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China's real GDP growth decelerated to 6.8% in Q4 2008 on sharp contraction in external demand. Despite the extremely difficult conditions, China still managed to grow by 9.0%, the highest growth rate among the major economies in the world.

Given its massive fiscal stimulus package, ample room for further monetary ease, and credible institutions, we remain optimistic that a growth rate close to its potentials can still be achieved in 2009.

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Executive Summary

- China's real GDP growth decelerated to 6.8% in Q4, compared to 9.0% in Q3, led by a sharp fall in external demand. The economy still grew by 9.0% in 2008, the highest growth rate among the major economies in the world.

- Meanwhile, inflationary pressure waned fast with the December CPI inflation reaching 1.2% and PPI inflation falling by 1.1% yoy. CPI inflation eased sharply in Q4, reaching 2.5% on increased slack in the economy and continued falls in food, energy and commodity prices. For the year as a whole, CPI inflation increased by 5.9%, about 1.1 percentage points above the government target for 2008.

- In response to the rapidly deteriorating global financial and economic conditions since our October review, the Chinese authorities reacted quickly and announced a massive fiscal stimulus package of RMB 4 trillion in November 2008 with an aim to boost infrastructure spending and the flagging construction and real estate sector. In addition, the government announced a new medical reform package in January this year intending to spend RMB 850 billion over the next three years (2009-2011) to provide universal health care for all. These packages are timely and large enough to help cushion the expected sharp contraction in external demand, thus offering strong stimulus to growth for 2009.

- Given China's large fiscal stimulus packages, ample room for further monetary eases, and credible institutions, we are optimistic that a growth rate close to China's economic potential is still achievable in the coming years. We therefore maintain our forecast that China is to grow at around 8.1% in 2009. However, because of the lags in implementing fiscal policy, we expect the Chinese economy to continue to moderate in Q1 2009; the economy is expected to pick up momentum from Q2 onwards. Inflationary pressure is expected to remain minimal. Our forecast for baseline CPI inflation is 0.7%, much lower than the government target of 4% large because of falling food and global commodity prices and diminishing external demand pressures.

- Looking forward, there are a number of downside risks surrounding our relatively upbeat outlook on the Chinese economy. First, the very much needed large fiscal stimulus package runs the risk of making the Chinese economic structure even more imbalanced as the investment share of the GDP will likely top 48% in 2009. This will not be sustainable for the future. Therefore, the authorities may want to use this opportunity to engage in further structural reforms in areas such as the under-funded education and the social security system so to rebalance the Chinese economy in a fundamental way.

- Second, the banking sector risk may increase if banks were to engage in policy lending without careful consideration of commercial risks in an economic downturn. Though manageable according to our assessment, the non-performing loans (NPLs) in the banking system will probably rise again. Therefore, the regulatory authority has to strike a balance between the need to encourage commercial banks to lend in an economic downturn and the need to strengthen the risk management practices so to prevent large NPLs from re-occurring in the banking system.

- Third, economic slowdown and a sharp fall in export growth will intensify China's unemployment problem in both urban and rural areas in 2009, thus giving rise to social tensions and instability. While this calls attention for urgent reform on the existing social safety net, the local governments may need to take initiatives by designing innovative social programs aimed at maintaining social harmony, on top of their penchant for infrastructure programs.

1. GDP Growth and Economic Activities

China's real GDP growth decelerated to 6.8% in Q4 from 9.0% in Q3, led by a sharp fall in external demand, which depressed exports and overall economic activities, while domestic consumption and net exports remained solid (Chart 1). For the year as a whole, the economy grew by 9.0%, still the highest among the major economies in the world.

The deceleration appeared to be consistent to some measures of economic activities. Industrial activities were particularly sluggish in Q4. Value-added industrial production grew by only 6.4% yoy, down from 13.0% yoy in Q3 and 16.3% in the first half. Meanwhile, economic slowdown has also affected industrial profits. Growth in industrial profits fell to 4.9% yoy in the first eleven months of 2008, compared with 37.0% over the same period in 2007.

A sharp slowdown in industrial production in 2008 H2 was affected by a slump in export growth, which in turn was affected by much weakened expectation on economic activities in the US and the EU (Chart 2). Specifically, growth in both heavy and light industry production experienced a sharp drop until a slight rebound in December 2008.

Moderated from a fast growth of 18% yoy in 2007, household disposable income grew by 14.7 yoy in 2008. However, retail sales continued to expand at a fast pace. Nominal retail sales grew by 20.6% yoy in Q4, compared with 23.2% yoy in Q3 from 21.4% in the first half of 2008 (Chart 3). Real retail sales grew even faster, increasing by 17.3% yoy in Q4, after a 16.4% yoy growth in Q3 and a 13.0% rise in the first half.

While fixed asset investment (FAI) in nominal terms slowed somewhat to 23.4% yoy in Q4 from 28.8% yoy in Q3 and 26.8% yoy in 2008 H1, real FAI growth picked up to 20.5% in Q4 from 17.4% yoy in Q3 on falling producer prices. The pace is roughly the same as the growth rate in 2007 Q4 (Chart 4).

While the overall FAI held up well, some sectors have experienced some sharp falls. In particular, FAI growth in the real estate sector slowed to slightly above 10% (Chart 4). Given there is a close relationship between China's manufacturing investment growth and export growth, we expect FAI in the manufacturing sector to experience some further falls going forward.

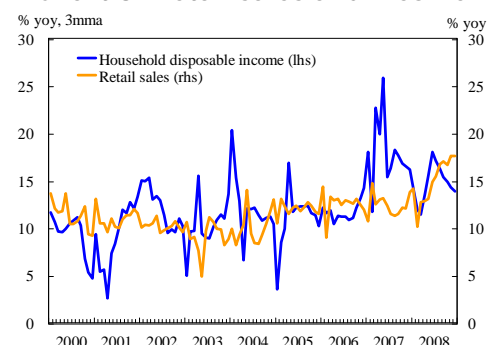**Chart 1: Real GDP growth**
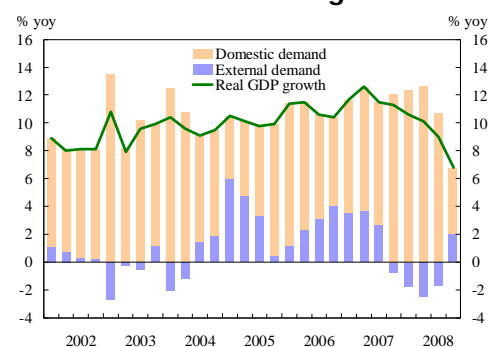
Sources: CEIC and BBVA estimates.
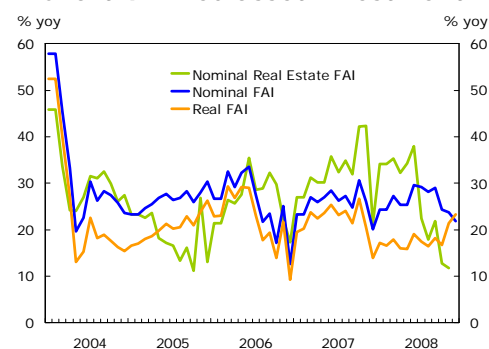
Chart 2: Industrial production and exports
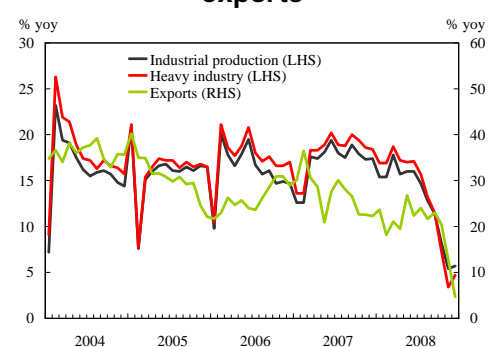
Sources: CEIC and BBVA estimates.

Chart 3: Retail sales and income

Sources: CEIC and BBVA estimates.

Chart 4: Fixed asset investment

Sources: CEIC and BBVA estimates.

2. External Trade

China's exports contracted further by 2.8% yoy in December from a decline of 2.2% in November. However, imports dropped even more sharply by 21.3%. Trade surplus thus continued to remain substantial at USD 39 billion (Chart 5). For the year as a whole, China's exports grew by 17.2% yoy, lower than 25.8% in 2007.

Sharp contraction of external demand, together with rising wages and real appreciation of the renminbi exchange rate, led to the export retrenchment. China's export growth is expected to continue to decline in 2009, while trade surplus will remain positive in the future for two reasons: First, the size of China's exports is much larger than that of imports. Second, Chinese manufacturing products are mostly concentrated in low-value chain area, therefore demand for such good remained inelastic even in an economic downturn. However, the net export contribution to growth is to remain negative in 2009.

Meanwhile, import growth in 2008 slowed to 18.5% yoy from 20.8% in 2007, largely reflecting the falling oil and commodity prices in the second half of 2008. Nevertheless, trade surplus climbed to USD 295.5 billion in 2008, which is USD 30.3 billion higher than that in 2007. Thus, the contribution of net exports to GDP growth should remain highly positive in Q4, despite export slowdown in Q4 2008.

The rapid fall in commodity prices after 2008 H1 helps explain import contraction (Chart 6). Since China imports primary products mainly from ASEAN and Latin America, import growth from these economies dropped sharply, particularly those from ASEAN economies.

Meanwhile, export growth to major markets all declined substantially in December. In particular, exports to the EU and the US recorded larger declines, due to the spread of financial crisis from Wall Street to Main Street (Chart 7). Moreover, the spread of financial crisis to emerging market economies has also dimmed the prospect of China's export performance further.

While the production-based GDP growth measure slowed considerably, our review on the latest economic development appears to show that the proxies of expenditure-based GDP measure continue to hold up well.

We therefore believe there is a high probability that the production-based GDP measures, led by a sharp fall in industrial production growth and the much slowed profitability, may have downwardly biased the GDP figure for Q4.
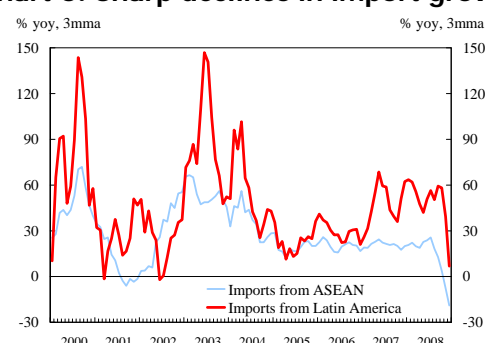
Given large discrepancies exist between production-based and expenditure-based GDP for previous years, we predict that the 2008 GDP, especially real GDP growth for Q4, will be revised higher later this year (Table 1).

Chart 5: Trade performance
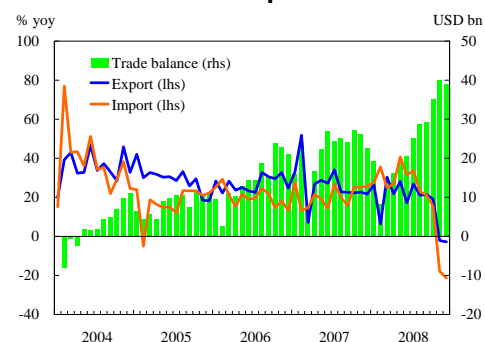
Source: CEIC.

Chart 6: Sharp declines in import growth

Sources: CEIC and BBVA estimates.

