Goldman Sachs

高华

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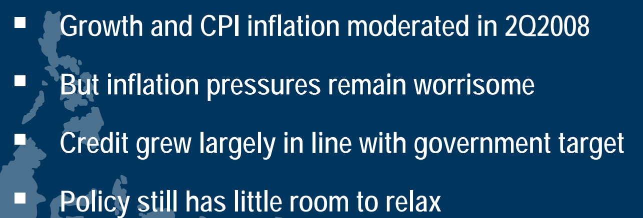

- Growth and CPI inflation moderated in 2Q2008
- But inflation pressures remain worrisome
- Credit grew largely in line with government target
- Policy still has little room to relax

Asia Economics Research

Table of Contents

Themes of the quarter:

Macro outlook:

Real GDP growth came in at 10.1% for 2Q2008 and we trimmed China's growth forecasts for 2008-2009 page 3

Policy path will be data dependent page 8

Too early to relax policy page 9

China's inflation outlook: Silver lining emerging, but dark clouds still hanging around page 12

Policy issues:

The PBOC raised the reserve requirement ratio by 200 basis points in 2Q2008 page 14

Turmoil in Vietnam—limited economic impact but plenty valuable lessons for China page 15

China adjusted refined oil and electricity prices, limited impacts on CPI inflation page 16

Thoughts on China's macro outlook after the earthquake, and a comparison with Kobe in 1995 page 17

Thematic issues:

Why we still like the CNY so much page 19

Beijing 2008 Olympics: Fears of a boom and bust page 22

Changing tides in corporate earnings page 26

China's vulnerability to rising oil prices—a revisit after four years page 31

Charting China page 34

We would like to thank our intern, Yitian Li, for her contribution to this publication.

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China impression – 2Q2008:

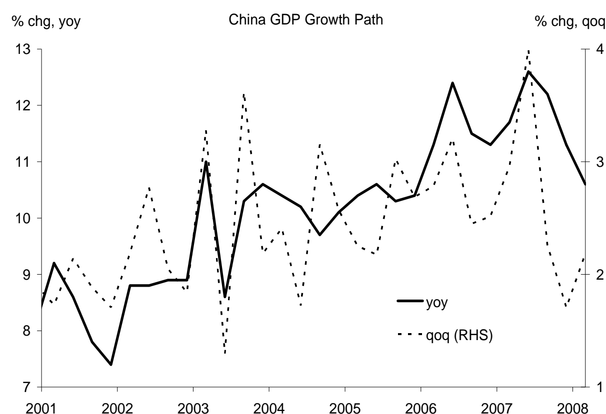
- Real GDP growth and CPI inflation softened in 2Q2008... (see *Real GDP growth came in at 10.1% for 2Q2008* and *Trimming China's growth forecasts for 2008-2009*).
- ...however, inflation pressures remain worrisome and it is too early for the government to relax its macro policy (see *China's inflation outlook: Silver lining emerging, but dark clouds still hanging around*, *Too early to relax policy*, and *Policy path will be data dependent*).
- We believe higher oil prices worsened China's growth-inflation trade off and put downward pressure on China's corporate profitability growth (see *Changing tides in corporate earnings*, and *China's vulnerability to rising oil prices—a revisit after four years*).
- We assessed the economic impacts of the Sichuan earthquake and the Olympic Games on the national economy and concluded the impacts are likely to be limited (see *Thoughts on China's macro outlook after the earthquake*, *Further thoughts of the economic impact of the latest earthquake and a comparison with Kobe in 1995* and *Beijing 2008 Olympics: Fears of a boom and bust*).
- We assessed the various costs to the Chinese economy of keeping the exchange rate at artificially low level and argued that Vietnam's economic turmoil offers a valuable lesson for China in this respect (see *Why we still like the CNY so much*, and *Turmoil in Vietnam—limited economic impact but plenty valuable lessons for China*).

What else is in this issue:

- We reviewed policy changes in 2Q2008 (*The PBOC raised the reserve requirement ratio by 200 basis points in 2Q2008* and *China adjusted refined oil and electricity prices, limited impacts on CPI inflation*).

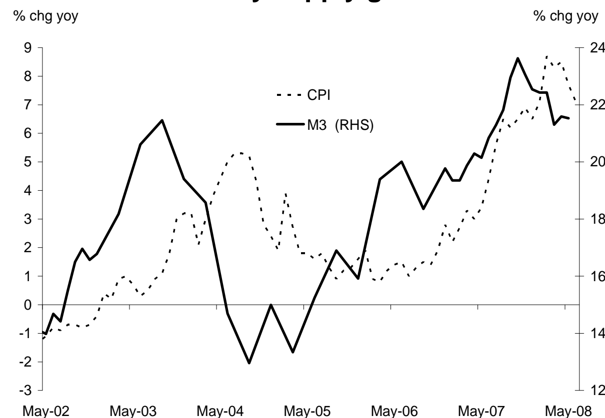
Key charts of the quarter:

Exhibit 1: GDP growth moderated further in 2Q2008…



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: …so did CPI inflation, driven by slower broad money supply growth



Source: CEIC, Goldman Sachs Economics Research.

2Q2008 data summary:

% change, unless otherwise stated

	2008		2007				2006				2005		
GDP	**2Q**	**1Q**	**4Q**	**3Q**	**2Q**	**1Q**	**4Q**	**3Q**	**2Q**	**1Q**	**4Q**	**3Q**	**2Q**
yoy	**10.1**	10.6	11.4	12.2	12.6	11.7	11.2	11.5	12.5	11.4	10.4	10.3	10.5
qoq (sa)	**3.0**	2.3	1.7	2.5	3.6	3.2	2.5	2.6	3.0	2.8	2.7	3.1	2.1

	2008						2007						
	Jun	**May**	**Apr**	**Mar**	**Feb**	**Jan**	**Dec**	**Nov**	**Oct**	**Sep**	**Aug**	**Jul**	**Jun**
Industrial Production													
yoy	**16.0**	16.0	15.7	17.8	15.4	15.4	17.4	17.3	17.9	18.9	17.5	18.0	19.4
qoq (sa, ann)	**18.2**	21.9	20.8	20.7	14.7	14.6	13.1	12.5	10.2	11.5	16.8	19.7	19.3
mom (sa)	**2.5**	1.8	-0.4	3.3	1.1	1.9	1.0	1.1	0.5	2.4	0.1	-0.5	2.7
Nominal Retail Sales													
yoy	**23.0**	21.6	22.0	21.5	19.1	21.2	20.2	18.8	18.1	17.0	17.1	16.4	16.0
qoq (sa, ann)	**24.9**	23.7	21.7	21.1	22.5	22.8	22.6	20.8	20.6	20.2	19.7	19.9	18.8
mom (sa)	**2.3**	1.5	1.8	2.5	1.1	1.2	2.2	1.6	1.9	1.2	1.7	1.7	1.2
Real Retail Sales													
yoy	**15.1**	13.1	12.9	12.7	10.2	14.1	13.8	12.1	12.2	11.5	11.3	11.5	12.4
qoq (sa, ann)	**19.0**	14.8	12.6	11.0	14.0	14.4	15.4	13.1	11.0	9.5	9.6	12.5	13.9
mom (sa)	**1.9**	1.6	1.4	1.3	1.0	-0.1	2.1	0.8	1.4	1.1	0.9	0.7	0.2
Fixed Asset Investment													
yoy	**29.5**	25.4	25.3	27.2	24.3	24.3	20.1	26.0	30.7	24.8	27.3	26.2	28.5
qoq (sa, ann)	**25.1**	26.6	26.2	25.5	22.9	23.9	26.1	27.7	27.4	26.1	25.2	25.9	26.1
mom (sa)	**2.5**	1.8	1.5	2.3	1.8	2.6	1.0	1.6	2.5	1.8	2.2	2.1	1.4
Price Indicators													
Consumer Price Index													
yoy	**7.1**	7.8	8.5	8.3	8.7	7.1	6.5	6.9	6.5	6.2	6.5	5.6	4.4
qoq (sa, ann)	**5.3**	7.5	9.3	9.0	8.4	6.8	6.4	6.8	9.4	10.7	10.2	8.6	6.1
mom (sa)	**0.3**	0.0	0.4	0.6	1.1	0.6	0.6	0.7	0.5	0.0	1.2	1.0	0.9
Producer Price Index													
yoy	**8.8**	8.2	8.1	8.0	6.6	6.1	5.4	4.6	3.2	2.7	2.6	2.4	2.5
qoq (sa, ann)	**9.0**	10.4	10.9	11.8	11.7	11.0	8.5	6.3	4.8	4.3	4.2	3.7	3.3
mom (sa)	**0.7**	0.5	0.6	1.2	0.7	0.9	1.0	1.1	0.5	0.4	0.4	0.4	0.3
Trade Indicators													
Exports													
yoy	**17.6**	28.1	21.8	30.6	6.5	26.6	21.7	22.8	22.2	22.8	22.7	34.2	27.1
qoq (sa, ann)	**36.9**	16.3	13.1	30.2	29.1	24.1	9.4	13.6	17.0	29.2	51.2	17.9	12.2
mom (sa)	**1.4**	6.7	7.5	-5.3	-1.8	10.5	-1.5	1.9	1.6	0.1	-0.6	5.6	1.1
Imports													
yoy	**31.1**	40.0	26.3	24.6	35.1	27.5	25.7	25.1	25.3	15.7	19.9	26.8	14.3
qoq (sa, ann)	**35.4**	27.7	19.9	33.4	43.4	41.9	30.8	25.6	24.2	31.3	26.9	22.2	20.2
mom (sa)	**-6.3**	11.1	4.5	-2.7	0.4	6.3	1.4	2.4	5.6	-0.7	-0.8	8.1	-0.7
Trade Balance (USD bn)	**21.4**	20.2	16.7	13.4	8.5	19.5	22.6	26.3	27.1	24.0	25.0	24.4	26.9
% yoy	**-20.5**	-9.9	0.0	98.6	-64.0	22.7	7.7	14.9	13.9	56.8	32.8	67.3	86.7
Financial Indicators													
M2													
yoy	**17.4**	18.1	16.9	16.3	17.5	18.9	16.7	18.5	18.5	18.5	18.1	18.5	17.1
qoq (sa, ann)	**21.0**	17.4	14.0	17.1	17.1	16.6	11.6	17.1	15.2	20.0	20.9	21.9	16.6
mom (sa)	**0.8**	2.1	1.9	0.0	1.4	2.6	0.0	1.3	1.5	1.2	0.9	2.5	1.4
Total Loans													
yoy	**15.2**	16.2	16.1	16.2	17.1	17.5	16.4	17.5	18.0	17.3	17.0	16.5	16.3
qoq (sa, ann)	**13.2**	11.6	13.2	18.7	19.4	15.8	11.3	15.0	18.1	17.7	18.9	17.3	17.4
mom (sa)	**0.5**	1.3	1.4	0.1	1.6	2.6	0.3	0.8	1.6	1.1	1.5	1.5	1.4
FX Reserves (USD bn)	**1809**	1797	1757	1682	1647	1590	1528	1497	1455	1434	1409	1385	1333
Proprietary Indicators													
GSCA	**10.6**	11.2	10.3	11.4	10.3	10.3	12.0	12.0	12.9	13.1	12.6	14.0	13.5
CEMAC-GS Coincident Indicator (Index)	**103.84**	103.52	103.34	102.50	102.62	102.61	103.15	103.30	103.21	103.04	102.78	102.61	102.53
CEMAC-GS Leading Indicator (Index)	**102.16**	102.15	102.50	102.80	102.55	101.92	101.91	102.76	103.47	103.84	104.02	104.05	103.83
GS China FCI (Index)	**109.2**	108.4	107.8	109.0	107.8	108.4	108.0	108.1	106.8	106.8	107.0	106.7	107.4
GSPCC (Index)	**230.9**	207.1	192.2	189.9	184.6	176.4	166.7	159.6	157.0	155.3	150.1	146.0	145.6
% yoy	**58.6**	40.6	32.1	30.7	26.5	21.5	17.3	13.4	12.3	12.3	10.4	7.4	2.5

