrate from rural areas is decreasing and, therefore, is expected to bring the Lewis turning point forward. Yet even from this perspective there are factors that may slow the process. First, capital, mainly in the form of foreign direct investment, is considered to be very mobile geographically and, thus, should be able to utilise cheap rural labour even in case of intensified labour rigidity. The available evidence indeed confirms that there has been a shift of capital from coastal to less developed mainland regions. FDI inflows to the mainland

Chart 36 Share of employment in the agricultural sector vs GDP per capita



Sources: WDI, Statistics Bureau, Japan Ministry of Internal Affairs and Communications.

Chart 37 Urbanization rate versus GDP per capita



Sources: WDI, Statistics Bureau, Japan Ministry of Internal Affairs and Communications.

area have increased by 52% between 2008 and 2010, compared to a 10% increase for the coastal areas. Second, government policies may also help mitigate the costs of migration. For instance, the recent efforts of the authorities to reform the “hukou” registration system and deliver a broader coverage of public services to workers with rural licences who migrate to the cities will likely increase the willingness of rural families to move.

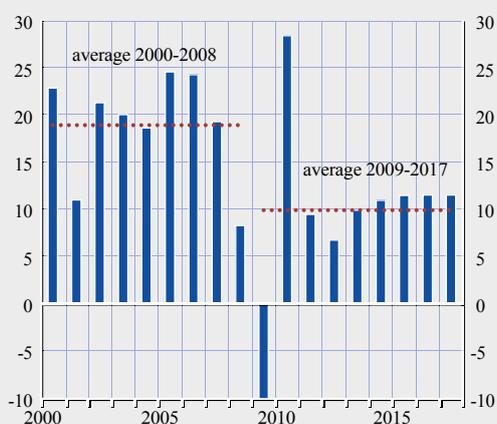
3.3 HOW LONG CAN CHINA’S WORLD MARKET SHARE KEEP GROWING?

The need for economic rebalancing in China is often justified by the argument that, after years of buoyant growth, China’s external demand is slowing. The ongoing economic and financial crisis originating from the United States and then the euro area evidenced the limits of export-led growth models in East Asia, especially in the small open economies. In the case of China, however, two factors may mitigate the impact of the fall in external demand: (i) China’s sophisticated export product structure, with a price-inelastic demand curve; and (ii) the low domestic value-added content of exports. This is discussed below.

Advocates of the idea that China will be forced to rebalance due to a sharp deceleration in external demand use a dual argument, namely that after the crisis both the pace of world demand expansion and China’s gain in world market shares are set to slow. Their argument is that, even after the global economy has fully recovered from the financial crisis, it is unlikely that China’s export growth will continue to persistently exceed 15-20% per year, given the projected trend in domestic demand in the advanced economies. Even accounting for increasing demand from emerging economies and so-called South-South trade, it is estimated that this will imply future export growth at around 10-15%, as Chart 38 shows. This is significantly below the average of the period 2000-08. Also, gaining market shares is a process that has its own limits: historical evidence indicates that all

Chart 38 Export growth (2000-2017 projected)

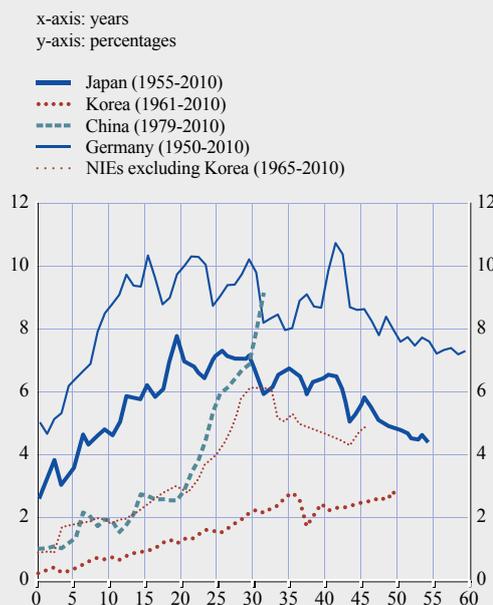
(year-on-year growth rates)



Source: IMF WEO, April 2011.