Chart 7: Exports by markets
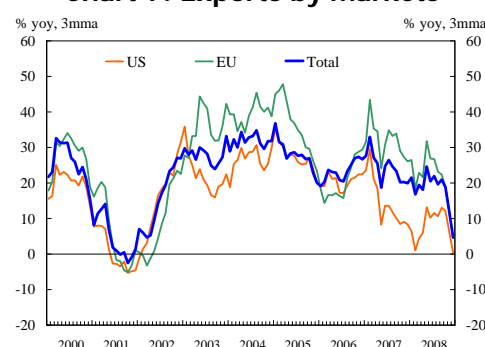
Sources: CEIC and BBVA estimates.

Table 1: GDP figures in different approaches

	Production-based				Expenditure-based
	Preliminary		Final		
	Nominal GDP	Real GDP	Nominal GDP	Real GDP	Nominal GDP
	(RMB bn)	(% yoy)	(RMB bn)	(% yoy)	(RMB bn)
2005	18,232.1	(9.9)	18,386.8	(10.4)	18,869.2
2006	20,940.7	(10.7)	21,192.3	(11.6)	22,165.1
2007	24,661.9	(11.4)	25,730.6	(13.0)	26,324.3
2008	30,067.0	(9.0)	n.a.	n.a.	n.a.

Source: China's National Statistical Bureau.

Box 1: The impact of global slowdown on China's exports

China's export growth contracted in the last two months in 2008 led by intensified economic downturn in its key trading partners. Indeed, 2009 could prove to be the most difficult year for Chinese exporters ever since the country's reform and opening up in 1978. Going forward, we expect export performance to deteriorate further. This box assesses the impact of the global slowdown on China's exports using trade elasticity estimated from equations of trade balance and exports.

1) Trade elasticities

Trade theory suggests that a country's exports are determined by external demand, usually measured by world GDP growth (approximated by the G-3 growth) excluding the exporting country and the real effective exchange rate (REER), a measure of trade competitiveness. The trade balance equation, on the other hand, is determined by external demand, REER, and some control variables such as its export share in the international market and investment growth.[1] Following Shu and Yip (2006), the detailed specifications of the export and trade balance equations are shown in the following text box.[2]

Long-run relationship:
$$x_t = \alpha_0 + \alpha_1 WGDP_t + \alpha_2 REER_t + \varepsilon_t$$

$$TB_t = \beta_0 + \beta_1 WGDP_t + \beta_2 REER_t + \beta_3 X_t + \varepsilon_t \text{ where } X_t \text{ is a vector for control}$$
variables such as China's export market share and investment growth

Short-run dynamics:

$$\Delta x_t = \gamma_0 + \gamma_1 ecm_{t-1} + \gamma_2 \Delta WGDP_t + \gamma_3 \Delta REER_t + \sum_{i=1}^{n} \varphi_i \Delta x_{t-i} + \varepsilon_t$$

$$\Delta TB_t = \gamma_0 + \gamma_1 ecm_{t-1} + \gamma_2 \Delta WGDP_t + \gamma_3 \Delta REER_t + \sum_{i=1}^{n} \varphi_i \Delta TB_{t-i} + \varepsilon_t$$

These equations are estimated using an error correction technique that allows for both short-term dynamics and long-term equilibrium value. The results are obtained in Table B1.1.

One interesting observation that consistently emerges from our observation is that the coefficients of external demand as approximated by G-3 real GDP growth rate are much larger than those of the exchange rate, measured by REER. As shown in Table B1.1, coefficient of income effect is about 5.1 times bigger than that of exchange rate effect. However, the same ratio between income and exchange rate effect is larger for ordinary trade where trade takes place without involving intermediate imports, whereas that for processing trade is much smaller, suggesting the exchange

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[1] This also assumes that Marshall-Lerner Condition holds, that is, the volume effect domintates value effect. Whether this condition holds or note and stability of these trade elasticities will be important in predicting the potential effect of a change in the real exchange rate of an economy on its trade balance.
[2] Shu, Chang and Remond Yip, 2006, "Impact of Exchange Movements on the Mainland Economy," *China Economic Issues*, Hong Kong Monetary Authority, July.

rate effect affects China's export growth in processing trade much less than the ordinary trade. These results are conveniently summarized in Table B1.2.

Table B1.1: Determinants of China's exports and trade balance

	Exports	Of which: Ordinary exports	Processing exports	Trade balance
Long-run relationships				
$G3\ GDP_t$	8.55 ***	8.59 ***	8.34 ***	0.19 ***
	(34.16)	(28.51)	(39.23)	(7.60)
$REER_t$	-1.67 ***	-2.12 ***	-1.22 ***	-0.04 **
	(-6.41)	(-6.78)	(-5.54)	(-2.45)
Short-run dynamics				
ecm_{t-1}	-0.10 **	-0.14 ***	-0.10 ***	-0.13 *
	(-2.28)	(-2.56)	(-2.79)	(-1.72)
$\Delta G3\ GDP_t$	3.36 *	2.17	4.89 ***	0.06 ***
	(1.94)	(0.81)	(3.31)	(2.82)
$\Delta REER_t$	-0.17	-0.03	-0.20	-0.04 *
	(-0.59)	(-0.06)	(-0.82)	(-1.76)
Adjusted R^2	0.27	0.15	0.27	0.60
Sample period		1994Q1-2008Q4		

Source: BBVA estimates.
Note: t-values are in parentheses, *, ** and *** indicate that variables are significant at 10%, 5% and 1% levels respectively.

Table B1.2 Trade elasticities

	Income elasticity (A)	Exchange rate elasticity (B)	Ratio (A/B) (absolute value)
Exports	8.55	-1.67	5.1
Of which:			
Ordinary exports	8.59	-2.12	4.0
Processing exports	8.34	-1.22	6.8
Trade balance	0.19	-0.04	4.8

Source: BBVA estimates.

2) Forecasts for China's trade balance for 2009

Using our estimated trade elasticities and various scenarios on GDP growth in the G-3 economies, we will then be able to obtain forecasts for China's trade balances for 2009. If we assume the REER to increase by 2% and the G3 GDP growth to fall by 0.3%, this will lead to a fall in China's export growth by 11%, while the trade balance falls by 7%. Despite a large fall in export growth, the trade surplus remains sizable. It is projected to be USD 276 billion. Our rough estimate shows that the contribution from net exports to GDP growth will be a negative 0.6 percentage point.

However, if the G3 economies were to experience a more severe recession with an economic contraction of 1.9% and the REER stays at the level of 2008 in 2009, then China's exports will fall by 21% and the trade balance will fall by 55%. Despite the large fall, China is still likely to maintain a trade surplus of USD133 billion, largely because its exports are 1.3 times larger than imports. In terms of contribution to GDP growth, the net merchandise exports will contribute negatively by 3.8 percentage points.

Table B1.3 Forecasts of external trade

| Assumption on G3 GDP	Exports (% yoy)	Trade balance		
		(USD bn)	(% yoy)	(contribution to GDP growth, ppt)
-0.3%	-11%	276	-7%	-0.6
-1.3%	-21%	133	-55%	-3.8

Source: BBVA estimates.

Some Implications

Indeed, our estimates on China's trade balance and its contribution to growth have important implications for projecting China's reserve accumulation for 2009. Trade surplus has been a large component for China's accumulation in last several years, contributing to USD 102, 177, 263, 295 billion for 2005, 2006, 2007, and 2008, respectively, which are major contributors to China's FX reserve for these years.

If trade balance were to fall with the range of USD 133 to 276 and with falling FDI inflows from the global credit crunch, the net accumulation on FX reserves will likely remain small. Thus, the central bank will no longer have a need to sterilize capital inflows and the pressures for RMB appreciation will diminish.

This will also lead to much diminished net purchase of US debt. However, as China's holding of US financial assets remains small at 2% and 9.5% out of total foreign holdings of US assets (Chart B1.1 and B1.2), we expect the impact on US yield curve to be rather limited.

Chart B1.1 Total foreign holdings of US long-term financial assets (June 2007)
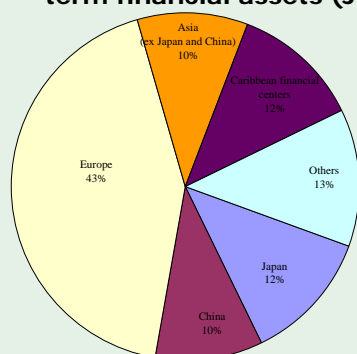
Source: US Treasury.

Chart B1.2 Total US long-term financial assets (June 2007)
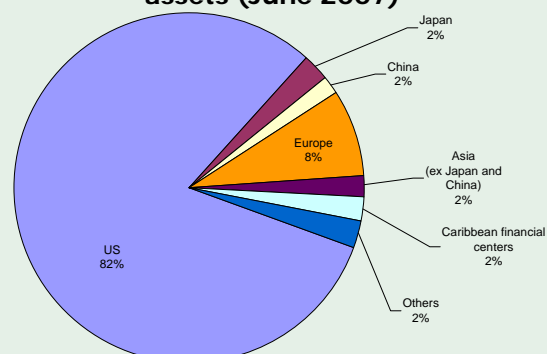
Source: US Treasury.

Box 2: Export slowdown and the unemployment problem in China

1) China's employment pressure in 2009

While 2009 is a tough year for China to maintain fast growth, the employment conditions will be even tougher. As close to 50% of value-added output in the manufacturing sector comes from the export sector, falling export growth will see large job losses this year. In particular, this problem will be exacerbated by a large cohort of fresh college graduates after years of rapidly expanding enrollment in China's higher education system.

According to various estimates published by academics and governmental bodies, there expected to be about 12 to 13 million working age population entering the labor market in 2009 (Table B2.1). While employment pressure has increased in recent years, China's ability to generate new jobs appears to have been faltering, largely owing to its economic structure with a high reliance on heavy industry. Indeed, the share of the heavy industrial output to the total industrial output has increased by twofold from 30% in 1997 to about 60% in 2007.

Based on employment elasticity, we estimate that China will be able to generate about less than 4 million jobs in 2009 if assuming a growth rate of 8.1 percent according to our latest GDP forecast (Table B2.2). This will thus lead to a net increase of unemployed people in the urban area to about 8.24 to 9.28 million (Column 4, Table B 2.1). After accounting for the registered urban unemployment in the previous year, we approximate that China's urban unemployment will jump from around 4.20 percent in 2008 to as high as 7.84 percent in 2009.

Table B2.1 Estimated labor supply and unemployment in China for 2009

Year	Labour force[1] (person, mn)	Newly-added labor force[2] (person, mn)	Net increase in unemployed workers[3] (person, mn)	Registered urban unemployed workers[8] (person, mn)	Registered urban labour force[9] (person, mn)	Registered urban unemployment rate (%)
2004	771.29	7.06	---	8.27	196.9	4.20
2005	778.17	6.88	0.63	8.39	199.8	4.20
2006	784.52	6.35	0.60	8.47	206.6	4.10
2007 [4]	794.52	10.00	4.10	8.30	207.5	4.00
2008(f) [5]	805.65	11.13	7.01	9.12	217.1	4.20
2009(f) [6] {max}	818.65	13.00	9.28	18.00	229.5	7.84
2009(f) [6] {min}	817.61	11.96	8.24	16.96	229.2	7.40

Sources: International Labor Organization (ILO), Chinese Academy of Social Science (CASS) and the Ministry of Human Resources and Social Security (MOHRSS).