Source: NBS, CEMAC, PBOC, CEIC, Goldman Sachs Economics Research.

Real GDP growth came in at 10.1% for 2Q2008 and we trimmed China's growth forecasts for 2008-2009

These comments were first published on July 17, 2008.

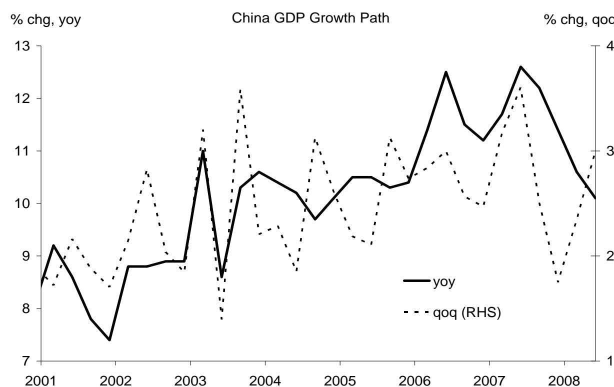
1. GDP growth moderated

Real GDP growth came in at 10.1% yoy in 2Q2008 from 10.6% yoy in 1Q2008 (our estimate: 10.1%, market consensus 10.4%). On a quarter-on-quarter (qoq) basis, GDP growth accelerated to 3.0% from 2.3% in 1Q2008 (see Exhibit 1). Moderation in yoy GDP growth was mainly driven by a declining contribution from real net exports.

The narrowing trade surplus reflected both slowing exports demand but also resilient imports demand despite the ongoing credit tightening. We believe the appreciation of the currency has been an important factor behind the resilience of China's import demand, and thereby the adjustment in its trade balance, because credit tightening tends to lead to a widening of the trade surplus in China as the experiences in 2004-2005 have shown (despite a surge in oil and commodity prices during that period as well).

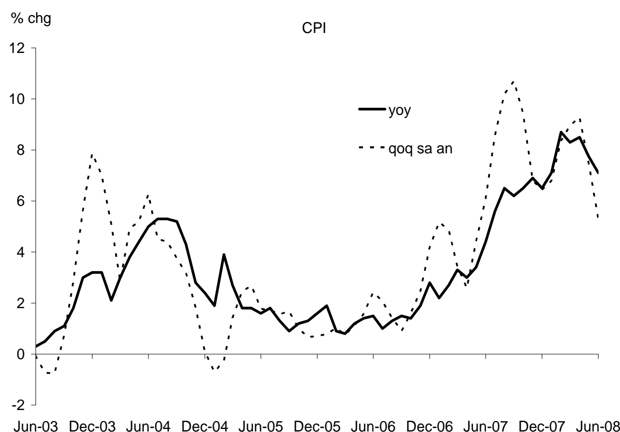
June activity data posted strong (and above consensus) growth. Year-on-year industrial production growth came in at 16.0% (our estimate: 13.8%, market consensus 15.7%). **The implied sequential growth accelerated strongly to 2.5% mom in June** up from 1.8% mom in May. **Fixed asset investment growth came in at 29.5% yoy in June** (our estimate: 25.0%, market consensus: 25.4%), significantly up from 25.4% yoy in May. **Nominal retail sales growth also accelerated strongly to 23.0% yoy in June** (our estimate: 20.9%, market consensus: 21.3%) from 21.6% yoy in May, despite a lower CPI reading. Real retail sales accelerated to 15.1% yoy in June from 13.1% in May, the highest in a decade.

Exhibit 1: Growth moderating further in 2Q2008



Source: National Bureau of Statistics (NBS), CEIC, Goldman Sachs Economics Research.

Exhibit 2: CPI inflation continued to moderate in June



Source: NBS, CEIC, Goldman Sachs Economics Research.

2. CPI moderated to 7.1% but PPI rose to 8.8% in June

Headline CPI inflation moderated to 7.1% yoy in June (our estimate: 7.1%, market consensus: 7.3%), compared with 7.7% yoy in May (see Exhibit 2). Its sequential momentum moderated to 5.3% qoq from 7.5% qoq. Lower food prices were the main contributor to the moderation. We believe that, if the government sticks with its monetary tightening programs, CPI inflation will likely continue to trend down in 2H2008. **Meanwhile, the yoy reading of PPI inflation in June continued to accelerate to 8.8% yoy from 8.2% yoy in May (our estimate: 8.3%, market consensus: 8.5%)**. Its sequential momentum moderated to 9.0% qoq from 10.4% qoq. The rise in the PPI was driven by the adjustments in refined oil and electricity prices as well as record prices in coal and crude oil.

3. We trimmed China's growth forecasts

We have lowered our GDP growth forecasts for both 2008 and 2009, and raised our CPI inflation forecast for 2009. In the meantime, we have also changed our call on interest rates: we no longer expect any hikes to benchmark interest rates this year, and believe the pressures on interest rates will mostly transpire into currency appreciation pressures given the concerns on capital inflows.

Specifically:

1. **We have revised down our real GDP growth forecasts to 10.1% for 2008, from 10.5% previously, and to 9.5% for 2009 from 10.0% previously (see Exhibit 3)**. Lower GDP growth forecasts mainly reflect lower-than-expected contributions from net exports and fixed investment growth. In particular, the contribution of net exports growth is expected to fall to 1.2 percentage points (ppt) in 2008 and further to nil in 2009, compared with 1.6 ppt in our previous forecast for 2008 and 3.2 ppt in 2007. On the other hand, we expect the strength in consumption to be maintained. Under our new forecasts, GDP growth will likely trough in 1H2009 and gradually trend up towards the end of 2009 (see Exhibit 4).

2. **The narrowing trade surplus reflected both slowing export demand but also resilient import demand despite the ongoing credit tightening**. We believe the appreciation of the currency has been an important factor behind the resilience of China's import demand, and thereby the adjustment in its trade balance, because credit tightening tends to lead to a widening of the trade surplus in China as the experiences in 2004-2005 have shown (despite a surge in oil and commodity prices during that period as well). Therefore, the decline in the trade surplus should be viewed as a positive and necessary adjustment that is needed for China to return to a more balanced and sustainable growth pattern.