Chart 39 Market shares of selected economies since growth took off

(in percentage of world market)



Source: WDI.

export-led economies have reached a peak in their world market shares at a certain point of their development path (Guo and N'Diaye 2009b), as Chart 39 illustrates. The reversal of market share gains is a natural step in the process of economic development. It reflects increasing labour costs and the associated appreciation of the real effective exchange rate.⁸

There are, however, two important features of China's exports that should mitigate the downward impact from weaker external demand on economic growth. First, an increasing share of China's exports is highly sophisticated (see Box 6). This means that demand is price-inelastic, i.e. less sensitive to changes in prices. In 2007, high-tech sectors accounted for 33% of China's exports, based on the OECD's technology intensity classification. The high-tech ratio of China's exports was well above that of Japan (20%) or the EU (10%). The "over-sophistication" of Chinese exports is related to the high share of IT and electrical machinery exports in total exports, which accounts for about one third of China's total exports. While the quality of Chinese export products is still below that of most advanced competitors, recent empirical evidence shows that China has climbed up the quality ladder rapidly in the last few decades. By 2007, China had overtaken Korea, Hong Kong SAR and Singapore in terms of the average quality of exports (Pula and Santabarbara (2012)).

Second, the relatively high sophistication of China's exports is due to imported technology via multinational companies and relates to the emergence of global supply chains in Asia (Pula and Santabarbara (2012)). The high import content of exports means that China's exports have a low domestic value-added content. Koopman et al. (2010) estimate that the domestic value-added content of China's exports is close to 60%, which compares with 85% in Japan or 75% in the

⁸ The reversal of market shares of advanced economies in the Asian region was also related to the emergence of global supply chains, which contributed to a shift in market shares from Japan and the NIEs to China, the main export platform in this region.

United States. This, however, also means that China's GDP is less affected by export volatility, and ultimately by fluctuations in external demand. According to Pula and Peltonen (2011), external demand accounted for less than one-fourth of China's total value-added content in 2009, implying that a slowing of exports from 20% to 10% would only shave off 2-3 percentage points from GDP growth. Given China's 10% GDP growth before the crisis, this would have implied a substantial but not disruptive impact.

Box 6

IS CHINA CLIMBING UP THE QUALITY LADDER?

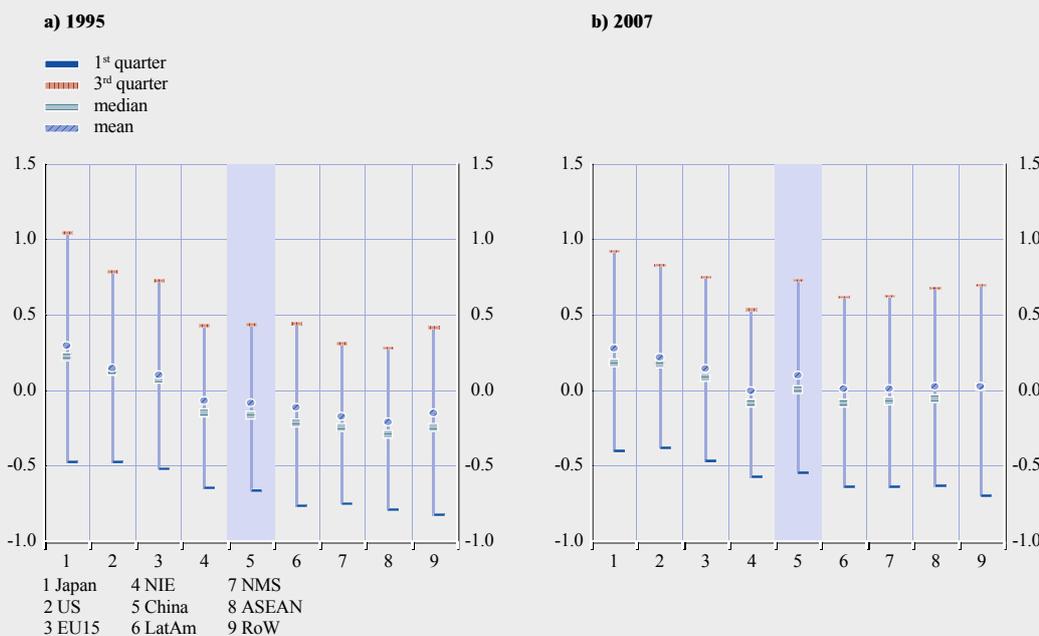
The *quality* of Chinese exports is relevant from several perspectives, such as China's competition vis-à-vis advanced economies in third markets, its long-term growth prospects or even its exchange rate policy. Despite the importance of the quality of Chinese export products, data on it is scarce and ambiguous. This is mainly due to the fact that product quality is unobservable and difficult to measure. Empirical evidence suggests that China's export structure is similar to that of advanced economies, while its unit values are much smaller. Based on the assumption that unit values reflect the quality of exports, the mainstream literature concludes that China exports lower quality varieties of the same products that are exported by advanced economies. This finding usually also leads to the conclusion that Chinese exports present only limited competition challenges for advanced economies.