Notes:
1. Figures refer to ILO estimates. For figure in 2007 and onward are derived by adding newly-added labor force in previous year.
2. Year on year change in labor force.
3. Difference between newly created job posts and newly-added labor force.
4. According to a survey conducted by CASS, newly-added labor force was about 10 million persons in 2007.
5. According to a survey conducted by CASS, registered urban unemployment was expected to reach 10.742 and newly-added labor force roughly increased to 9 million persons.
6. Based on the press released from the MOHRSS, in 2009 newly-added urban labor supply will increase to 13 million, while urban laid-off are 8 million and 3 million persons retired. Assuming the majority of the labor force is concentrated in the urban area and simply substitutes this figure as proxy for 2009 newly-added labor force as the upper-bound. Within 13 million persons, 6.1 million of them are graduates from higher education institutions.
7. Among 6.1 million higher institution graduates, we estimate 0.57 million students will be expected to enroll into graduate school. Therefore, the lower-bound of newly-added labor force will be 11.96 million persons.

8. Since unemployment refers to individuals who would like to be employed and are actively seeking for jobs, urban unemployment for the upper-bound assumed to be 18 million (sum of newly-added labor force and urban laid-off and deduct the number of retired). As to the lower-bound, urban unemployment will be 16.96 million persons, excluding the number of students retain in further education and retirees.

9. For registered urban labor force in 2008 and onward, it is derived by adding the corresponding newly-added labor force to the previous year registered urban labor force. Assuming a decrease in number employment is totally offset by an increase of unemployed.

Table B2.2 Estimated job creation in 2008-2009

Year	Real GDP (% yoy)	Employment growth (% yoy)	Total employment (person, mn)	Employment elasticity[1]	Newly created job posts[2] (person, mn)
2005	10.4	0.83	758.3	0.08	6.25
2006	11.6	0.76	764.0	0.07	5.75
2007	13.0	0.77	769.9	0.06	5.90
2008 (f) [3]	9.0	0.53	774.0	0.06	4.12
2009 (f) [4]	8.1	0.48	777.7	0.06	3.72

Sources: CEIC and BBVA estimates.

Notes:
1. Newly created job posts refer to the actual change in total employment within the year.
2. Employment elasticity is the ratio of employment growth to real GDP growth.
3. Forecast figures for employment figure and its growth rate, assuming employment elasticity remains unchanged.
4. Based on BBVA 2009 real GDP forecast figure.

While the employment pressure for 2009 is high, our estimates have not included potential unemployment due to increased manufacturing sector unemployment led by export slowdown. Using a simple elasticity analysis, we find that if exports were to decline by 5% in 2009, there would be an increase in unemployment of 1.6 million people.

Indeed, our estimates so far have not yet considered increased underemployment resulting from a slower growth led by export slowdown. According to a survey conducted by the Chinese Academy of Social Sciences, there was an increasing trend in rural migration. From 2004 to 2006, 5.58 million migrant workers, per year on average, tend to move out of rural area and seek job in cities[3]. Increased unemployment in the urban area will certainly slow and even impede rural urban migration.

2) Economic slowdown and social disturbances: Is there a relationship?

Large increase in unemployment tends to lead to increased mass labor disputes, thus threatening social stability and harmony. Indeed, there seems to be a negative relationship between employment growth and collective labor disputes. As urban employment growth decreases by one percent, the number of collective labor disputes is likely to increase by 8% using the latest available data in 2004. Indeed, if this relationship were robust, the number of collective labor disputes in 2009 would increase by close to 30%.

[3] The annual average of 5.58 million migrants across provinces is equivalent to an average annual growth of 5.4%. Based upon these statistical data, the CASS concluded that there will be around 21 to 26 million of unemployment for the next three years.

Chart B2.1: Collective labor disputes vis-à-vis urban employment of 31 provinces in 2004

No. of collective labour disputes (% yoy)

Urban employment (% yoy)
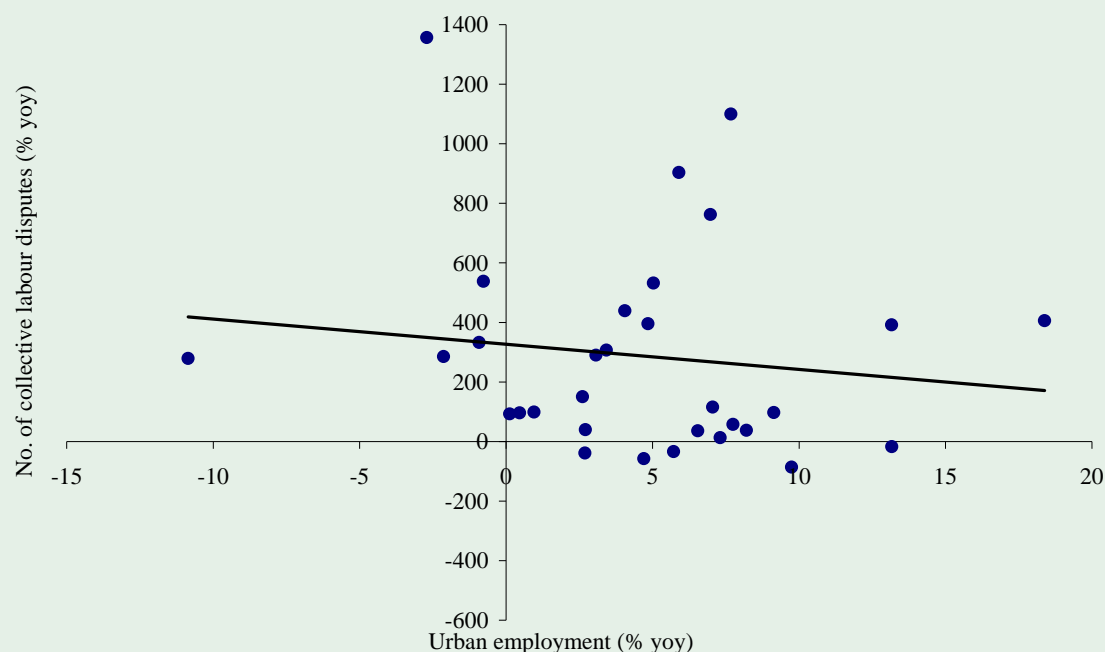
Growth of collective disputes = -8.4637(Urban employment growth) + 326.94
$R^2 = 0.0177$

Sources: National Bureau of Statistics of China and Ministry of Labor and Social Security.

Our preliminary look at the numbers paints a rather gloomy picture on China's unemployment problem in 2009. Given the massive unemployment problem has a potential threat to social stability, it warrants a serious concern. Although the central government established a "three-stage guarantee" system for laid-off workers, which mainly designed to protect their basic livelihood, unemployment benefits and the minimum subsistence allowance for urban residents only, these guarantees may not reach the rural migrants. While the massive fiscal stimulus program helps maintain growth target, the contents of the program are mostly related to infrastructure spending while social spending is quite limited (See Box 4). The local governments may need to take initiatives by designing innovative social programs aimed at maintaining social stability.

3. Inflation

The disinflation process accelerated in Q4. CPI inflation fell to 2.5% yoy in Q4 from 5.3% in Q3, with the December CPI inflation reaching 1.2% (Chart 8). The fall in CPI was mainly led by falling food prices (Chart 9) and a high base effect, while imported inflation from international energy and commodity prices has also eased dramatically (Chart 10).

Given slower domestic demand and much more depressed commodity prices, PPI inflation dropped sharply by 7.2 percentage points to 2.5% yoy in Q4 from 9.7% in Q3. It even registered a negative yoy change in December. Among sub-category of PPI measures, industrial good PPI fell the largest (Chart 11).

Since China's PPI inflation is highly correlated to price changes in international commodity prices, the pass-through effect on PPI inflation will continue to diminish in the near term (Chart 12). According to our estimates, a 10 percent decrease in commodity prices will likely lead to a 1.2 percent fall in PPI inflation and a 0.22 percent fall in non-food inflation.

The sharp correction of some key agricultural commodity prices since June 2008 has also affected domestic prices of these goods (Chart 13 a) to d)). For example, soybean prices, while still higher than those abroad, have fallen from over USD 800 per ton to over USD 500 per ton. Meanwhile, wheat and corn prices have also experienced some downward adjustments. Given the collapse of international rice price, the Chinese domestic price for rice also is likely to halt its gradually increasing trend.
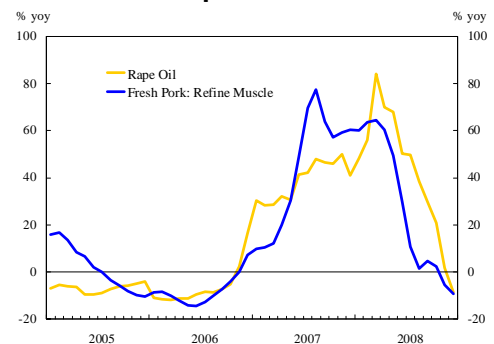
As inflationary pressures originating from food and industrial commodities have dissipated, we expect China's CPI inflation will continue to fall further, thus raising a serious risk of deflation. This warrants more aggressive monetary eases going forward.
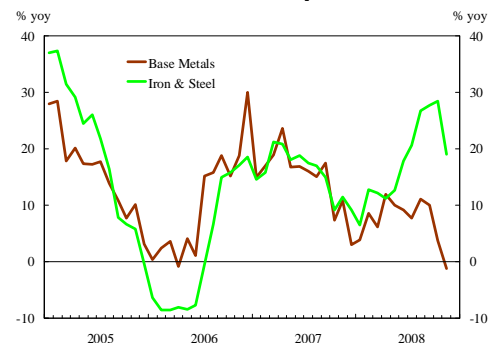
Chart 8: CPI inflation
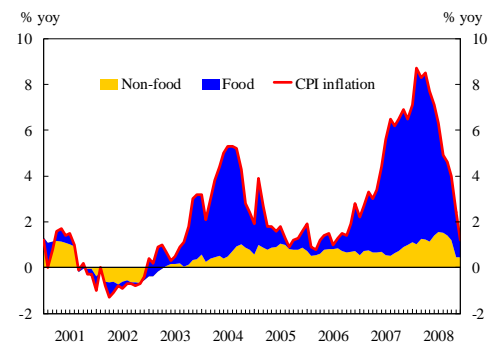
Sources: CEIC and BBVA estimates.

Chart 9: Retail prices of selected food

Sources: CEIC and BBVA estimates.

Chart 10: Prices of imported metals

Sources: CEIC and BBVA estimates.

Chart 11: PPI by components
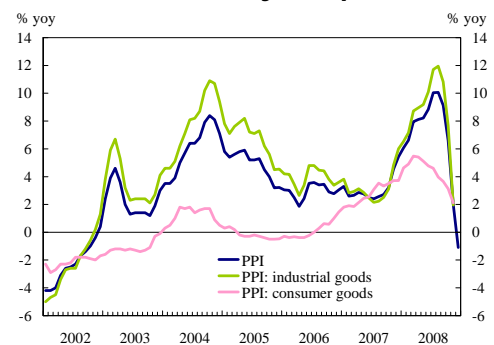
Sources: CEIC and BBVA estimates.