3. **We maintained our 2008 CPI forecast at 6.8% but raised our 2009 CPI inflation forecast to 3.8%, up from 3.0% previously** (see Exhibit 5). We assume the government will stick with its monetary tightening programs in the near term by keeping broad money supply growth (as measured by M3) under control. In the meantime, we believe energy prices will be adjusted upwards quickly, at least to levels that can cover the costs of downstream industries. Under this scenario, CPI inflation will gradually trend down to 5% towards the end of 2008, and further down to 3%-4% in 2009, while higher input cost pressures will be largely absorbed by corporates due to softening demand.

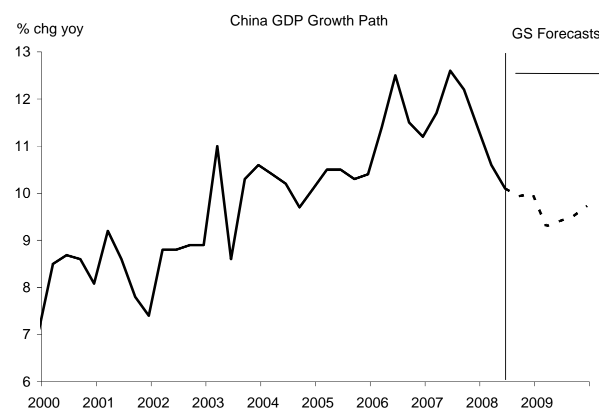
4. We believe monetary policy will likely entail further reserve requirement ratio (RRR) hikes, continued quantitative controls on commercial banks' lending, and further appreciation of the CNY (we maintain our 3, 6 and 12-month USD/CNY forecasts at 6.76, 6.60 and 6.30 respectively). However, **we no longer expect any hikes to benchmark interest rates this year, and believe the pressures on interest rates will mostly transpire into currency appreciation pressures given the concerns on capital inflows**.

Exhibit 3: Comparison of forecasts

		Forecasts			
	2007	2008E		2009E	
		Old	**New**	Old	**New**
Real GDP Growth	11.9	10.5	**10.1**	10.0	**9.5**
Domestic Demand	9.4	9.9	**9.9**	11.0	**10.2**
Total Consumption	9.4	9.8	**9.7**	10.3	**10.4**
Household Consumption	9.3	9.9	**9.6**	10.5	**9.9**
Government Consumption	9.5	9.5	**10.0**	9.9	**11.8**
Investment (GCF)	9.5	9.9	**10.2**	11.9	**10.0**
Fixed Investment (GFCF)	10.6	10.6	**10.5**	11.2	**10.0**
Change in Inventories	-15.0	-10.0	**0.0**	36.0	**9.0**
Net Exports (ppt contribution to GDP growth)	3.2	1.6	**1.2**	0.1	**0.3**
Exports	19.0	12.0	**12.0**	7.0	**9.0**
Imports	16.8	11.5	**12.0**	7.8	**9.8**
CPI	4.8	6.8	**6.8**	3.0	**3.8**

Source: National Bureau of Statistics (NBS), Goldman Sachs Economics Research.

Exhibit 4: Quarterly real GDP growth path



Source: NBS, Goldman Sachs Economics Research.

Exhibit 5: Quarterly CPI growth path

Source: NBS, Goldman Sachs Economics Research.

5. **On the other hand, there is more room for fiscal policy to help the rebalancing of the economy**, including tax cuts and reducing various fees associated with public services. We have long argued that the government should cut import value-added tax (VAT) rates, reduce the VAT tax for fixed asset investments, and further reduce and rationalize personal income taxes. We are expecting some of these measures, and other supportive fiscal policies to be adopted likely early next year, after the inflation pressures subside broadly.

6. **We see balanced risks to our 2008 macro forecasts, but modest downside risks to our growth forecasts and upside risks to our inflation forecasts for 2009**. In particular, if the central bank would yield to various domestic pressures and allow the money and credit growth to rebound meaningfully, China's inflation outlook would become cloudy again, while its growth outlook would become darker over the 1-2 year horizon. Furthermore, we believe the more decisive the government allows the "correct" price signals (such as the currency and energy prices) to percolate through the real economy, the earlier the private sector can take the necessary demand/supply adjustments, and the quicker the economy can return to a sustainable and strong growth path.

Hong Liang
Yu Song

Box 1: The timeline of policy tightening in China since 2007

June 7, 2008
The PBOC raised the RRR by 100 bp in two stages. The RRR was raised to 17.0% on June 15, and 17.5% on June 25.

May 12, 2008
The PBOC raised the RRR by 50 bp to 16.5%, effective May 20, 2008.

April 16, 2008
The PBOC raised the RRR by 50 bp to 16.0%, effective April 25, 2008.

March 18, 2008
The PBOC raised the RRR by 50 bp to 15.5%, effective March 25, 2008.

January 16, 2008
The PBOC raised the RRR by 50 bp to 15.0%, effective January 25, 2008.

December 20, 2007
The PBOC raised the 1-year deposit rate by 27 bp, lending rate by 18 bp, and other rates by various degrees, effective December 21, 2007.

December 8, 2007
The PBOC raised the RRR by 100 bp to 14.5%, effective December 25, 2007.

November 21, 2007
The State Council issued a statement urging the ministries and local governments to ensure that all new projects have been properly authorized and meet the land-use, energy efficiency and environmental protection criteria.

November 10, 2007
The PBOC raised the RRR by 50 bp to 13.5%, effective November 26, 2007.

October 13, 2007
The PBOC raised the RRR by 50 bp to 13%, effective October 25, 2007.

Late September, 2007
Monetary authorities gave strict orders for commercial banks to abide to the 15% total CNY loan growth target set for the year.

September 14, 2007
The PBOC hiked the 1-year benchmark deposit rate by 27 bp to 3.87% p.a. and the 1-year lending rate by 27 bp to 7.29% p.a., effective September 15, 2007.

September 6, 2007
The PBOC raised the RRR by 50 bp to 12.5%, effective September 25, 2007.

August 21, 2007
The PBOC hiked the 1-year benchmark deposit rate by 27 bp to 3.60% p.a. and the 1-year lending rate by 18 bp to 7.02% p.a., effective August 22, 2007.

July 30, 2007
The PBOC raised the RRR by 50 bp to 12%, effective August 15, 2007.

July 20, 2007
The PBOC raised benchmark interest rates by 27 bp, effective July 21, 2007.

July 20, 2007
The MOF cut the tax on interest income to 5% from 20%, effective August 15, 2007.

Box 1: The timeline of policy tightening in China since 2007-continued

June 18, 2007
The MOF announced a series of export tax rebate adjustments affecting about 37% of China's export categories.

May 30, 2007
The MOF raised the stamp duty on A and B shares to 0.3% from 0.1% overnight.

May 18, 2007
The PBOC widened the USD/CNY trading band from +/-0.3% to +/-0.5% around the central parity.

May 18, 2007
The PBOC raised the 1-year deposit rate by 27 bp and the 1-year lending rate by 18 bp as well as the RRR by another 50 bp.

April 29, 2007
The RRR was raised by 50 bp, effective May 15, 2007.

April 5, 2007
The RRR was increased by 50 bp, effective April 16, 2007.

March 17, 2007
Both the benchmark 1-year deposit and lending rates were increased by 27 bp.

February 16, 2007
The RRR was increased by 50 bp, effective February 25, 2007.

January 5, 2007
The reserve requirement ratio (RRR) was increased by 50 bp, effective January 15, 2007.

Policy path will be data dependent

This comment was first published on July 28, 2008.

1. Investors and market commentators have been trying hard to read the policy messages from the top government bodies in the past few weeks. The policy statement from the Political Bureau, published over the weekend, has offered both the doves and the hawks something to chew on. It basically re-iterated the dual policy objectives of the government, which include both growth and inflation. For the doves, the absence of any reference to monetary policy tightening implies an upcoming easing of policy. For the hawks, the continued emphasis on controlling inflation means it is too early to contemplate any easing.

2. In our view, the mixed messages have reflected not just different opinions among different government ministries, but also mixed data signals from macro and micro. On the micro level, there have been a large number of reports/anecdotal stories of activity slowdown, factory closures, and property prices falling in pockets of the coastal areas. However, on the macro level, the latest data continue to be on the hawk's side. Why should any central bank need to ease policy when the economy is growing at 10% in real terms and 19% in nominal terms?

3. We believe China's macro policy will be driven more by macro data rather than by micro noises. Within the dual policy objectives of growth and inflation, we believe inflation is ultimately the constraint for macro policy choice because social and political stability is at the heart of the policy objective function. Putting it another way, since most governments would likely prefer expansionary policies, their capability to do so would only be constrained by the threat of inflation.

4. On the inflation front, we see little room for policy easing at this juncture. Not only that the headline inflation remains elevated at 7% [PPI at 8.8% (June), CGPI at 9.5% (June), and GDP deflator at around 10% (2Q)], but also such headline inflation readings needed the help of strenuous price controls. Any breathing room offered by a lower CPI reading in the coming months should and will likely be taken up by the government to adjust upwards the distorted energy prices, while the overall monetary policy needs to keep a tightening bias to anchor inflation expectations (see China: Too early to relax policy, Asia Economic Flash, July 14).