A recent study by Pula and Santabarbara (2012) on the quality of Chinese exports improves on the existing studies in two ways. The study relaxes the assumption that import prices reflect quality, using not only prices, but also information on market shares to derive a quality measure. Moreover, it analyses the role played by global production networks in the quality of China's exports by using micro data on Chinese exporting firms.

The analysis provides some interesting findings. First, China's share of the EU market is much larger than would be justified by its low average prices, which implies that the quality of Chinese exports is high compared to many competitors (see Chart A). As early as 1995, the distribution mean of the estimated quality of Chinese export products was higher than that of other emerging economies, such as Latin America, the EU New Member States (NMS) and the Association of Southeast Asia Nations (ASEAN) countries.

Second, Chinese exports have gained quality relative to other competitors since 1995, indicating that the country is climbing up the quality ladder. Between 1995 and 2007, the quality of exports from emerging economies caught up with the level of more advanced economies. The quality upgrading was most marked in China, the NMS and the ASEAN countries. By 2007, China had over taken the NIEs in terms of export quality and had gained fourth position in the study's country sample, ranking after Japan, the United States and the EU-15 advanced economies. China has increased the quality of its export products and, if this trend continues, it may pose a potential threat to the market position of the United States, Japan or the EU. According to these findings, China not only exports the same kind of products as developed economies, but is also improving the quality of these products to catch up with its most technologically advanced competitors.

Chart A Distribution of standardised quality estimates



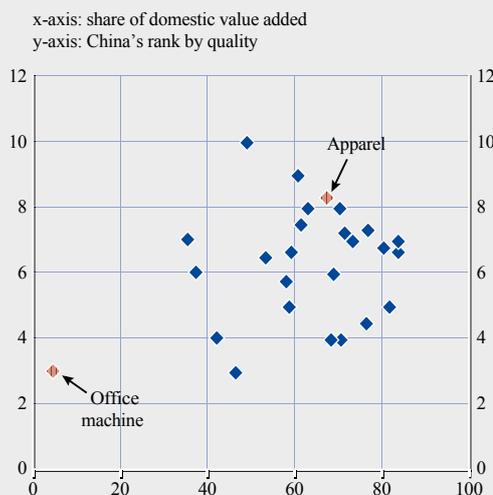
Source: Pula and Santabarbara (2012).

Third, the quality estimates also reveal a significant sectoral heterogeneity. For instance, the quality of China's exports of office equipment is much higher than of the quality of its exports from the apparel industry. In fact, the quality of Chinese products seems to be higher in industries where multinational companies are involved and the domestic share in the total value added is relatively low (see Chart B). An empirical analysis on the supply side determinants of exports reveals that Chinese firms engaged in processing activity tend to export higher quality goods (see the Table).