Chart 12: PPI and commodity prices

IMF commodity price index (LHS)

Producer prices (RHS)
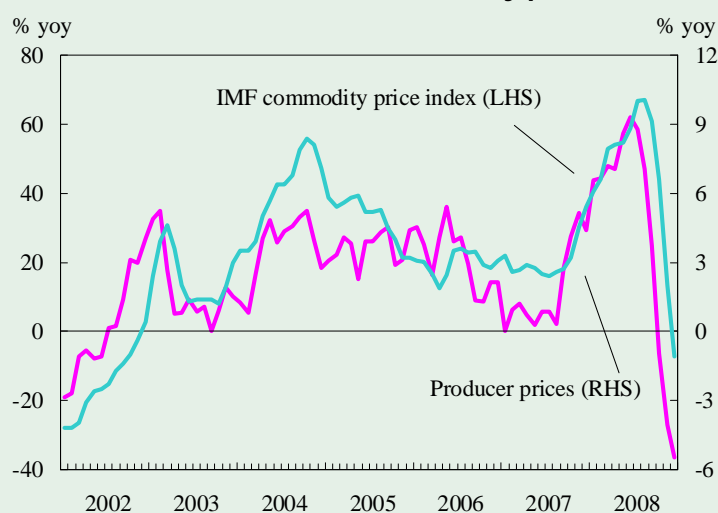
Sources: CEIC and BBVA estimates.

Chart 13: Global commodities prices and China domestic food prices

a) Wheat prices

- Domestic Wheat Price
- World Wheat Price

Sources: CEIC and BBVA estimates.

b) Rice prices

- Domestic Rice Price
- World Rice Price

Sources: CEIC and BBVA estimates.

c) Corn prices

- Domestic Corn Price
- World Corn Price

Sources: CEIC and BBVA estimates.

d) Soybean prices

- Domestic Soybean Price
- World Soybean Price

Sources: CEIC and BBVA estimates.
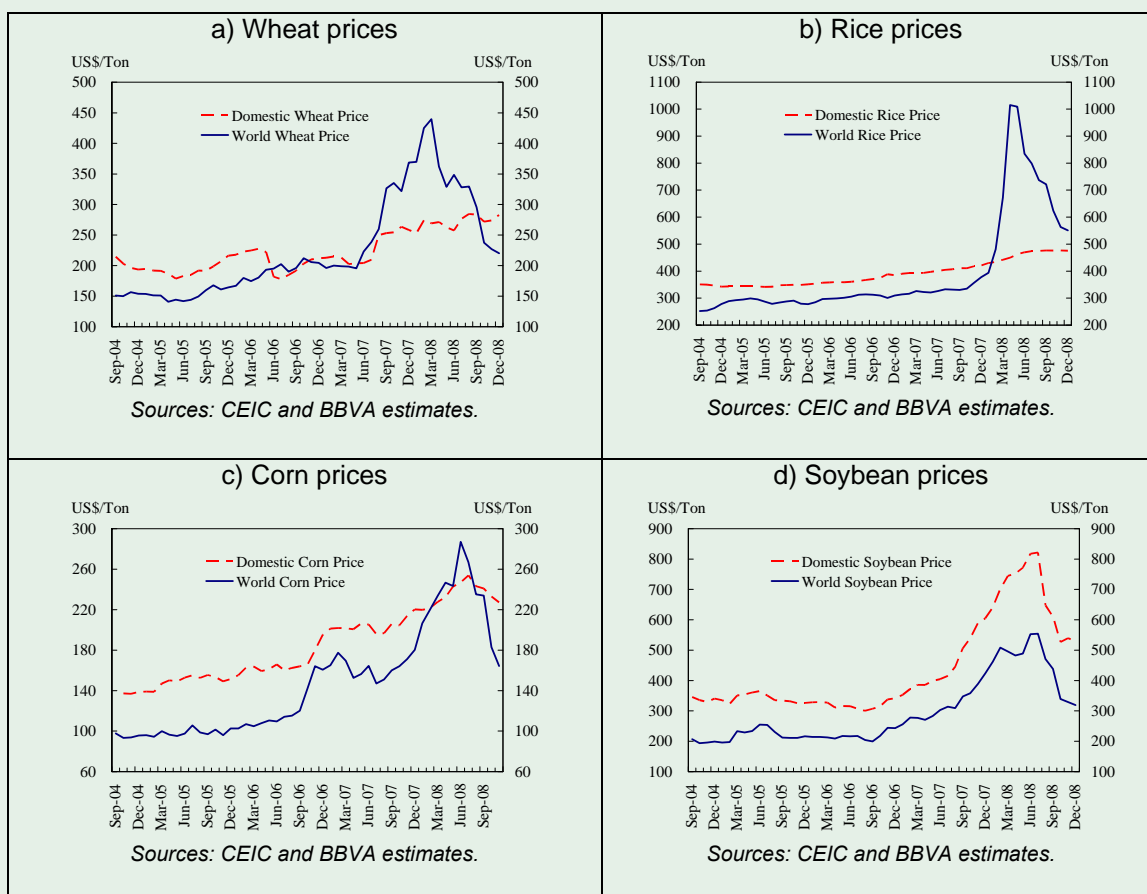
4. Monetary conditions

Broad money (M2) growth picked up considerably to 17.82% yoy in Q4 from 15.29% yoy in Q3, while credit growth rose sharply to 18.76% yoy from 14.48% in Q3 (Chart 14). The surge in money supply and loans indicates that the aggressive monetary policy eases of the People bank of China (PBoC) since mid-September may have started to work (Chart 15).

PBoC's open market operations continued to contract sharply in Q4 as net capital inflows eased. This has reduced the costs of sterilization, as measured by the spread between China's short-term money market rate and US fed fund target rate, which rose sharply since 2007 H2 (Chart 16). Indeed, the interest rate differentials between 3-month Chibor and Libor contracted to around 100 at the end of 2008 from around 150 bps in November, reflecting the high costs of funds in global market due to the seizure of the global credit markets (Chart 17).

As PBoC has already cut interest rates and reserve requirement rate aggressively by 216 bps and 200 bps (400 bps for small- and medium-sized financial institutions), respectively, the Chinese banks have reacted rather positively. Chinese banks, unlike their western counterparts, appear to have high incentive to lend because of their ownership structure and profitability concerns. The earmarked spending of RMB 100 billion in 2008 Q4 have also provided new opportunities for banks to lend.

The much improved banking sector health also provides good ground for banks to lend under eased monetary conditions. The NPLs in the banking system have fallen sharply by the end of 2008. The latest NPL ratio for major banks dropped to 2.49%, 4.24 percent points lower than that in the end of 2007 (Table 2).

In addition, the banking system liquidity has improved after cuts in RRR and profitability has been impressive. In addition, Chinese banks are unaffected global credit crunch and their foreign currency debt remains very small relative to China's large foreign exchange reserves (Table 2).

Table 2: Latest performance of banking system

NPL (overall)	2.45
NPL (major banks)	2.49
Capital Adequacy Ratio (CAR)	8.40
Net interest margin	2.98
Loan to Deposit Ratio	63.30
ROA	0.80
ROE	10.10
Net Profit growth % yoy	65.80
Ratio of Foreign claims to FX reserves	13.93
Of which: Short term	8.85

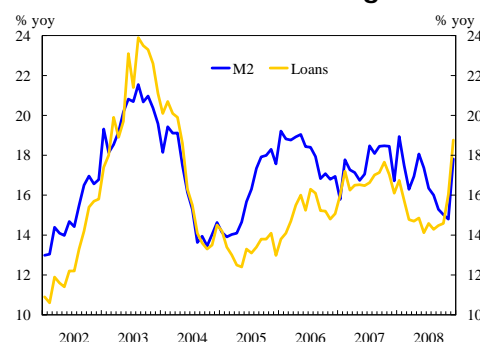*Sources: Official sources, CEIC and BBVA estimates.*

Chart 14: M2 and credit growth

Sources: CEIC and BBVA estimates.

Chart 15: Policy rate and RRR
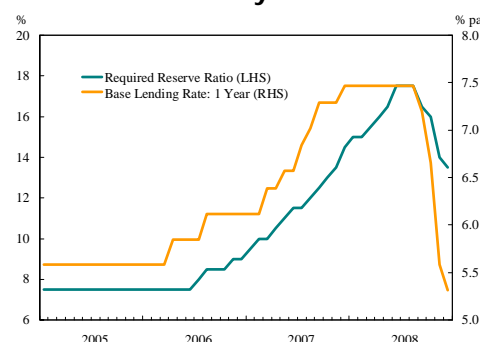
Source: CEIC.

Notes: At the end of December 2008, the required reserve ratio (RRR) for small- and medium-sized financial institutions was 13.5%, and 15.5% for the six largest banks.

Chart 16: Open market operations

Source: CEIC.

Chart 17: Interest rate differentials (spreads of Chibor over Libor)

Sources: CEIC and BBVA estimates.

5. Asset prices

China's stock prices fell by close to 70% in 2008 from the peak in October 2007, while the decline in stock prices was particularly large in September, partly affected by the global financial crisis. The PE ratio also returned to a more sustainable level, declining to around 16 times from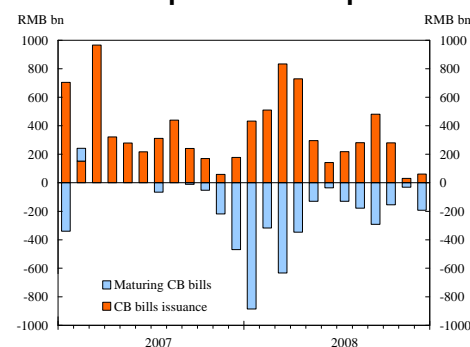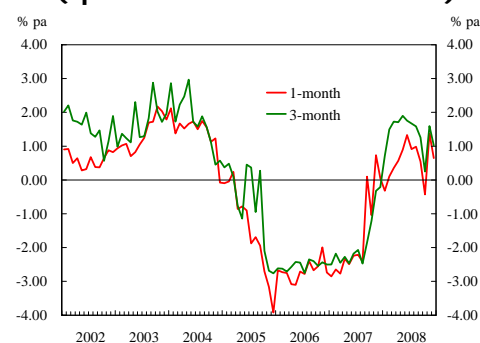 a peak of 70 times in October 2007. However, the stock prices have stabilized since Q4. Meanwhile, trading value also picked up by 100% from the bottom (Chart 18).

The concerns on profitability of Chinese firms, particularly those firms in the export sector due to a global recession, may have explained a large part of the decline. However, the expected circulation of previously locked shares (or non-traded shares), may also help explain the rapid downfall.

As shown in Chart 19, the peak of non-traded shares entering the market will not be reached until late 2009. From 2009 to 2011, the total market capitalization for the circulation of these non-traded shares is estimated at RMB 2.1 trillion, which is 29% of market capitalization of the current market capitalization. If all the non-traded shares were to be sold, the stock prices will fall by around one-third (i.e. the CSI 300 index will fall from 2000 to 1400). Therefore, the expected circulation of these non-traded stocks continues to remains a Damocles' sword hanging on the Chinese stock market.

To resolve this problem once for all, we suggest establishing a stabilization fund to purchase those shares that are expected to circulate. Under various plausible assumptions, we estimate the fund needed for purchasing those non-tradable shares sold by their shareholders could be around RMB 600 billion (Table 3). The funding source of this stabilization fund can be from Investor Protection's Fund or other relevant sources such as the Social Security Fund that has a long-term investment profile.

The property prices registered a yoy decline in December 2008. Since the beginning of 2008, property prices have started to cool, after a sharp increase in property prices in 2007 (Chart 20). Housing price growth in Shenzhen recorded a large negative yoy growth of 15% in December. The sharp fall in property price prices may reinforce economic downturn, as the negative wealth effect will affect private consumption further.