5. On the other hand, structural and micro policies will likely be adopted to deal with micro complaints. These policies may include reform measures aiming at providing better financing to small- and medium-sized companies, specific supporting policies targeting struggling exporters, and tax policy adjustments such as raising the minimum personal income threshold and broadening the VAT reduction scheme for fixed asset investment.

6. But, how quickly and how decisively the government can switch to a neutral and later to a pro-growth stance will depend on how quickly the inflation pressures would be brought under control. In our view, not only headline inflation needs to move further down towards the 5% range, it also needs to happen without the crutch of price controls. The earliest that could happen is probably 4Q2008. Between now and then, we expect aggregate demand growth to soften further, alleviating some more pressures from resources and thereby bringing the overall inflation pressures down.

7. The upside risks to our view will not come from an unexpected policy easing (that would only make us more worried about inflation risks, and therefore growth risks down the road), but a sustained decline in oil and commodity prices. However, in our view, it is hard to stipulate such a scenario without stipulating a sharp slowdown in global demand.

Hong Liang

Too early to relax policy

This article was first published on July 14, 2008.

There has been a lot of chatter lately in the market about a potential (imminent) policy easing in China.

We believe the government has little room to ease monetary policy at this juncture, because:

1. Headline inflation remains elevated at 7%.

2. The strenuous price controls need to be adjusted urgently, as widespread power shortages have begun to take place.

Therefore, the emerging "breathing room" offered by a lower CPI reading in the coming months should and will likely be taken up by the government to adjust upwards these energy prices. In the meantime, the overall monetary policy needs to be maintained at a tightening stance to anchor inflation expectations.

If the central bank yields to various domestic pressures and allows money and credit growth to rebound meaningfully, China's inflation outlook would become cloudy again, while its growth outlook would become darker over the 1-2 year horizon.

There has been a lot of chatter lately in the market about a potential (imminent) policy easing in China because the government has now become more concerned about the downside risks to growth rather than inflation. We believe the government has little room to ease monetary policy at this juncture, because:

1. Headline inflation still stands at an elevated level of 7%.

2. The strenuous price controls need to be adjusted urgently, as widespread power shortages have begun to take place.

Therefore, the emerging "breathing room" offered by a lower CPI reading in the coming months should and will likely be taken up by the government to adjust upwards these energy prices. In the meantime, the overall monetary policy needs to be maintained at a tightening stance to anchor inflation expectations.

If the central bank yields to various domestic pressures and allows the money and credit growth to rebound meaningfully, China's inflation outlook would become cloudy again, while its growth outlook would become darker over the 1-2 year horizon.

We lay out our thoughts in details as follows.

I. Growth has slowed, but is still at a robust level and will likely need to slow further

As we have argued before, the present inflation challenge facing China had its source in excessive demand growth, propelled by excessive money supply growth, between late-2006 and 1H2007. Therefore, to bring inflation down to 5% or below, growth needs to decelerate back to its potential level while broad money supply growth needs to be curtailed. The tightening policies adopted so far, coupled with the gradual slowdown in external demand, have already led to a modest deceleration in growth since 2H2007, and real GDP growth is likely to head towards 10% or slightly below very soon.

However, the recent surge in oil prices has clearly worsened China's growth and inflation tradeoff in the near term. **Arguably, such a significant oil price shock may have resulted in a decline in potential output before relative prices and demand patterns complete their changes in response to the changes in oil prices**. That is, the potential growth rate that is consistent with low inflation (5% or below) target may have been lowered due to the oil price shock, at least until the economy adjusts its demand and supply molds adequately.

Therefore, even though growth has already slowed to the 10% range, it may need to slow further, possibly towards 9% or so, for inflation to stay at the 5% level or below, after the full oil price impact is allowed to pass through the economy.

II. While CPI inflation has begun to trend down, energy price controls have worsened the relative price distortion

In our view, the main reason that China's CPI inflation has begun to trend down is because the central bank has effectively (although not efficiently) curtailed broad money supply growth using credit controls and frequent reserve requirement hikes. As the growth rate of broad money supply, as measured by our preferred M3 proxy, begun to trend down since last October, CPI inflation has also begun to descend in the recent two months (see Exhibit 1).

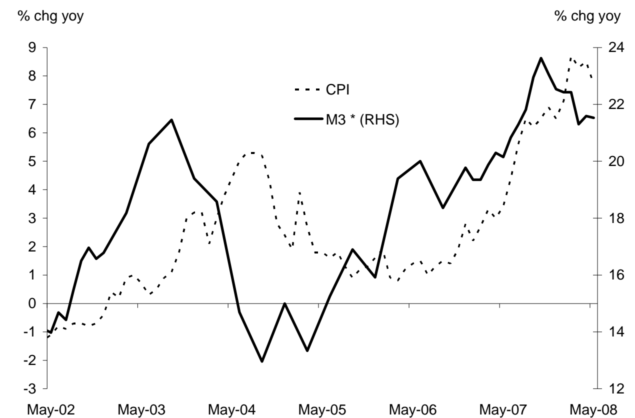
However, the distortion in relative prices, induced by the government's energy price controls, has continued to worsen, and widespread power shortages have started to emerge as the peak summer season arrives. Despite the recent adjustments in oil product prices and electricity prices, these prices are still significantly below the cost levels of the producers. Exhibits 2 and 3 illustrate clearly how stretched these price controls have become with the doubling of international oil and domestic coal prices in 1H2008. The persistent and rising financial losses incurred by oil and power producers have limited their capability to keep normal production and has even begun to pose risks to their financial lenders.

If a softening in headline CPI provides any "breathing room" for the government, it should, and also will likely, be used to adjust energy prices upwards, at least to levels that the producers no longer incur financial losses. When these energy price controls are eventually lifted, the central bank will have to keep a tightening bias so as to prevent this relative price adjustment from becoming a persistent headline inflation pressure.

On the other hand, loosening monetary policy before energy price controls are lifted would entail significant risks of worsening the inflation outlook over the 1-2 year horizon, aggravating the existing energy shortage, and ultimately requiring a larger sacrifice in output growth to bring inflation down.

In particular, getting general inflation pressures down is crucial to ensure an orderly relative upward adjustment in China's grain prices. Both rice and wheat prices in China remain significantly below international levels and farmers reluctant to sell their harvest at the current market prices, while inventory levels should be fairly low after years of de-stocking. Therefore, we believe China needs to dis-inflate the costs of agricultural

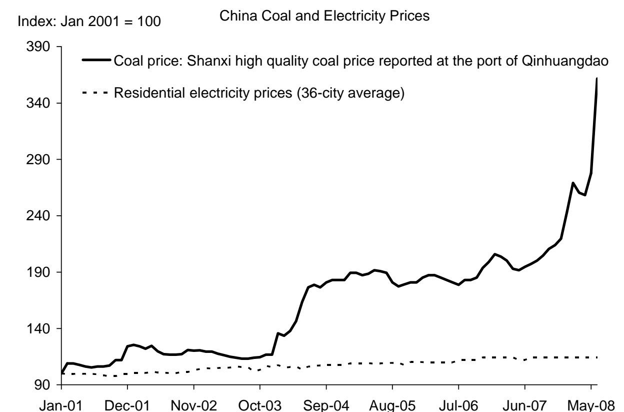
Exhibit 1: M3 proxy growth has been trending down



* Broad money supply only contains M2 before 2003, since non-M2 components in M3 supply take up very small weight back then. We used a "M3 proxy" for broad money supply after 2003. M3 proxy includes net foreign assets and domestic credits, and the only item in M3 that is not included in the M3 proxy is "other assets", whose level is only attainable since 2006, however, it should not have much impact on the growth rate of M3 due to its small share and very stable growth.

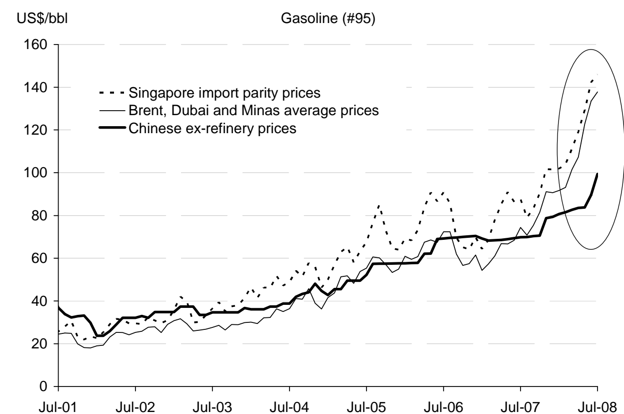
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Widening gap between electricity and coal prices



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: Widening gap between domestic and international oil prices



Source: CEIC, Goldman Sachs Economics Research.

production and of farmers' own consumption quickly to prevent a disorderly grain price adjustment in the future.

III. How about some adjustments in the policy mix?

Besides monetary policy easing, there have also been suggestions that the sectoral policies for exports and real estate need to be adjusted. Specifically, the pace of CNY appreciation would need to slow down, export tax rebates to be raised, and access to financing by property developers to be eased.