All in all, these findings suggest that China's export quality and technological upgrading is related to the high-technology content of imported inputs and thus not embedded in the indigenous technological development of the

Chart B Quality ranking vs. the share of domestic value added

(by NACE 4-digit sectors)



Source: Pula and Santabarbara (2012).

Export quality and firm characteristics

Dependent variable: <i>Standardized product quality (hs6 and city level data)</i>	Time fixed effects	City and time fixed effects	Province and time fixed effects
Share processing trade	0.119*** (0)	0.0984*** (0)	0.114*** (0)
Share foreign ownership	0.00268 (0.782)	-0.0161 (0.116)	0.00867 (0.382)
Share private ownership	0.0150* (0.0743)	-0.000833 (0.926)	0.0168* (0.0509)
Real GDP per capita	-0.00423*** (0)	0.00135 (0.386)	-0.00360*** (0)
Graduates/non-agricultural population	-11.79*** (0)	-1.524 (0.718)	-4.195 (0.302)
Constant	0.0169 (0.439)	-0.0724 (0.126)	0.0130 (0.723)
Observations	119,035	119,035	119,035
R-squared	0.015	0.026	0.018

Notes: OLS estimates. Time and location fixed effects not reported. Sample: 1995, 2005, 2007. City level data. p-value in parentheses, ***p<0.01, **p<0.05, *p<0.1.

country. Given that processing trade largely benefits multinational companies, these findings also suggest that the rise in quality of China's exports is a side-effect of the global trend of production delocalisation.

3.4 WILL PROTECTIONISM AGAINST CHINA RISE?

Finally, external factors may also eventually provide some incentives for Chinese policy-makers to adjust towards a more sustainable model of growth. One of these factors may be that the systematic undervaluation of the renminbi exchange rate, coupled with several hurdles to accessing China's domestic markets from abroad and adverse developments in advanced economies, have been in turn fuelling protectionism against China in recent years. If this trend continues in the future, it may eventually encourage bolder reforms in the exchange rate and trade regimes of China. It is clear that trade protectionism has been on the rise despite WTO and G20 commitments. Take, for instance, the experience following the Lehman global shock of 2008. Between November 2008 and October 2010, the Global Trade Alert database identified 690 protectionist measures announced or implemented by G20 members (51% of the world total). Interestingly, 243 measures (35%) were harmful to China. They included:

- import tariffs, with a huge majority of cases issued by other emerging economies;
- antidumping duties (the cases that made it to the headlines were issued by the EU and the US on steel pipes, footwear and tyres, but the majority of measures were again issued by other emerging economies);
- hidden protectionism such as state aid, export subsidies and non-tariff barriers.

The correlation between the rise in the unemployment rate of advanced economies and trade complaints against China has also been striking, as the IMF (2011) has documented. However, fears of a widespread surge in trade protectionism appear to be unfounded thus far.

4 THE THORNY PATH TO REBALANCING

4.1 STOCKTAKING OF REBALANCING POLICIES

The Chinese authorities are well aware of the unsustainable foundations of Chinese growth over the longer run. As early as 2007, Premier Wen Jiabao cautioned that “the biggest problem with China’s economy is that the growth is unstable, unbalanced, uncoordinated, and unsustainable.” Accordingly, several areas which require rebalancing measures have been identified, including: (i) widening the social safety net and raising household incomes and, ultimately, consumption; (ii) removing the distortions in relative prices – mainly in the exchange rate and input costs – to exploit real comparative advantages and make the model more sustainable; (iii) reducing the government’s interference in the allocation of resources; and (iv) liberalising the financial system, which would allow for a more efficient and effective intermediation of savings.

The 12th Five Year Plan, approved in March 2011, seems to have provided the required reforms with the right sense of direction, although concreteness may be still lacking in several areas. In particular, the authorities may have to put more effort into the enhancement of the services sector and consumption relative to the promotion of manufacturing and investment. Also, financial market reform lacks traction, thus raising doubts as to what the authorities are really aiming at.