Chart 18: Stock prices and turnover
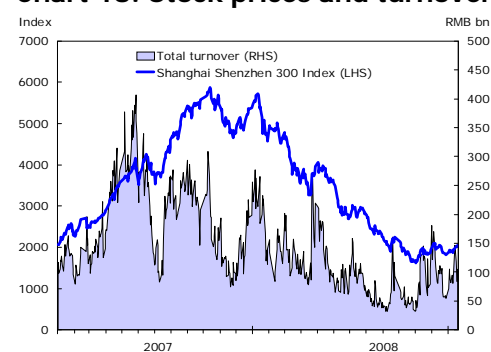
Source: CEIC.

Chart 19: Circulation of non-traded shares (market capitalization)
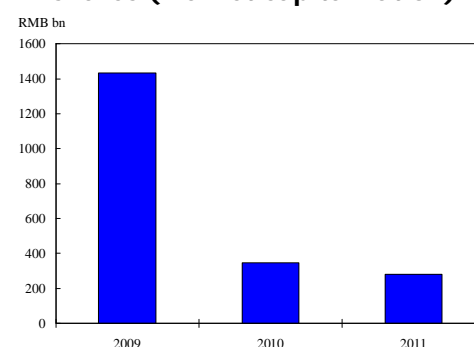
Source: BBVA estimates.

Table 3: Fund required for purchasing non-tradable shares

CSI 300 Index	2,000	1,500	1,300
Average equity prices (RMB per share)	6.9	5.1	4.4
% purchase from large shareholders of non-tradable stock	(Fund needed: RMB bn)		
20%	596	441	382
30%	794	588	510
50%	1,191	882	765

Source: BBVA estimates.

Chart 20: Property prices
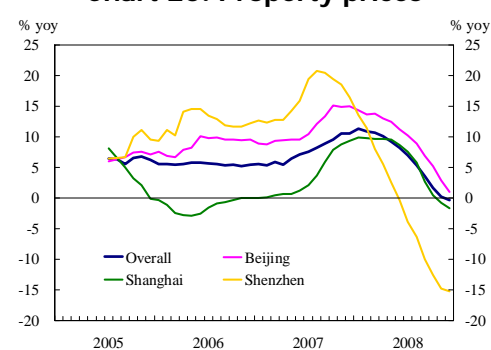
Source: CEIC.

6. Exchange rate and capital flows

The renminbi exchange rate has stabilized since August (Chart 21), although the market has priced in some depreciation. As indicated by the 3-month non-deliverable futures (NDF) rate of CNY/USD, the market expects the renminbi to depreciate by 1.2 percent in 3 months time.

The halt of the RMB appreciation may be due to the following reasons: 1) The RMB exchange rate has already become a strong currency relative to other East Asian currencies in both nominal and real term largely because of the sharp US dollar appreciation. This has thus eliminated arguments for further RMB appreciation (Chart 22). 2) Export growth has contracted in November and December by more than 2%, although trade surplus remains large. Export growth in China is expected to fall further as external demand from the G-3 economies dropped sharply. An export slowdown will lead to a tide of bankruptcies in the coastal region, thus increasing unemployment rate sharply and potentially threatening social stability.

While there is no further room for the RMB appreciation, we think a depreciation of the RMB will be costly as well. This is because depreciation will invite trade protectionist measures and limit the ability for PBoC to use the interest rate instrument to ease monetary policy. In addition, it will also worsen the global imbalance as it might lead to competitive devaluation in Asian and emerging market currencies.

Therefore, stability of the RMB exchange rate is in China's interest for now. Box 3 discusses in great detail on the reasons why we think it is in China's interest to maintain a stable currency in global economic crisis.

Net capital inflows have moderated after strong inflows in H1. In particular, portfolio capital experienced some large outflows from September to November, before registering an inflow again in December. The net portfolio inflows decreased by USD 100 billion in H2, compared with an increase by USD 131 billion in H1, possibly reflecting profit repatriation motives, as some FDI firms may need liquidity in their home markets on worsening global credit conditions.

Nevertheless, China's foreign exchange reserves continued to increase, rising by USD 40 billion in Q4 alone on large trade surplus and FDI inflows. On a quarter on quarter basis, the size of reserve increase in Q4 slowed substantially, compared to an increase of USD 154, 127, and 97 billion in Q1, Q2, and Q3, respectively. At the end of 2008, China's FX reserves Reached to USD 1.946 (Chart 23).

Chart 21: RMB exchange rate
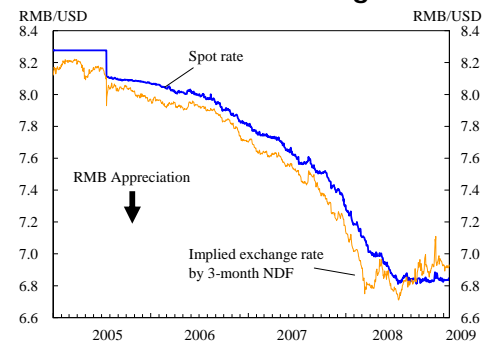
Sources: Bloomberg, CEIC and BBVA estimates.

Chart 22: Nominal exchange rate of Asian currencies
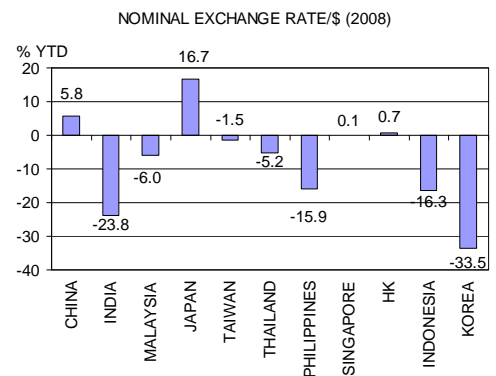
Source: Datastream.

Chart 23: Capital flows
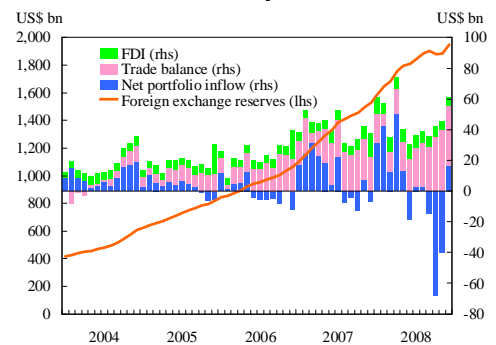
Sources: CEIC and BBVA estimates.

Box 3: Why a stable exchange rate should be in China's interest at this juncture?

The renminbi exchange rate has stabilized at around CNY 6.8 the dollar since Mid-July 2008 after a period of gradual appreciation that started in July 2005. As the global economy suddenly turned for the worse in Q4 2008 and China's exports started to contract, the market has started to price in some RMB depreciation. As shown in Chart B3.1, the 3-month non-deliverable futures (NDF) for the RMB/USD rate have started to depreciate since Mid-August 2008. As of late January 2008, the NDF rate of the same maturity is expected to depreciate by approximately 1.2% as compared with the current spot rate.

Chart B3.1 Three-month RMB NDF

Source: Datastream.

Chart B3.2 REER of Asian currencies

Source: Datastream.

Indeed, the market expectations as reflected by the NDF rates may have some justifications. First, the RMB exchange rate has already become a currency of strength relative to other Asian currencies in the region. In nominal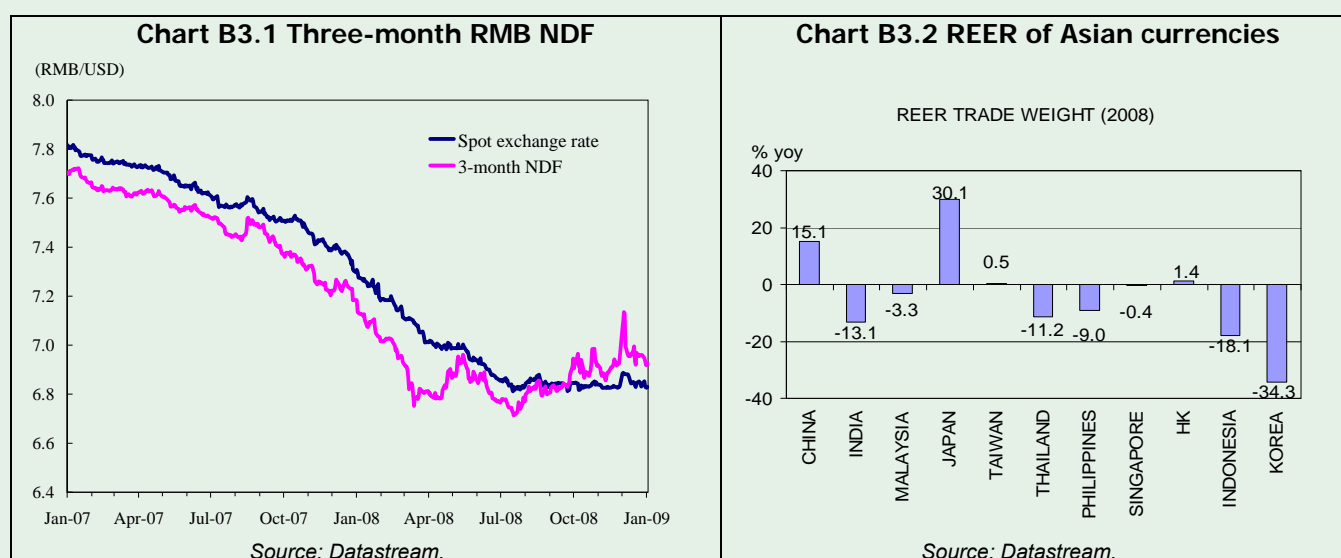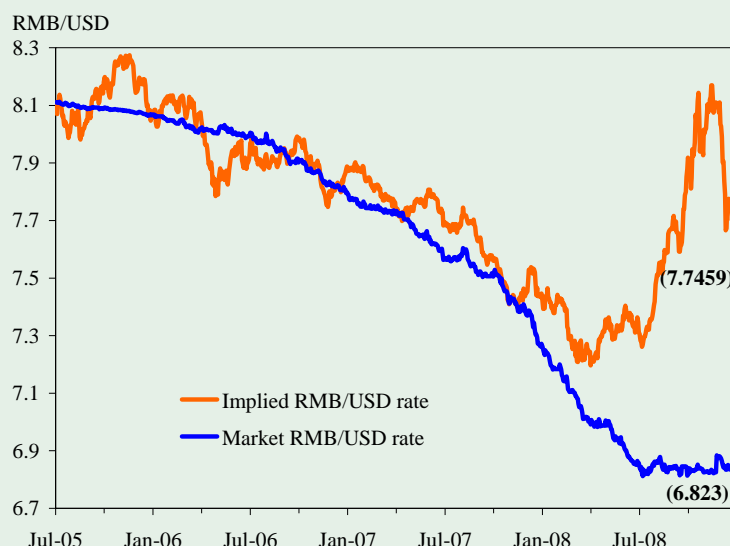 terms, the RMB spot rate has appreciated by 5.8% in 2008, the second highest appreciation among the key regional currencies other than the yen, while the won, the rupee, the rupiah, and the peso have experienced large depreciations. Similarly, in terms of real effective exchange rate (REER), both the RMB and the yen experienced the most appreciation by 15% and 30%, respectively, in 2008 largely because of their relatively substantial nominal appreciation and their relatively low inflation rate (Chart B3.2).