In our view, the main challenge for China's policy mix should be to move away from administrative/micro controls towards more market-based adjustments in macro prices. Furthermore, getting the currency close to the right level remains the key for such a policy mix rebalancing. In this context, we believe any back-peddling on CNY appreciation and export tax rebates would be counter-productive, and would only prolong the necessary adjustment process for the export sector.

As for the real estate sector, there are some valid arguments for a level playing field in terms of access to funding (both bank lending and capital markets) between property developers and other commercial borrowers. However, in our view, funding will likely remain tight for the sector for the time being as many developers continue to report rosy profit growth in 1H2008.

On the other hand, there is more room for fiscal policy to help the rebalancing of the economy, including tax cuts and reducing various fees associated with public services. We have long argued that the government should cut import value-added tax (VAT) rates, reduce the VAT for fixed asset investments, and further reduce and rationalize personal income taxes. We are expecting some of these measures, and other supportive fiscal policies, to be adopted, likely early next year, after the inflation pressures subside broadly.

Hong Liang

China's inflation outlook: Silver lining emerging, but dark clouds still hanging around

This article was first published on June 10, 2008.

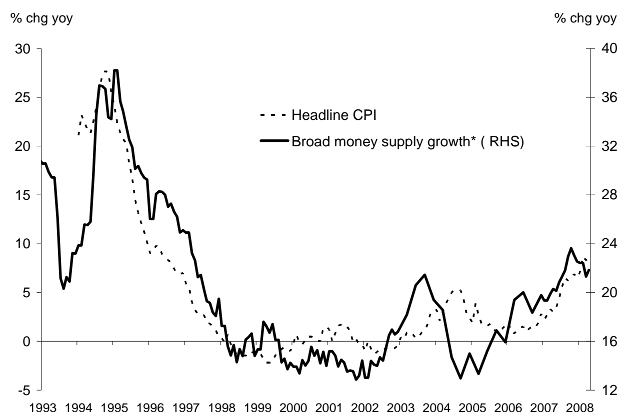
1. While many regional economies reported new multi-year high CPI numbers lately, China will likely buck the trend by reporting a potentially lower CPI reading for May as compared with April (see *CPI inflation likely begins to trend down while PPI continues to rise—a preview of the May data*, China Views, June 6). Yet the Chinese equity markets seem to take little comfort from this expectation, which should have been building since early May when prices of daily food produce began to seasonally subside. What is the market worried about?

2. Clearly, rising energy prices are weighing on investors' minds. In particular, China's energy price controls and increasingly frequent reports of energy shortages have led investors to wonder whether the underlying inflation pressures have truly begun to trend down even if the officially-reported headline numbers begin to soften. More importantly, such price controls are clearly neither efficient nor sustainable, and therefore, it begs the question of who is bearing the costs of the price controls, when they will (have to) be scrubbed, and what will then happen to headline inflation and growth.

3. Although these are important issues, we believe the key to assess China's inflation outlook remains to be how successful the central bank is in controlling broad money supply growth. It is here we see some positive signs emerging: the growth rate of broad money supply, as measured by our preferred M3 proxy, seems to have peaked last October, and have been gradually trending down (see Exhibit 1). If the central bank can keep money supply growth from rebounding, CPI inflation would likely also have peaked and would begin to trend down towards 5%-6% later this year.

4. In our view, the main reason that China's CPI inflation trend may differ from that of the region is because the People's Bank of China has tightened monetary policy earlier and more aggressively. The authorities became more concerned about inflation after headline CPI broke 6% in 4Q2007, and they began to tighten domestic bank credits more forcefully. After putting bank lending on a tight leash for 6 months, there are increasing signs suggesting that the tightening has gradually become binding on the margin, leading to tighter liquidity in the market, rising "curb market" interest rates, and stress on corporate cash flows in a few sectors.

Exhibit 1: Broad money supply has been gradually trending down



* Broad money supply only contains M2 before 2003, since non-M2 components in M3 supply take up very small weight back then. We used a "M3 proxy" for broad money supply after 2003. M3 proxy includes net foreign assets and domestic credits, and the only item in M3 that is not included in the M3 proxy is "other assets", whose level is only attainable since 2006, however, it should not have much impact on the growth rate of M3 due to its small share and very stable growth.

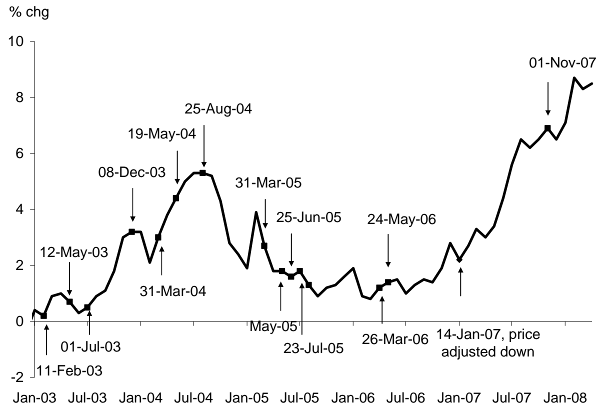
Source: CEIC, Goldman Sachs Economics Research.

5. As a result, the equity market has lost its buoyancy and begun to adjust downward its earning expectations for this year, and even for 2009. In other words, the "landing" of CPI inflation was driven by a (soft) landing of aggregate demand and of nominal income (changes in pork prices clearly can not have such a large macro impact). But has the landing been completed?

6. Probably not yet, both because the level of inflation is still too high and a few controlled prices need to be adjusted upwards. In our view, both energy and grain prices in China are under significant upward pressures given their gap vs. international prices. When these prices eventually get adjusted, hopefully in the not too distant future, the central bank would need to keep its tight leash on broad money supply so as to prevent this relative price adjustment from becoming persistent headline inflation pressures.

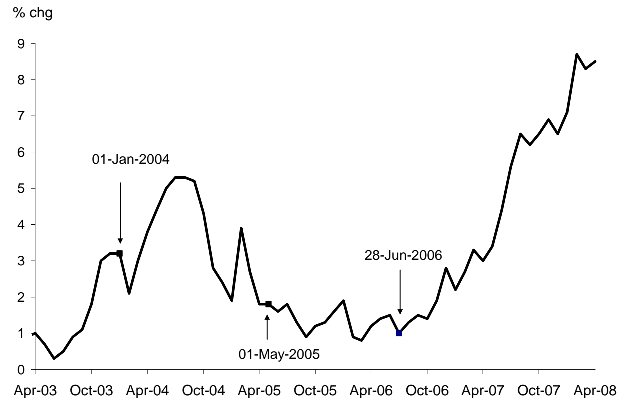
7. Interestingly, the few episodes of energy price adjustments since 2003 have indeed *not* associated with noticeable jumps in headline inflation, rather in a few cases, headline inflation came down afterwards (see Exhibits 2 and 3). This likely reflects the fact that the government tends to only raise administrative prices when the broad inflation

Exhibit 2: CPI and adjustments to gasoline prices



* Actual price adjustment dates.
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: CPI after the adjustments to electricity prices



* Actual price adjustment dates.
Source: CEIC, Goldman Sachs Economics Research.

environment is relatively benign, sometimes after a major tightening program. In the latter case, downstream industries tend to shoulder the brunt of the profit squeeze.

8. Therefore, even though we believe the stretched energy price controls will keep both investors and policymakers on a wary stance, the inflation outlook hinges on the capability of the central bank to keep broad money supply growth in check. The latest 100-bp reserve requirement ratio hike should help strengthen the central bank's credibility. On the other hand, any rebound in money supply growth will lead us to re-assess our tentative conclusion that inflation may have peaked in China. Otherwise, the attention should be paid on where in corporate earnings that the brunt of dis-inflation squeeze will bear.

Hong Liang

The PBOC raised the reserve requirement ratio by a total of 200 basis points in 2Q2008

The People's Bank of China (PBOC) hiked the reserve requirement ratio (RRR) three times by a total of 200 basis points (bp) to 17.5% in 2Q2008. The three hikes were announced on April 16, May 12 and June 7.

We believe these RRR hikes should help strengthen the credibility of the central bank, and therefore, help ensure China's macro stability in the long run. In particular, the larger-than-usual hike of 100 bp on June 7 demonstrated the central bank's tightening stance despite slightly lower CPI inflation and should translate into some meaningful liquidity tightening in the banking system given the excess reserve ratio was reported to be at below 2% at the time of the hike.

Going forward, we expect the central bank to maintain its tightening package which includes further hikes to the RRR, continued credit rationing in commercial lending, as well as further appreciation of the currency (but no hikes to benchmark interest rates).

Hong Liang
Yu Song

Turmoil in Vietnam—limited economic impact but plenty valuable lessons for China

This comment was first published on June 10, 2008.

The recent economic and financial market turbulence in Vietnam has led many Chinese policymakers/investors to become increasingly concerned about their potential impact on China. In this article, we outline our thoughts on what is happening in Vietnam, the risk of a potential currency crisis, and any lessons China should draw from Vietnam's experiences.