Table 3 gives a broad idea of what is being done, but also of what has been reversed and what remains to be done in several rebalancing areas. The main indications can be summarised as follows.

- Some initiatives have been taken to *boost consumption, raise household and rural incomes, and reduce precautionary savings and inequality*. For instance, the expansion of the social safety net

Table 3 Measures to rebalance China’s economy: an overview

	In process	Reversed	To be done
Strengthen private domestic demand			
<i>Boost private consumption</i>			
Household and rural incomes			
Implementation of labour law and increasing minimum wages	X		
Labour mobility (“ <i>hokou</i> ”)			X
Social housing subsidies	X		
Agricultural subsidies	X		
Income tax reform			X
Consumption subsidies (cars and durable goods)	X	X	
Reduce precautionary savings via enhanced welfare			
Rural and urban pensions reform	X		
Education	X		
Health care (subsidies and infrastructure)	X		
Reduction of inequality			X
<i>Boost private investment</i>			
Crowding out from public investment stimuli 2008-2010		X	
Financial sector reform (see below)			X
Export-led model discontinuation / Private sector promotion			
Exchange rate reform	X	07/08-06/10	
Export tax rebate system		X	
Input costs			X
Manufacturing sector’s domestic value added			
Technological upgrading		X	
Service sector development			X
Inland regions development	X		

Table 3 Measures to rebalance China's economy: an overview (cont'd)

	In process	Reversed	To be done
Financial market reform and financial opening up			
Interest rate liberalization and price-based monetary policy	X	2004-2012	X
Bond market development	X		
Market driven banking sector		X	
Stock market development		X	
Other financial reforms (Derivatives, OTC market)			X
Other structural reforms			
Agricultural sector reform			X
Strategic industries development	X		

(pension, healthcare and the education system) has accelerated since the eruption of the global financial crisis in 2008. However, some of the main root problems have not been addressed yet: income tax reform, which would allow a widening of the tax base, has not been initiated yet; a lot of progress has still to be made as regards the access to basic public services of those workers who have emigrated; and some of the incentives to foster consumption were only transitory in nature, as in the case of subsidies on car or durable goods acquisitions.

- The authorities have not been particularly pro-active yet in reducing *distortions in relative prices and inputs costs*. This would be a crucial step in changing the incentive structure so as to promote economic rebalancing. In particular:
 - On the exchange rate front, on 19 June 2010 the PBC announced the enhancement of the exchange rate flexibility of the renminbi and confirmed its peg to a basket of currencies instead of the US dollar only. However, as we have discussed in Section 2.1.3, there is still considerable scope for reform in this field.
 - On the labour cost side, it has been acknowledged that an increase of nominal wages above nominal GDP would be required for rebalancing – a phenomenon that has not been observed yet, however, although the increase of minimum wages is a step in that direction.
 - Regarding capital costs, real interest rates remain excessively low compared with output growth, which continues to set incentives to over-invest and distort the allocation of capital. Despite recent measures, further interest rate liberalization and the move of monetary policy towards a price-signal-based transmission mechanism are necessary. These steps would help to raise the cost of capital and allocate savings more efficiently.
 - The under-pricing of energy and low-level environmental protection have also de facto subsidised the current manufacturing-oriented model, a situation which should be reversed.
- *Private initiative in the allocation of resources should be further encouraged*. Measures taken to boost the weight of the private sector and the services sector in the economy, thus making the model less state- and export-led, have not evidenced much progress thus far. In particular, while the 12th Five Year Plan ambitiously targets a four-percentage-point-of-GDP increase in the share of services, this does not seem fully credible given the underperformance of the previous plan in this field (see Table 4).