Secondly, an implied RMB exchange rate valuation based on a basket of currencies is also revealing. Although the PBoC never revealed currencies constituting the basket after China's exchange rate reform in July 2005, the basket can nevertheless be inferred using trade weights of China's major trading partners. Using an 11-currency basket that makes up to 70% of China's trade shares, we find that the implied RMB basket rate follows the RMB/USD exchange rate quite closely until the end of November 2007. The basket has since deviated considerably from the RMB/USD rate with almost a path of its own. For example, the implied basket rate suggests that the RMB/USD should have been 7.7459 on Dec 31, while the actual RMB/USD rate on that day was 6.823, a 12% difference (Chart B3.3). This shows that the spot RMB/USD exchange rate has appreciated faster than the currency basket would warrant. The PBoC did not seem to refer much to a currency basket when determining the RMB valuation in 2008, probably on domestic inflation concerns, especially when inflation was imported because of surges in global commodity prices between November 2007 and July 2008.

Chart B3.3 RMB spot rate and the implied basket rate of the RMB

RMB/USD

(7.7459)

(6.823)

Implied RMB/USD rate
Market RMB/USD rate

Jul-05   Jan-06   Jul-06   Jan-07   Jul-07   Jan-08   Jul-08

Sources: Bloomberg and BBVA estimates.

But do these valuation measures necessarily justify the market expectation for RMB depreciation? We do not think so. While these measures appear to have alleviated pressures for continued RMB appreciation for the time being, they do not imply the RMB will necessarily depreciate in the near future for the following reasons:

First, China's trade surplus remains large, especially with the US and the EU. RMB devaluation will certainly invite renewed political pressures and possibly more trade protectionist measures against Chinese exports. In addition, China's devaluation may also lead to a competitive devaluation among East Asian and to some extent, emerging market currencies, thus exacerbating the already deteriorating global economic imbalance. The consequence of this scenario would be increased global trade tension. This is not what China wants to see.

Secondly, our empirical studies, among many others, show that the income (demand) effect is much more important a determinant than the exchange rate effect for Chinese export growth. To be more specific, the income effect is 3-4 times bigger than that of the exchange rate effect. Therefore, RMB depreciation would stimulate Chinese export growth only marginally, while the anticipated political backlash could be much more severe and stronger from China's major trading partners.

Thirdly, a weak currency will not be in China's own interest, either, as it will continue to worsen its economic structure that relies too much on net exports and investment. A weak currency will continue to allow resource allocations favoring tradable sectors, at the expenses of non-tradable sectors and therefore China's sustainable development and growth in the long run. Furthermore, a depreciation at this juncture will likely lead to large capital outflows, thus limiting the room for further monetary policy ease, especially when stimulating domestic demand is more important than stimulating exports, as the latter is less effective and costly under the current global environment.

Therefore, market participants should be aware that the exchange rate policy in China is not driven by economic impetus alone when contemplating China's RMB exchange rate policy. In fact, it is often considered as just one of the instruments in the overall calculus of China's foreign economic policy. At this moment, there are compelling reasons to think that the costs of depreciation overweigh the gains greatly in terms of China's economic relations with its key trading partners. Given a further appreciation is too harmful to exports and a depreciation is too costly both economically and politically, a stable RMB exchange rate against the US dollar is therefore a preferred path for now.

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Economic Policy and Outlook

Policy response

In response to the rapidly deteriorating global financial and economic conditions since our October review (Chart 24), the policy makers in Beijing have rolled out a massive fiscal stimulus package of RMB 4 trillion with an aim to boost infrastructure spending and the flagging construction and real estate sector.

Although about 70% of the package has been devoted to infrastructure spending, the package also intends to address the deteriorating income distribution problem by building more affordable housing for the urban poor and by increasing spending in rural sector (See Box 4).

Recognizing the limitations of fiscal pumps and prims, the central government also announced a new medical reform package in January that will spend RMB 850 billion over the next three years (2009-2011) to provide universal health care to all. The reform package aims at expanding medical insurance coverage to over 90% of the general public, improving equality in accessing public health facility and care, and establishing an efficient public health and medical system. Specifically, the package plans to increase subsides to both urban and rural residents by RMB 120 per year in 2010.

As public health care system is one of the weakest links in China's social welfare system, the medical reform package is indeed a right policy in the right direction. This reform, together with other pending reforms in the under-funded education and social security system, will help reduce pre-cautionary savings motives of Chinese consumers and will help fundamentally rebalance the Chinese economy.

Overall, these packages have been timely, large, and sustainable, thus possessing some key features of an optimal fiscal package.

Meanwhile, monetary policy has continued to play an accommodative role in facilitating the implementation of the fiscal stimulus package. The PBoC has lowered policy lending rate by 5 times since mid-September. Meanwhile, PBoC has reduced the RRR by 200-400 bps points (400 bps for small- and medium-sized financial institutions). This is equivalent to injecting liquidity of RMB 1,166 billion.

Commercial banks have so far reacted positively to these aggressive monetary policy eases, as shown by a sharp rebound in December M2 and loan growth figures. Indeed, unlike their Western counterparts, the Chinese banks are well-capitalized, repleted with liquidity, and little burdened with bad loans and therefore will react differently once monetary conditions are eased.

In addition, institutional characteristics also suggest that the

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Chart 24: Real activity index
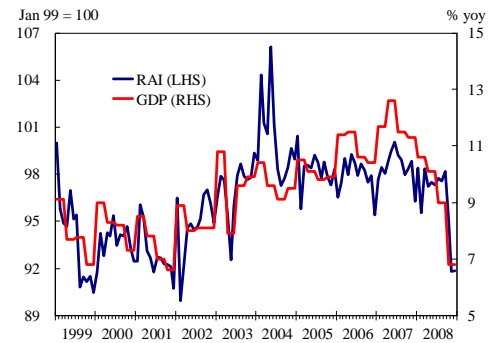
Sources: CEIC and BBVA estimates.

BBVA

Chinese banks will behave differently from their counterparts in an economic downturn. Though independent commercial entities, the Chinese banks are still under predominant state ownership. This in turn implies that banks could be under moral suasion of the state to lend even under an economic downturn. Thus, we are optimistic that banks will continue to provide support to the economy.

Economic Outlook and Prospects

Global economic outlook for 2009 is shrouded with significant uncertainties. On the positive side, one could expect further financial stabilization as the public sector has borne a large fraction of credit losses in the US and the EU and funding markets have shown signs of normalization. Aided by large and coordinated fiscal stimulus packages and extremely accommodative monetary conditions, a sharp drop in GDP growth in G-3 economies may be avoided.

On the negative side, the impact of fiscal policy is subject to extreme uncertainties, as whether consumers will react positively to fiscal stimulus under the current extreme conditions remains a question. In addition, there are also limits to size of public bearing of losses and ability to engage in fiscal stimulus in some key crisis affected economies.

Factoring in these global economic uncertainties (Chart 25) and using our baseline estimates for fiscal elasticity, we forecast GDP growth in 2009 to be at around 8.1%. Given lags in implementing fiscal policy, we expect the Chinese economy to continue to moderate in Q1 2009 to around 6.4% and then pick up from Q2 onwards (Table 4).

Indeed, our current forecast for 2009 is on the upper side of the consensus forecasts (Table 5). This largely reflects our view that China's large fiscal stimulus package, under a favorable institutional and monetary policy environment, will be effective in substituting the lack of external demand (Box 4).

Rapid economic slowdown, much lowered oil and commodities prices, and a high base effect suggest China's inflation may fall faster than previously expected. Our forecast on food component of CPI inflation suggests that food price inflation will fall to 0.01% yoy by the end of 2009.

In addition, diminishing external demand will continue weakening the ability of firms' pricing power. Therefore, this may lead firms to cut prices further to maintain market shares.

Taking these factors into consideration, we forecast non-food prices to CPI inflation to reach 0.04%. Our forecast for the overall baseline CPI inflation is at 0.7% for the average of 2009, suggesting the risk of deflation has intensified (Chart 26).

Chart 25: Assumptions for forecasts
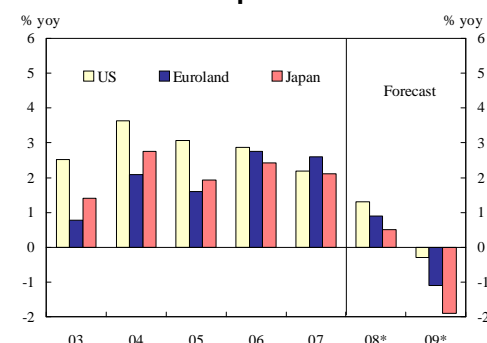
Sources: Datastream and BBVA estimates.

Table 4: Forecasts

	2008	2009				
	Actual	**Forecast**				
	Whole year	Q1	Q2	Q3	Q4	**Whole year**
GDP	**9.0**	6.4	7.6	8.4	9.8	**8.1**
CPI Inflation	**5.9**	1.2	0.8	0.5	0.2	**0.7**

Sources: CEIC and BBVA estimates.

Table 5: Comparison of forecasts

	Consensus Forecasts	BBVA	Actual
Forecasts for 2008 (in November 2008)			
GDP	9.5	9.3	9.0
CPI	6.3	6.0	5.9
Forecasts for 2009 (in January 2009)			
GDP	7.8	8.1	--
CPI	1.7	0.7	--

Sources: Datastream and BBVA estimates.

Chart 26: Inflation forecasts (baseline)
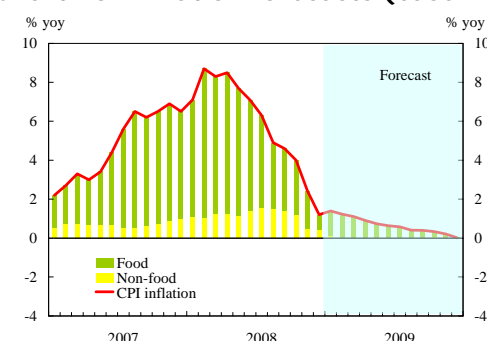
Sources: CEIC and BBVA estimates.

Box 4: Why are we optimistic that China will be able to grow 8% in 2009?

1) The contents of the massive fiscal stimulus package

China announced a 10-point fiscal stimulus package in early November. The package plans to spend RMB 4 trillion (USD 586 billion, close to 16% of 2007 nominal GDP) spread out from 2009 to 2010 in order to boost the economy from the possibly the most severe recession in the post-war era.

Table B4.1: The RMB 4 trillion fiscal stimulus package (USD 586 billion)

	RMB billion	Percentage
Affordable housing for low income population	280	(7%)
Rural infrastructure facilities and programs to boost rural income	370	(9%)
Investment in transportation network	1,800	(45%)
Investment on medical services, culture and education	40	(1%)
Spending on ecology protection	350	(9%)
Technical innovation and economic restructure	160	(4%)
Sichuan post-earthquake reconstruction	1,000	(25%)
Total	**4,000**	**(100%)**

Source: State council, China.

About 70% of the funds (or RMB 3.17 trillion) in the package will be allocated to investment in transportation network, rural infrastructure, and the Sichuan post-earthquake reconstruction. While there are investments on environmental protection and investment on medical services, culture and education, the fund appear to be quite small, only account for RMB 390 billion or less than 10% of total fund. In addition, the government has committed to providing more affordable housing for low income population. This spending is equivalent to 108% fixed asset investment in the construction and real estate sector.