1. **Vietnam's markets in turmoil**. Rising cyclical risks have aggravated investors' fears that macro instability in Vietnam will soon translate into a balance of payments (BOP) crisis or a significant currency devaluation. In recent days, the offshore non-deliverable forward (NDF) market has moved to price in a more than 30% depreciation of the VND in 12 months; the price of Vietnam's 5-year sovereign debt credit default swaps has jumped by almost 100 bp from its closing level on May 30; and the equity index, the Viet Nam Index (VNI), has continued its nosedive, recording a nearly 60% plunge year-to-date. The property values of some high-end apartments in Ho Chi Minh City are said to have slumped by 20%-50% within the past few months.[1] Meanwhile, rating agencies such as Standard & Poor's, Fitch, and Moody's have lowered their outlooks for Vietnam to reflect increasing macro risks on growth and inflation. There have also been increasing anecdotal stories of people rushing to buy gold or USD in the black market to hedge against the potential VND devaluation.

2. **What has caused the shift of sentiment?** Investors' optimism on Vietnam has quickly waned in the past 6 months as deteriorating macro dynamics have raised the systematic risk for the economy: Vietnam has seen its headline CPI inflation surge to 25.2% yoy in May (from only 8%-9% last September), and a trade deficit of US$14.4 billion in the first 5 months of the year, which is US$2 billion more than the total deficit for the whole year of 2007. Many investors have become concerned that if there is a slowdown in foreign direct investment (FDI) and/or exports growth, any potential capital outflows could soon lead to a BOP crisis in Vietnam similar to what happened in Thailand in 1997.

3. **In our view, the contagion risk for China remains limited**. First, we believe that the probability of a BOP crisis in Vietnam is still not large enough to make it our baseline scenario at this point yet. Given the existing foreign exchange controls in Vietnam, we believe the likelihood of an outright currency attack on the VND initiated by international speculators remains limited. Second, even if things deteriorate further in Vietnam, we believe the contagion impact on China should be limited. If inflation deteriorates further in Vietnam, local capital might flee massively into gold and the USD, putting the domestic monetary system under stress. As a result, foreign investors' confidence in Vietnam and other emerging markets facing similar macro challenges could deteriorate further, leading to more capital outflows from these markets. Nevertheless, China's strong fiscal and BOP positions should keep any potential contagion effects to a very limited extent.

4. **What is the real lesson that China should learn from Vietnam's turmoil?** We believe the Vietnam boom-and-bust experience has again illustrated the large macro risks of keeping a currency undervalued for too long. Market-oriented reforms and the entry into the WTO at the beginning of 2007 have significantly improved the fundamentals of the Vietnamese economy, leading to persistently large capital inflows and consequently, real exchange rate appreciation pressures. Vietnam, like many of its Asian neighbors, chose to resist nominal appreciation by undertaking large-scale foreign exchange purchases. However, the central bank failed to sterilize these inflows, and it allowed a rapid domestic credit expansion (domestic credit growth was 54% yoy in 2007), fuelling a domestic investment boom and consequently, rampant domestic inflation pressures. As a result, the real exchange rate has overshot quickly from being undervalued to become overvalued as headline inflation surged from 10% six months ago to 25% presently. Therefore, the valuable lessons for China from Vietnam's current macro difficulties should include 1) keeping a currency undervalued for too long entails significant macro risks; 2) allowing domestic inflation to run-up to correct real currency undervaluation can be very destructive for macro stability; and therefore 3) nominal appreciation is a much more optimal policy choice when an economy is facing structural appreciation pressures. But when these appreciation pressures still persist, the central bank needs to closely monitor and control domestic credit expansion to prevent macro excesses from building up.

Hong Liang
Helen (Hong) Qiao

[1] See *Slump leaves upmarket property speculators in the lurch*, Thanh Nien News, May 26.

China adjusted refined oil and electricity prices, limited impacts on CPI inflation

This comment was first published on June 20, 2008.

The National Development and Reform Commission (NDRC) announced a series of adjustments to energy-related prices on June 19 (see Exhibit 1). Effective from June 20, benchmark gasoline and diesel prices will be both hiked by Rmb1000 per ton (16%). Retailers will be allowed to raise prices further by up to 8%, which we believe will most likely be utilized. Therefore, retail gasoline prices can potentially be raised by 26%. Jet fuel prices were hiked by Rmb1500 per ton (25%).

Electricity prices will be hiked by 2.5 cents per kwh (4.7%) on average. However, electricity prices for households and agricultural production, natural gas and LGP prices will not be adjusted. At the same time, the NDRC announced that it will cap power coal prices at its level on June 19 until the end of 2008.

Exhibit 1: Summary of energy price adjustments

	Benchmark price before adjustment	**Benchmark price after adjustment**	**Adjusted by**		**Adjusted for the 8% max further adjustment**	**Adjusted by**	
per ton	Rmb	Rmb	Rmb	%			
Gasoline	5980	6980	1000	16.7	7540	1560	26.1
Diesel	5520	6520	1000	18.1	7040	1520	27.5
Jet fuel	5950	7450	1500	25.2	-	-	-
per kwh							
Electricity	-	-	0.0025	4.7	-	-	-

Source: NDRC, Goldman Sachs Economics Research.

We view the adjustments to refined oil and electricity prices as a positive first step in improving resource allocation, although the cap on power coal prices is a step backward and both gasoline and electricity prices will likely need to be adjusted upwards further in the future.

We believe the direct impacts of the oil price hikes on the CPI are likely to be small. We estimate the weight of refined oil in the CPI basket is around 0.5%. Therefore, a 26% price hike in gasoline prices implies a net impact of only around 0.13%. Since we expect the June CPI to soften on the back of lower food prices, the gasoline price hike is unlikely to change the declining trend of the CPI.

The impacts of the energy hikes on the PPI is likely to be more visible but more difficult to quantify. However, as we expect aggregate demand growth to soften, we believe most downstream producers will not be able to pass on the increased energy costs. As a result, **the corporate profitability of downstream industries will likely decline**.

We reiterate our view that China's inflation outlook hinges on the capability of the central bank to keep broad money supply growth in check. As the central bank has gradually brought down the broad money supply growth, **we believe the energy price hikes are more likely to be a relative price adjustment rather than an overall inflationary impulse**.

Hong Liang
Yu Song

Thoughts of the economic impact of the latest earthquake and a comparison with Kobe in 1995

This comment was first published on May 21, 2008.

1. It will probably take weeks, if not months, before we know the exact human tolls and business fallout from the latest earthquake in China. As the search and rescue mission for victims has come close to an end, market concerns have again been shifted to the economic impact from the earthquake. In this context, Japan's experiences from the Kobe earthquake in 1995 have been cited by some commentators as risks that the potential economic fallout from China's latest earthquake could be more severe than expected initially.

2. Notwithstanding the much higher human tolls from the Sichuan earthquake (the expected death tolls could reach 50,000), its economic impact is likely to be much less significant than Kobe (with 6,500 deaths). Aside from being a relatively more important agricultural area, the national shares of population, GDP, and industrial production for the Sichuan quake-affected areas are about less than one fourth of those for the Kobe earthquake in 1995 (see Exhibit 1).

Exhibit 1: Comparing the impacts of the Sichuan and Kobe earthquakes

% share of severely affected areas* in a national context	2008 Sichuan earthquake	1995 Kobe earthquake
Population	1.0	4.4
GDP	0.8	4.1
Agriculture production	1.3	2.1
Industrial production	0.7	4.8

* We include the 40 counties in Sichuan Province that are classified by the government as being "severely hit." In terms of Japan, we used data for the Hyogo Prefecture which includes the city of Kobe.

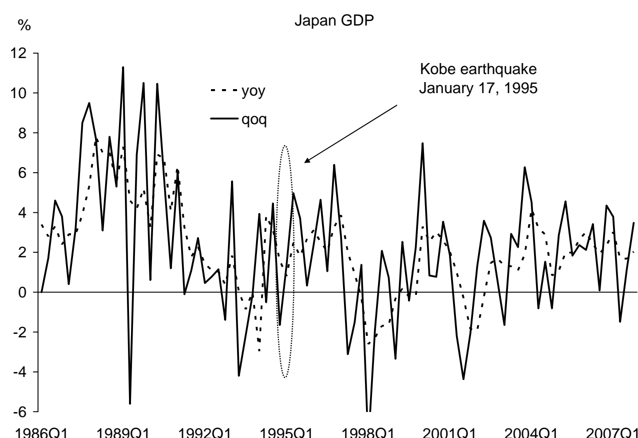
Source: Sichuan Statistical Yearbook, CEIC, Goldman Sachs Economics Research.

3. Specifically, the heavily-damaged counties are mostly in remote mountain areas this time in China, whereas Kobe and its surrounding areas are known for its manufacturing prominence. For example, Kobe boasts one of the largest steel smelters and the world's sixth largest container port. Therefore, the quake-induced disruptions to manufacturing and trade transportation were severe for Japan, and the damages are said to have cost Japan US$200 billion or 2.5% of GDP at the time (it was known as the costliest natural disaster to fall in any one country).