Table 4 Rebalancing policies. A comparison between the 11th and 12th Five Year Plan

	11th FYP target	2006-10 actual	12 FYP target
1. <i>Real GDP growth</i>	7.5% p.a	11.2% p.a	7% p.a
2. <i>Income policies</i>			
Per capita disposable income of urban households	5% p.a.	9.7% p.a.	>7% p.a.
Per capita net income of rural households	5% p.a.	8.9% p.a.	>7% p.a.
3. <i>Social security</i>			
Population covered by basic urban pension	5.1% p.a.	8.1% p.a.	7.5% p.a.
Coverage of basic health insurance (percentage of population)	-	-	3%
4. <i>Social housing</i>			
Construction of economic housing	-	-	36 million units
5. <i>Services sector development</i>			
Share of services in GDP (percentages)	3 pps	2.7 pps	4 pps
Share of services in total employment (percentages)	4 pps	3.5 pps	-

- The fiscal budget does not yet show any major shift in the expenditure pattern to support rebalancing policies (see Table 5).
- Measures to *reform financial markets and gradually open the capital account* are also mentioned, but not well detailed in the 12th Five Year Plan (see Table 4). China should develop a comprehensive agenda in this field. Continued delay could lead to a disorderly development, with the financial system outpacing supervisory capabilities and suffering from regulatory gaps. The reform strategy should be flexible enough, paying particular attention to the proper sequencing between exchange rate reform, changes in monetary policy management and liberalisation of interest rates, development of financial markets and opening up of cross-border financial flows.

All in all, the ultimate indicator that the policy-driven rebalancing process has progressed too slowly is that there has been no tangible sign of decline in domestic savings, which is an essential component of the agenda. As discussed in Section 2.1.1, the narrowing current account surplus has been explained by the impact of policy stimuli on investment, and not by a decrease in domestic savings.

Table 5 Composition of the 2011 budget of the central government

(selected items, expenditures in percentage of total)		
	2010	2011 budget
Education	5.3	5.5
Social security and employment	7.8	8.1
Medical and health care	3.1	3.2
Guaranteeing adequate housing	2.3	2.4
Urban and rural community programs	0.3	0.3
Agriculture, forestry and water conservancy	8.0	8.4
Stockpiling grain, edible oils and other commodities	1.6	2.1
Transport, transportation costs	5.4	5.3
Commercial services industry	1.7	3.3

4.2 IS REBALANCING EMBEDDED IN ECONOMIC DEVELOPMENT? WHAT IS THE ROLE OF POLICY?

The analysis conducted in Section 3 led to the conclusion that not only has China's growth model delivered in the past, it is expected to deliver relatively sustained growth in the foreseeable future. While this model engenders imbalances, such imbalances do not fundamentally impair its main achievements for the time being. Factors such as the misallocation of capital, financial repression and the low return on FX reserves shave off a few percentage points from GDP growth and create losses on external assets; and yet at around 8% China's

growth may be still strong enough to ensure social prosperity to a sufficient extent. In other words, the need for urgent implementation of rebalancing policies is far from being apparent.

In addition, historical experience suggests that in an economy transiting from high to lower but stable growth, economic rebalancing can to a significant extent also take place “naturally”, i.e. independently of rebalancing policies. The (partial) economic rebalancing of Japan, Korea and Taiwan, to mention the most relevant examples, occurred to a significant extent as a “natural” consequence of catching up.

In the same vein, it could be expected that, as China develops further, the decline in the marginal productivity of capital will naturally limit investment. Also, the depletion of cheap rural labour will increase wages and the level of consumption. Demographic changes will also naturally contribute. The dependency ratio, whose decline we discussed in Section 1.1, is now expected to start rising again by 2015 at the latest (see Chart 40). As a result, the number of people who are only in a position to consume – the oldest and the youngest members of the population – will increase by definition, a development which will naturally lower the savings rate and the ensuing domestic funding of investment.

If rebalancing will also be, to some extent, a “natural” process embedded in economic development, what is the role of rebalancing policies?

In our view, the key lesson to be drawn from economic history is that not all catching-up experiences prove successful. Many economies are caught in the so-called “*middle income trap*”, i.e. they are unable to revitalise growth once the extensive sources of growth we discussed in Section 3 are depleted.