We think the package has some important features of an optimal fiscal package: It is timely, large, and sustainable. In addition, the low income population in both urban and rural sector will benefit from the massive fiscal stimulus. One could interpret this package as having an orientation of attempting to address China's economic imbalance problem, in particular in areas such as income inequality and rural-urban income inequality.

With respect to financing, the central government is committed to putting up 30% of the fund (equivalent to 19% of fiscal revenue), while the rest of funding will be covered by provincial governments and possibly, development banks.

Why does China need such a massive stimulus package? Using a simple growth accounting simulation, we could somewhat figure out the rationales behind of the large stimulus package.

Table B4.2: Extra spending required for a growth rate of 8%

Scenario	Assumption on net exports	Contribution of net exports to GDP (ppt)	Contribution of investment and government consumption expenditure to GDP (ppt)	Net changes in investment and government consumption expenditure (RMB billion)
1	Worst case	-3.2	8.2	2,954
2	Zero growth	0.0	5.0	2,012
3	5-year average	2.0	3.1	1,430

Source: BBVA estimates.

Over the last five years, net exports and private consumption expenditure (PCE) on average contribute to about 2% and 3% of GDP growth, respectively. If this growth pattern were to hold up, this would entail an increase in government spending and FAI of RMB 1.4 trillion per year in order to maintain a growth rate of 8% (Scenario 3, Table B4.2).

However, given the severe economic downturn in the G-3 economies, it is unlikely that the contribution from the net exports to GDP will continue to be maintained at the 5-year average of 2 percentage points. Suppose that the contribution falls to zero, this then requires a net increase of about RMB 2 trillion in additional FAI and government consumption in order for the economy to grow at 8% while the contribution from PCE is assumed to remain at 3% (Scenario 2, Table B4.2).

If the contribution from net exports to GDP were to fall to a historical low as experienced in 1993 at minus 3.2 percent points, this then requires a much large package of RMB2.9 trillion a year, while the contribution from PCE is still assume to remain at 3% (Scenario 1, Table B4.2). Indeed, our estimates from Scenarios 1 and 2 suggest the fiscal stimulus package is large enough to offset declining external demand.

Is this package affordable? It appears to be manageable given China's non-contingent or visible domestic debt remains low at 22.3% in 2007. If the fiscal stimulus package is financed in the form of debt issuance, the total national debt would increase to 29% of the GDP, which is still relatively moderate. At the current rate of 3.1% of 10-year government debt, China has no problem of maintaining fiscal sustainability if the real GDP growth rate can be maintained at 8% or above.

Table B4.3: China's Domestic Debt

	Issuance of domestic debt	Outstanding of total debt	
	RMB bn	RMB bn	% NGDP
2006	862	3,502	16.5
2007	2,247	5,748	22.3
2008	700	6,448	21.6
2009	1,919	8,367	25.5
2010	1,846	10,213	27.9

Source: CEIC and BBVA estimates for 2007 to 2010.

2) Will the package crowd out private investment?

Absent from an accommodative monetary policy, such a large increase in national debt will likely push up domestic interest rate, thus crowding out private investment. However, the crowding-out scenario will not happen under the current monetary policy conditions. Although the People's Bank of China has cut interest rates and reserve requirement rate aggressively since the collapse of the Lehman Brothers in mid-September by 216 bps and 200 bps (400 bps for small- and medium-sized financial institutions), respectively, we believe there is still ample for the monetary policy to be more accommodative.

On the interest rate policy, we calculate that the PBOC may be able to cut interest rate further by a range of 108 to 378 bps, pending on the outlook of the RMB exchange rate. If the RMB exchange rate were to be kept stable at the current rate, the room for interest rate cut will be up to 378 bps, as shown in Table B4.4 based on a calculation using the interest rate parity condition.

Table B4.4: Estimated parity interest rates under different assumptions

| Assumption on RMB exchange rate	$(E^e\text{-}E)/E$ +	ρ +	R^* =	Estimated R
RMB stabilises current level	0.0	1.5	0-0.25	**1.5-1.75**
1-year NDF implied depreciation	2.5	1.5	0-0.25	**4.0-4.25**

Source: BBVA estimates.

Note: For $(E^e\text{-}E)/E$, "+" represents RMB depreciation and "-" is RMB appreciation

In addition, our estimates show that if an additional cut RRR of 5.5-7.5 percentage points were to be implemented, this would be equivalent to injecting liquidity of RMB 4 trillion into the banking system. Even after this massive cut, the RRR would still be as high as 8%, at the level in mid-2006. The increased liquidity conditions in the banking system will certainly ease the pressure of interest rate rises caused by the expected large government debt issuances.

But the question is: In an economic downturn, will Chinese banks react positively to monetary policy ease and start lending again? We think so. Indeed, the December credit and M2 data already showed that the banking system has started to react positively to monetary policy ease (see Chart 15 in the main text of the report). There are good reasons that the Chinese banks will continue to lend to the overall economy. First, unlike the Western banks that are weighed down by toxic assets, the Chinese banking sector is fairly healthy, well capitalized, and endowed with ample liquidity. Its loan to deposit ratio has dropped sharply from over 90% in the late 1990s, as the banking system was heavily burdened with non-performing loans (Chart B4.1). As interest rates and RRR are cut further, there is great incentive for banks to lend for profit purposes. However, small and medium firms may continue to suffer from credit crunch until uncertainties of the economic outlook diminish further.

Second, although the ownership of Chinese banks has become increasingly diversified, the state still remains the major owners of China's banking system. As long as senior bankers are appointed by the state, it is unlikely that they will deviate from the directions of government policy much. This is a negative factor under the normal circumstances because the state interference often leads to unscrupulous lending and thereby non-performing loans. But under an economic downturn, this could be a positive factor as banks are under pressure to lend, thus refraining from their innate pro-cyclical behavior.

Chart B4.1 NPL and loan-to-deposit ratio
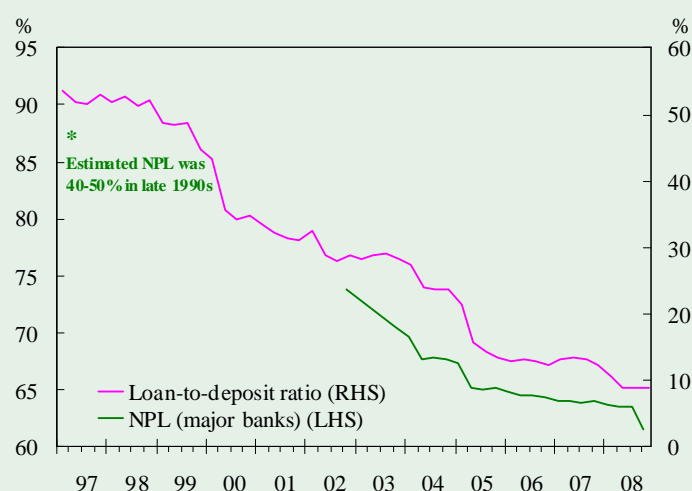
Sources: CEIC and BBVA estimates.

3) How stimulative to growth is the fiscal package?

Finally, it is important to know how stimulative to growth such a large fiscal stimulus could be. To answer this question, we will need to estimate China's fiscal multiplier and fiscal elasticity from empirical data. Following the standard approach of Keynesian model, fiscal multiplier can be derived from a structural equation as follows:

$$\text{Multiplier} = \frac{\Delta Y}{\Delta G} = \frac{1}{1-(c+d-im)}$$

where ΔY is change in output, ΔG is change in government expenditure, c is marginal propensity to consume (MPC), d is marginal propensity to invest, and im is marginal propensity to imports. The multiplier is derived based on a standard Keynesian model where

$$
\begin{aligned}
C &= \alpha + cY \\
I &= \beta + dY + eR \\
M &= \gamma + imY + fREER \\
X &= \varphi + xY^* + gREER \quad \text{where } Y^* \text{ is foreign GDP.} \\
&\text{and} \\
Y &= C + I + G + (X - M)
\end{aligned}
$$

where C, I G, M, and X are consumption, investment, government expenditure, imports, and exports, respectively. Estimating this structural model using quarterly data from 1992 to present, we will be able to estimate the coefficients for these equations and calculate the fiscal multiplier and fiscal elasticity accordingly. Note that fiscal elasticity is defined as:

$$\varepsilon = \frac{\Delta Y}{\Delta G} \frac{G}{Y} = \text{Multiplier} * \frac{G}{Y}$$

where G/Y is government expenditure share in GDP. Depending on the lag structure, we find that the range of the fiscal multiplier and therefore fiscal elasticity can be quite large. The fiscal multiplier is estimated with a range of 2.52 to 5.36; this implies fiscal elasticity for China could be in the range of 0.4 to 0.85.

Table B4.5 Estimates of fiscal multiplier and elasticity

Variable	Range of estimates
c	(0.69 - 0.85)
d	(0.45 - 0.53)
im	(0.49 - 0.62)
Fiscal multiplier	(2.52 - 5.36)
Fiscal elasticity	(0.40 - 0.85)

Source: BBVA estimates

Using these estimated fiscal elasticities, we conclude the fiscal stimulus impact on 2009 GDP growth could be in a range of 2.5 to 5.3 percentage points. If we take average of these estimated fiscal stimulus range, the stimulus package for 2009 will generate about 3.84 percentage points of GDP growth. Given the contents of the fiscal stimulus program are mostly on the expenditure side, the elasticity will be in general at the high end of our estimated average. Based on these elasticity estimates and our judgment, we believe China's fiscal stimulus package will be able to generate additional growth rate of at least 4 to 5 percentage points.

4) Provincial growth targets for 2009 remain upbeat

As it is well known, economic growth is often used as one of important performance indicators for promotions of local government officials. Therefore, local officials have a great incentive pushing for fast growth. Indeed, we have already found some evidence on this. After collating on the website and search for provincial growth target for 2009, we found that only Guizhou and Shanxi provinces (two small provinces in economic size) have a growth rate of 8% for 2009, while the rest of the provinces all have a growth target exceeding 8%. In particular, 5 provinces have a growth rate as high as 12% and 11 provinces have growth targets above 10%.

Indeed, the provincial governments are more ambitious in their spending plans. After the central government requested the local governments to propose provincial spending programs, the provincially proposed spending figures are as high as RMB 18 trillion over 2009 and 2010, or about 69% of the revised 2007 GDP. If this were allowed to happen, it would likely lead to activities overheating in certain sectors such as steel, cement, and other construction related sectors. This will probably top the scale of the recent overheating episode in 2003-04.

Against this backdrop, we believe that China has a good chance of achieving a growth rate of 8% in 2009. This largely reflects its good fiscal conditions, ample room for further monetary ease, economic incentives built in its banking system and its local governance structure for fast growth.

While we are optimistic that the growth target for 2009 is achievable, we are also concerned about the current economic structure may be ill-prepared for a protracted and severe global recession. Therefore, the authorities may want to use this global crisis as an opportunity to address the long-ignored structural problem in areas such as under-funded education and social security system. These fundamental structural reforms will help reduce pre-cautionary savings motive among Chinese consumers and steer the economy to a more sustainable path. Indeed, the medical reform package just announced in January 2009 was a right policy in the right direction.