4. In spite of such severe economic damage, Japan's economic activities actually held up better than expected, and indeed rebounded quickly (see Exhibit 2). Immediately after the Kobe quake, industrial activities, as well as consumer sentiment and consumption, all plunged. But they all came back quickly on the back of strong reconstruction demand. Looking at the quarterly data, one can hardly detect much negative impact from the earthquake: real GDP grew +1.2% (quarter-on-quarter annualized) for the quake, a rebound from the negative 1.5% qoq in the previous quarter, and accelerated to +5.1% qoq in the following quarter.

5. Because of Sichuan's relative importance in agriculture, there are also concerns that pork and other agriculture product prices may surge as a result of the losses caused by the earthquake. While such risks are real and need to be monitored closely going forward, official information suggests the amount of losses is limited so far. The loss of hogs is estimated to be is just below 1 million, out of an existing national stock of around 400-500 million. Consistent with this, pork prices have been stable in recent days as well. The direct impacts on grain production should be even more limited.

Exhibit 2: Japan's GDP growth



Source: CEIC, Goldman Sachs Economics Research.

6. Some investors are also concerned that the knock-on effects to basic materials and energy prices from China's reconstruction demand could be significant, and this was something Japan did not need to worry about after the 1995 Kobe quake. Yes, the after-quake reconstruction demand will likely complicate China's macro policy making given elevated domestic inflation and global commodity prices. But the "economic" size of the affected areas (see Exhibit 1) still suggests rebuilding the area should have limited impact on nation-wide aggregate demand, and thereby, prices, if the overall macro policy stance remains unchanged.

7. On the other hand, a premature easing of monetary policy, whether it is in response to the earthquake damages or outcries from a few exporters, would worsen the inflation outlook and aggravate China's macro challenges down the road. At this point, we still see this as an unlikely scenario, but will watch the policy space closely for upside risks to inflation.

Hong Liang
Yu Song

Why we still like the CNY so much

(An update on the speed and costs of China's FX accumulation and our new CNY forecasts)

This article was first published on June 4, 2008.

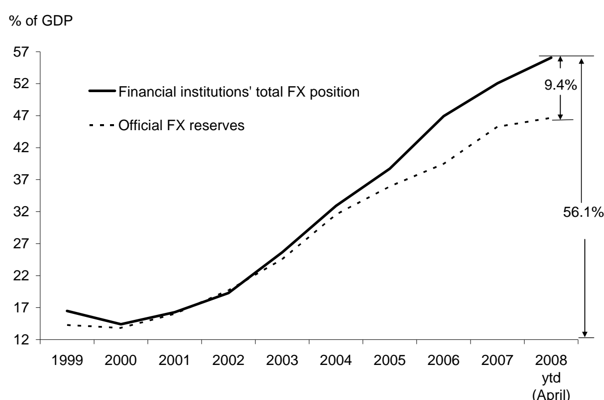
Since early-April, the CNY/USD appreciation rate has slowed significantly to an around 6.7% annualized rate in April-May, down from 17% in the first three months of the year. As a result, the non-deliverable forwards (NDF) market's expectation for 12-month CNY/USD appreciation has also been scaled back to 6.6% from 11.7%. Is the slower CNY appreciation rate a change of course? Or is it just a normal China-style "stop" before the "go" again? We believe it is more likely to be the latter, and thereby **we have rolled forward our USD/CNY forecasts to 6.76, 6.60 and 6.30 on 3, 6 and 12-month horizons, implying 10% appreciation in 12 months' time**.

Here is why we believe that China cannot afford to go slow, let alone to stop, on its long march to get the CNY right:

1. **The People's Bank of China needs to persistently buy large and rising amounts of USD, to hold the CNY at its current level**. China's foreign exchange (FX) reserves are reported to have posted the biggest single-month increase of US$75 billion in April 2008, reaching a total of US$1,757 billion.[1] For the first four months of this year, FX reserves grew by 40.9% yoy in USD terms, still much faster than China's nominal GDP growth rate. Assuming the current reserve accumulation speed remains unchanged, ***FX reserves can easily exceed US$2.2 trillion by end-2008***. It was only in October 2006 when China's FX reserves reached US$1 trillion, and the FX reserves has continued to double in size about every two years.

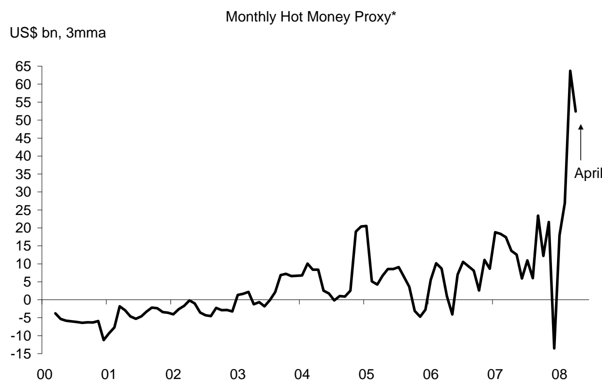
2. **Yet, the official FX reserves number has *still understated* the true level of FX accumulation by the official sector**. The total FX position of China's banking system already reached **US$2.1 trillion** in April 2008, or over 56% of GDP (see Exhibit 1). The gap between the official FX reserves and total financial institutions' FX positions have widened significantly since 2006, resulted from the central bank's creative ways to put more FX assets onto commercial banks' balance sheets,[2] including instructing the commercial banks to pay the increases in the required reserves in USD.

Exhibit 1: Widening gap between central bank FX reserves and financial institutions' FX positions, reflecting the (involuntary) FX assets accumulation in commercial banks



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Surging "hot money" inflows



* Hot money proxy = change in financial institutions' FX position - estimated current account balance - foreign direct investment.

Note: we estimate China's monthly current account balance using (merchandise exports) – (merchandise imports / 1.05), to account for the roughly 5% import price difference reported under customs regime vs. BOP regime. The other items in China's current account are relatively small.

Source: CEIC, Goldman Sachs Economics Research.

3. **Interestingly, such large FX inflows have continued to pour in, despite slower trade surplus growth and reduced global risk appetite**. A commonly used "hot money proxy" (hot money = change in FX reserves – current account balance – foreign direct investment) suggests that "hot money" inflows has surged again since late-2007, likely reflecting the reversed interest rate differentials of the CNY vs. the USD and rising expectations of

[1] The figure has been broadly reported by Reuters, Xinhua News Agency etc. that China's FX reserve hit US$1757 bn in April 2008.

[2] For more details on China's FX reserve diversification, see *China's surging current account surplus and FX assets in the banking system*, Asia Economics Flash, February 16, 2007.

CNY appreciation (see Exhibit 2). A large part of the recent surge in "hot money" inflows may have come from overseas Chinese's remittances, particularly through Hong Kong via the CEPA arrangement.

4. **The size of China's total balance of payments (BOP) surplus is unprecedented for any large economy**, both in absolute levels terms and as a share of GDP (see Exhibit 3). We estimate that China's BOP surplus had reached **15% of GDP** in 2007, and is likely to rise further this year. The flip side of such large BOP surpluses is the persistent FX purchases by the central bank, which has generated mounting economic costs in the following dimensions:

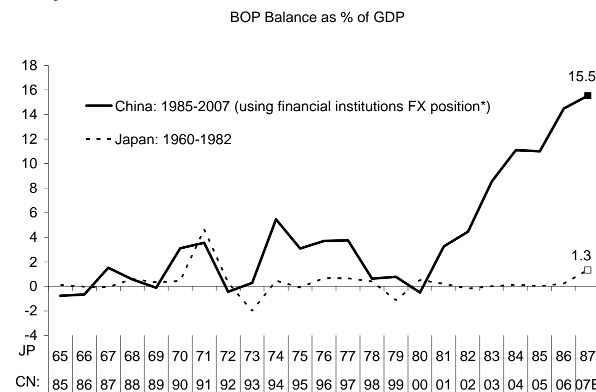
   a) Domestic inflation pressures;

   b) FX inflows have crowded out domestic credit growth. China's monetary tightening in the past few years has relied heavily on squeezing domestic credit growth, while letting FX assets grow at a much faster pace because of the currency policy constraints (see Exhibit 4). Because the share of net foreign assets (NFA) in China's money supply has now ballooned to 31% from 16% in 2003, domestic credit would have to slow much sharper nowadays to achieve the desired rate of money supply growth and inflation. But will there be sufficient political will to do that?

   c) Hefty economic losses from holding FX reserves. The opportunity costs of holding the FX reserves relative to holding CNY assets have risen rapidly, amounting to about US$15 billion per month, or 5% of GDP on an annualized basis (see Exhibit 5). This is relative to an estimated economic loss of about US$20 billion from the snow storm earlier this year.[3]

   d) The real value of the FX assets is being eroded by foreign inflation. Exhibit 6 illustrates that when we deflate China's FX reserves using the prices of a basket of commodities, the real value of these reserves in terms of real commodities increased by less than 3 times compared with the 8 times in USD terms (see Exhibit 6). Moreover, the real value of the reserves has *declined* since the USD renewed its slide in late 2007!