In order to avoid the middle-income trap and secure sustainable economic growth, a bolder and more comprehensive set of domestic reforms is required in China. This is because in a lower-growth environment:

- The corporate sector will have to operate with reduced profit margins owing to the increased cost of capital and labour. Therefore, protected segments in the product market should be liberalised and deregulated, and price distortions eliminated;
- Financial institutions will have to ensure a much more efficient allocation of capital than is the case under the current financial repression model, in an environment where price and information distortions may bring about significant losses and financial stability risks. Therefore, financial markets should be liberalised further;

Chart 40 China's dependency ratio

(people of non-working age as a share of those of working age; percentages)



Sources: Haver, United Nations.

- The demand from large parts of the household sector for higher relative incomes and increased consumer spending will rise. Therefore, wider social security buffers and more intensive income redistribution should be pursued; this would also help avoid social unrest.

All in all, as the transition to very high real per capita income requires efficient resource allocation to enhance the development of sophisticated services, structural policies – for instance, measures that enhance competition in domestic sectors, eliminate financial repression and promote advanced education – would facilitate this transition.

Conversely, “natural” market forces coupled with unsound policies may well result in sub-optimal economic outcomes, both domestically and globally. We have learned that unsustainable global imbalances across the key major world players have been a major root cause of the still unsolved global financial and economic crisis – as argued in the literature reviewed in Dorrucchi and McKay (2011). Macroeconomic and structural policies should therefore promote the orderly unwinding of such imbalances *before* it takes place via abrupt and painful market adjustment. Multilateral cooperation can make its own contribution to setting the right incentives for major economies to rebalance.

To sum up, a policy-led, rather than solely market-driven, rebalancing of the Chinese economy is crucial for the smooth economic transition of the country towards more sustainable growth, both from a domestic and global perspective. Policy-makers should act pre-emptively, because it is very difficult, if not impossible, to recognise the deceleration of an economy’s underlying growth in real time. It usually takes many years for structural policies to have a tangible impact on the economy and they should, therefore, be implemented well before risks to growth materialise.

4.3 THE POLITICS OF REBALANCING

China’s leadership is well aware of the limitations of the producer-biased and export-led model. Interestingly, there is no major disagreement between the Chinese and the international community about the need for rebalancing policies to ensure China’s smooth transition to a more sustainable model. The disagreement is more about *how fast* the reform measures should be implemented.

It has been argued that intertwined economic and political interests make China’s rebalancing more difficult and cause the reform process to advance slowly (see e.g. Pilling 2012). Political resistance to the reforms stems from various sources. First, in a system where political success at the local level has been historically dependent on quantitative growth, reforms that emphasise the quality of growth are bound to meet some resistance. Second, the current growth model required to keep some strategic sectors of the economy closed and under state control (e.g. financial markets, services, heavy industry). The planned opening up of these sectors to competition does not only meet resistance from SOEs and banks, but is also questioned in government circles owing to worries about exhausting the “privilege” of direct macroeconomic policy management. Not surprisingly, major resistance is observed in the export lobby, which is one of the most influential in China and the one which reforms affect most directly (Wen 2012).

Certain institutions may also be held accountable for the authorities’ sluggish progress with their reform agenda. As an example, exchange rate policy is set by the Politburo Standing Committee, China’s top de facto power organ, on the basis of information collected from the PBC, the Ministry of Commerce, the Ministry of Finance, and the National Development and Reform Commission.

Given that the process includes a large number of institutions with varying interests, changes to the exchange rate policy are difficult to accomplish. Were exchange rate policy delegated to the monetary authorities exclusively, changes could probably be faster.

It is understandable that there is policy resistance to change a model of growth that delivered for more than thirty years. This slow pace may also well involve short-term advantages. Insufficient progress, however, would imply longer-term costs, given the fading away of the longer-run supporting factors. Riedel (2011) argued, among others, that political vested interests which manage to block economic policy reforms necessary for the final catch-up phase inevitably contribute to countries falling into the middle-income trap. To avoid this, authorities should accelerate the implementation of their reform agenda, despite the resistance from interest groups.

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