As illustrated in Box 4 of our last China Watch in October 2008, China is also known for its economic reform cycle when large external economic shocks hit. The most recent example is the drastic reform on state-owned enterprises and banks that took place amidst the 1997-98 Asian financial crises. Therefore, we are confident that more decisive policy initiatives will be taken in the near future to tackle those aforementioned structural reform issues.

Table B4.6 Provincial GDP estimates for 2008 and GDP growth target for 2009

Province	2008 GDP estimates	2009 GDP target
Beijing	9.0%	9.0%
Shanghai	10.0%	9.0%
Tianjin	16.0%	12.0%
Chongqing	14.3%	12.0%
Anhui	12.0%	10.0%
Jiangsu	13.0%	11.5%
Zhejiang	10.0%	9.0%
Shandong*	12.1%	8.5%
Fujian	13.0%	10.0%
Jiangxi	13.0%	11.0%
Hebei	10.0%	9.0%
Neimenggu	17.5%	13.0%
Shanxi	10.0%	8.0%
Guangdong	10.1%	8.5%
Guangxi	12.5%	11.0%
Hainan	9.8%	9.0%
Henan	12.0%	10.0%
Hubei	13.0%	10.0%
Hunan	12.8%	10.0%
Heilongjiang	11.8%	11.0%
Jilin	16.0%	12.0%
Liaoning	13.0%	11.0%
Shaanxi	15.0%	13.0%
Gansu	10.0%	10.0%
Ningxia	12.0%	10.0%
Qinghai	12.5%	9.0%
Xinjiang	11.0%	9.0%
Sichuan	9.5%	9.0%
Yunnan	12.0%	11.0%
Guizhou	10.0%	8.0%
Tibet	10.1%	10.0%
Weighted average	**11.8%**	**9.9%**

Sources: Xinhua and various official sources.
*Note: *Shandong's 2009 GDP is our forecast.*
Weighted average based on 2007 provincial GDP figures.

Risks and Uncertainties facing the Chinese economy

While we are optimistic a growth rate close to China's economic potentials is achievable under the favorable institutional, monetary, and fiscal conditions, there are a number of downside risks and uncertainties surrounding our relatively upbeat outlook on the Chinese economy in 2009.

First, while the large fiscal stimulus package is very much needed in order to cushion the severe shock of the global economic recession, there is a risk that the current package may make the Chinese economic structure even more unbalanced as the investment share of the GDP will likely top 48% in 2009. This will likely diminish the effectiveness of the fiscal stimulus given the already relatively high capital output ratio.

Indeed, this also shows there are limitations of further fiscal pumps and prims. Therefore the authorities may want to use this opportunity to engage in other important structural reforms that will help China rebalance its economy in a fundamental way. The newly-announced health care reform is a right step in the right direction. Further reforms on under-funded education and social security system may also be needed. As illustrated in Box 4 of our last China Watch in October 2008, China is also known for its economic reform cycle when large external economic shocks hit. The most recent example is the drastic reform on state-owned enterprises and banks that took place amidst the 1997-98 Asian financial crises. Therefore, we are confident that the government has both credibility and capacity to carry out difficult reform measures going forward.

Second, the banking sector risk may increase again if banks were to engage in policy lending without consideration of commercial risks in an economic downturn. If not handled with care, NPLs in the banking system may rise to close to 10% under our risk scenario (Chart 27). This will undo many years of efforts to free the banks from the burdens of NPLs.

Therefore, the regulatory authority of the banking sector has to strike a balance between the need to encourage banks to lend in an economic downturn and the need to strengthen the risk management practices so to prevent renewed large NPLs in the banking system.

Third, as shown in Box 2, economic slowdown and a sharp fall in export growth will intensify China's unemployment problem in both urban and rural areas in 2009, thus giving rise to social tensions and instability. While this calls attention for urgent reform on the existing social safety net, the local governments may need to take initiatives by designing innovative social programs aimed at maintaining social stability, on top of their penchant for infrastructure programs.

Chart 27: NPL forecasts
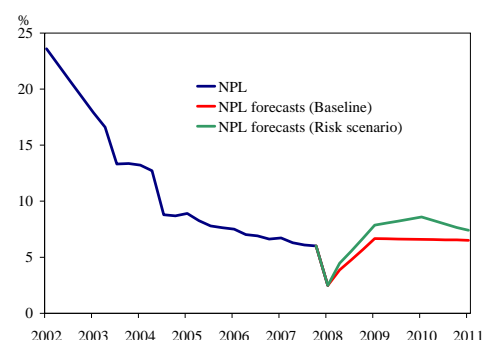
Sources: CEIC and BBVA estimates.

Appendix: Forecasts and Main Statistics

Forecasts for China

Basic economic indicators	2006	2007	2008	2009 (f)
Activity and prices				
Nominal GDP (RMB billion)	21,192	25,731	30,067	33,142
Nominal GDP (USD billion)	2,662	3,391	4,326	4,803
Real GDP (% yoy)	11.6	13.0	9.0	8.1
Average CPI (% yoy)	1.5	4.8	5.9	0.7
Public sector				
Budget surplus/deficit (% of GDP)	-1.0	0.6	-0.3	-2.3
Trade balance				
Exports (USD billion)[1]	969	1,218	1,429	1,126
Imports (USD billion)[1]	791	956	1,133	993
Trade balance (USD billion)[1]	178	263	295	133
Nominal exchange rate (RMB/USD, year-end)	7.81	7.30	6.83	6.83
International reserves (USD billion)	1,066	1,528	1,946	2,000
Financial sector				
Key interest rate (policy lending rate)	6.12	7.47	5.31	4.50
Job indicators				
Total employment (million people)	764	770	774	778
Registered urban unemployment rate (%)[2]	4.1	4.0	4.2	7.8

Sources: CEIC and BBVA estimates for 2009 (in January 2009).
Notes: 1) BBVA's lower bound forecasts for trade balance (see Box 1).
2) BBVA's higher bound forecasts for unemployment rate (see Box 2).

International Context

	Real GDP (%)				CPI (%, annual average)			
	2006	2007	2008	2009 (f)	2006	2007	2008	2009 (f)
USA	2.9	2.0	-0.2	-0.8	3.2	2.9	4.2	0.8
EMU	3.0	2.7	1.0	-0.9	2.2	2.1	3.3	1.4
Japan	2.4	2.0	0.7	-0.3	0.3	0.1	1.2	0.3
Latin America[1]	5.4	5.6	4.4	1.8	5.0	6.0	8.1	7.0

	Exchange rate (vs USD, year-end)				Official rate (%, year-end)			
	2006	2007	2008	2009 (f)	2006	2007	2008	2009 (f)
USA					5.25	4.25	0-0.25	0-0.25
EMU	1.32	1.46	1.30	1.15	3.50	4.00	2.50	1.50
Japan	116.4	113.1	100.7	95.6	0.40	0.75	0.30	0.30

Sources: CEIC, Datastream and BBVA estimates for 2009 (in October 2008).
Note: 1) CPI for Latin America are year-end figures.

China Statistical Table

	Unit	2003	2004	2005	2006	2007	2008	2008 Q1	Q2	Q3	Q4
Domestic economy											
Nominal GDP	RMB billion	13,582	15,988	18,322	21,192	25,731	30,067	6,149	6,913	7,101	9,904
	USD billion	1,641	1,932	2,239	2,662	3,391	4,326	858	994	1,038	1,448
Real GDP growth	% yoy	10.0	10.1	10.4	11.6	13.0	9.0	10.6	10.1	9.0	6.8
CPI	% yoy	1.2	3.9	1.8	1.5	4.8	5.9	8.0	7.8	5.3	2.5
External economy											
Exports	% yoy	34.6	35.4	28.4	27.2	25.8	17.2	21.2	22.2	23.0	4.3
Imports	% yoy	39.8	36.0	17.6	19.9	20.8	18.5	28.9	32.7	25.8	-8.9
Trade balance	USD billion	25	32	102	178	263	295	41	57	83	114
Current account balance	USD billion	46	69	161	250	372	n.a.	n.a.	n.a.	n.a.	n.a.
	% of GDP	2.8	3.6	7.2	9.4	11.0	n.a.	n.a.	n.a.	n.a.	n.a.
Balance of payment	USD billion	117	206	207	247	462	n.a.	n.a.	n.a.	n.a.	n.a.
	% of GDP	7.1	10.7	9.2	9.3	13.6	n.a.	n.a.	n.a.	n.a.	n.a.
Foreign exchange reserves[1]	USD billion	403	610	819	1,066	1,528	1,946	1,682	1,809	1,906	1,946
	% of GDP	24.6	31.6	36.1	39.3	43.4	44.2	44.1	44.4	45.0	44.2
External Debt	USD billion	209	247	281	323	374	n.a.	n.a.	n.a.	n.a.	n.a.
	% of GDP	12.7	12.8	12.4	11.9	10.6	n.a.	n.a.	n.a.	n.a.	n.a.
Fiscal											
Fiscal balance	% of GDP	-2.2	-1.3	-1.2	-1.0	0.6	n.a.	10.5	7.9	0.8	n.a.
Monetary											
M2 growth	% yoy	19.6	14.6	17.6	16.9	16.7	17.8	16.3	17.4	15.3	17.8
Loans growth	% yoy	21.1	14.5	13.0	15.1	16.1	18.8	14.8	14.1	14.5	18.8
Benchmark lending rate	% pa	5.31	5.58	5.58	6.12	7.47	5.31	7.47	7.47	7.20	5.31
Benchmark deposit rate	% pa	1.98	2.25	2.25	2.52	4.14	2.25	4.14	4.14	4.14	2.25
Required reserve ratio[2]	%	7.0	7.5	7.5	9.0	14.5	15.0	15.5	17.5	16.5	13.5
RMB/USD exchange rate	(period-end)	8.28	8.28	8.07	7.81	7.30	6.83	7.01	6.85	6.85	6.82
	(period-average)	8.28	8.28	8.18	7.96	7.59	6.95	7.16	6.96	6.84	6.84
Socio-economic indicators											
Population	Person (million)	1,292	1,300	1,308	1,314	1,321	1,328	1,323	1,325	1,326	1,328
Urban	% of total	40.5	41.8	43.0	43.9	44.9	n.a.	n.a.	n.a.	n.a.	n.a.
Rural	% of total	59.5	58.2	57.0	56.1	55.1	n.a.	n.a.	n.a.	n.a.	n.a.
Life Expectancy	Years	n.a.	71.4	72.0	72.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Infant Mortality	per 1,000	n.a.	n.a.	25.0	24.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
GDP per capita	RMB	10,510	12,299	14,012	16,122	19,474	22,639	4,648	5,218	5,354	7,457
	USD	1,270	1,486	1,712	2,025	2,567	3,258	649	750	783	1,090
Energy											
Energy Production	SCE Ton mn	1,638	1,873	2,059	2,211	2,354	n.a.	539	642	651	n.a.
Energy Consumption	SCE Ton mn	1,750	2,032	2,247	2,463	2,656	n.a.	813	877	936	n.a.
Per Capita Energy Consumption	SCE Kg	154	164	180	195	203	n.a.	n.a.	n.a.	n.a.	n.a.
Per Capita Electricity Consumption	KWH	174	190	217	249	275	n.a.	n.a.	n.a.	n.a.	n.a.

Sources: National Bureau of Statistic of China, World Bank, CEIC and BBVA estimates.
Notes: 1) Quarterly figures for "% of GDP" are annualized GDP figures.
2) In December 2008, the RRR for small and medium sized banks was cut to 13.5% while the RRR for the big six was cut to 15.5%.

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