Exhibit 3: China is facing unprecedented challenge of hefty FX inflows

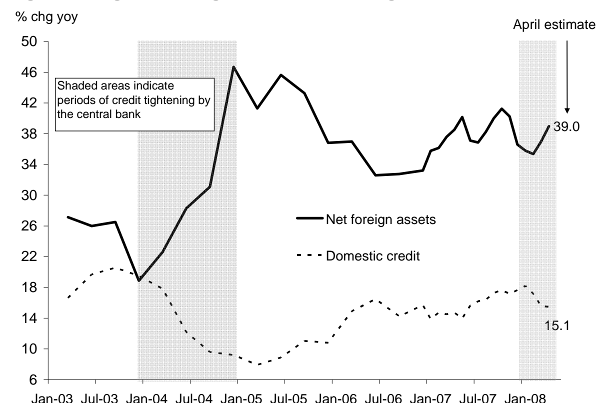


* For 2007E in China, we added back the US$20 billion transfer to the China Investment Corporation.

Note: we used change in FX position instead of official BOP balance (i.e., FX reserve change) for China as the central bank has been increasingly diversifying its FX holdings to commercial banks' balance sheets in recent years, while FX assets of commercial banks are likely accounted as "FX outflow" under BOP.

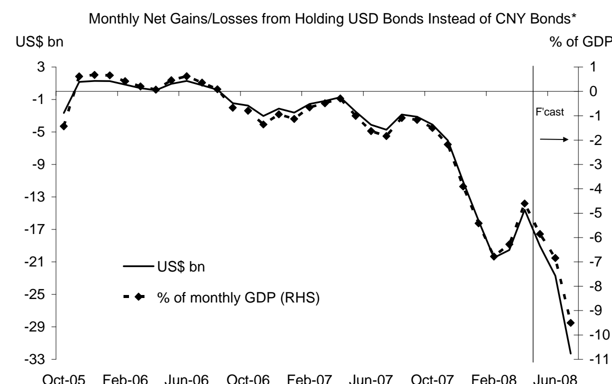
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: NFA has been growing much faster than domestic credit since 2004, with every credit tightening working to its advantage



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Holding excessive FX assets puts China on a steep losing streak

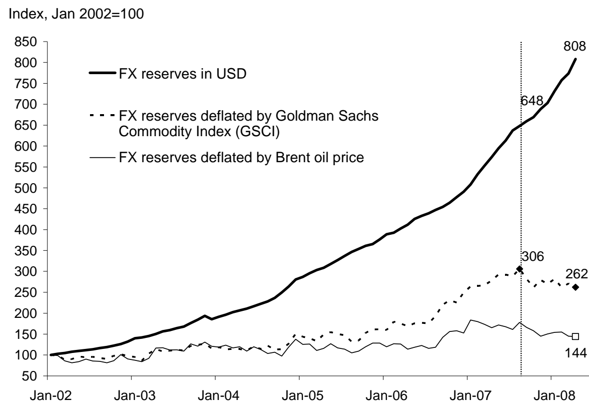


* Monthly net gain/loss = monthly opportunity cost (% p.a.) from holding USD bonds vs. CNY bonds X (monthly average FX reserves).

Source: CEIC, Goldman Sachs Economics Research.

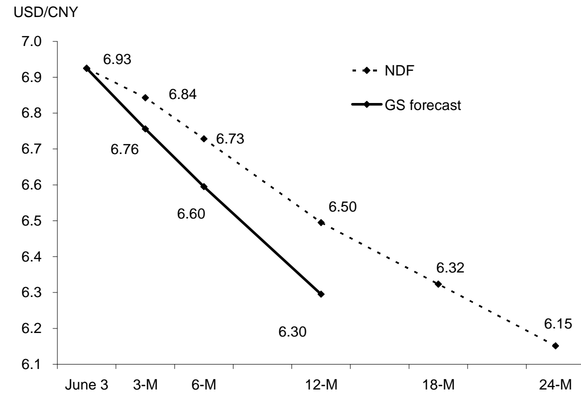
[3] The snow storm caused total economic loss of Rmb150 billion, according to the Ministry of Civil Affairs.

Exhibit 6: China's FX reserves in real commodity terms have not grown nearly as much as the USD headline, especially in recent months



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7: Our new USD/CNY forecasts vs. forwards



Source: Bloomberg, Goldman Sachs Economics Research.

5. **Will a 6%-7% CNY/USD appreciation in one year, in any meaningful way, help eliminate a US$700 billion BOP surplus (or US$262 billion trade surplus) and its associated distortions for China?** In our view, it is unlikely. China clearly prefers to move gradually; however, in the face of mounting economic costs and international pressures, "gradually" may also increasingly need to become "gradually faster" CNY appreciation.

6. **Therefore, we roll forward our USD/CNY forecasts to 6.76, 6.60 and 6.30 on 3, 6 and 12-month horizons, from 6.80, 6.55 and 6.38 previously**. Our updated forecast implies 10% appreciation of the CNY in 12 months' time, compared with 6.6% currently priced into the NDF market (see Exhibit 7). Our new 6-month CNY/USD forecast now implies 5% appreciation vs. 9% in our previous forecast made more than 3 months ago because of large realized appreciation in the past few months and our expectations of a more stable USD in 2H2008.

Hong Liang
Eva Yi

Beijing 2008 Olympics: Fears of a boom and bust

This article was first published on June 16, 2008.

As we are approaching the 2008 Olympic Games in Beijing, there are increasing concerns of whether China will follow the conventional wisdom by experiencing an Olympic-related "boom and bust." In this article, we take a close look at this topic by surveying the experiences of the last 10 hosting cities.

We conclude that neither the amount of the Beijing-2008-Olympics-related investment nor the size of the host city is large enough to generate a boom and bust in real economic activity for the overall country.

However, if macro policies are too loose in the period preceding the game, a cyclical slowdown tends to follow afterwards when policies are forced to tighten. In addition, an anticipated shutdown of some industrial activities in parts of the country in the summer, possibly to ensure better air quality, may inadvertently exacerbate economic volatility within the year.

On the other hand, experiences do show the hosting city's property market tends to benefit from the infrastructure investment, and the equity market of the hosting country also tends to do well during the few years surrounding the Olympic games.

Therefore, we see the major challenge for China in 2008 remains to be how to bring inflation down without overly restraining its domestic demand. If China succeeds in maintaining its macro stability in 2008, we believe its economy can sustain 9%-10% real growth in the coming years even after the Olympic fanfare is over.

As we are approaching the 2008 Olympics Games in Beijing, there are increasing concerns of whether China will follow the conventional wisdom by experiencing an Olympic-related "boom and bust." In this article, we take a close look at this topic, and find that:

1. Neither the amount of the Beijing-2008-Olympics-related investment nor the size of the host city is large enough to generate a boom and bust in real economic activity for the overall country.

2. However, if macro policies are too loose in the period preceding the game, a cyclical slowdown tends to follow afterwards when policies are forced to tighten.

3. In addition, an anticipated shutdown of some industrial activities in parts of the country in the summer, possibly to ensure better air quality, may inadvertently exacerbate economic volatility within the year.

4. On the other hand, the hosting city's property market tends to benefit from the infrastructure investment, and the equity market of the hosting country also tends to do well during the few years surrounding the Olympic games.

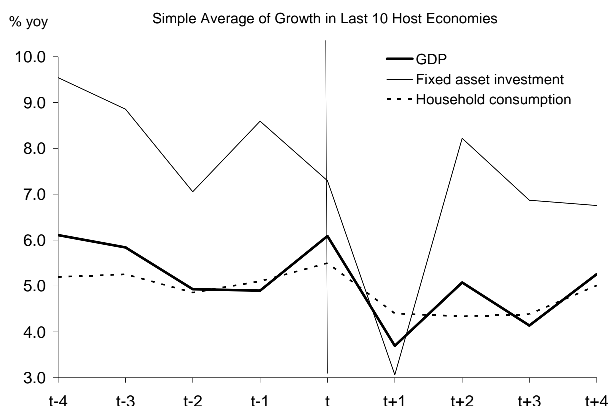
In short, the Olympic hosting country does not necessarily suffer a cyclical boom-bust because of the games itself, but its choice of macro and regulatory policies will be the key to watch for potential cyclical volatilities. On that note, we see the major challenge for China in 2008 remaining to be how to bring inflation down without overly restraining its domestic demand.

Exhibit 1: Past 10 Olympic host cities

	Host city
1964	Tokyo
1968	Mexico City
1972	Munich
1976	Montreal
1984	Los Angeles
1988	Seoul
1992	Barcelona
1996	Atlanta
2000	Sydney
2004	Athens
2008	Beijing

* The 1980 Moscow Olympic Games were not surveyed in this article.
Source: International Olympic Committee.

Exhibit 2: A simple average of GDP growth of the 10 host economies shows a boom and bust pattern around the Olympic year...



Source: CEIC, Goldman Sachs Economics Research.

Mixed records of Olympic-related boom and bust

We have surveyed the last 10 Olympic games from 1964 (see Exhibit 1), and found that a simple average of growth rates of the host countries do show a pattern of "boom and bust" (see Exhibit 2).

However, a closer look at the data reveals a rather divergent experience of the hosts: while Tokyo, Mexico City, Los Angeles, Montreal, and Seoul experienced some forms of boom and bust in their real economies, Munich, Barcelona, Atlanta, Sydney and Athens did not.

A close study of these cities experiences has led us to the following four observations:

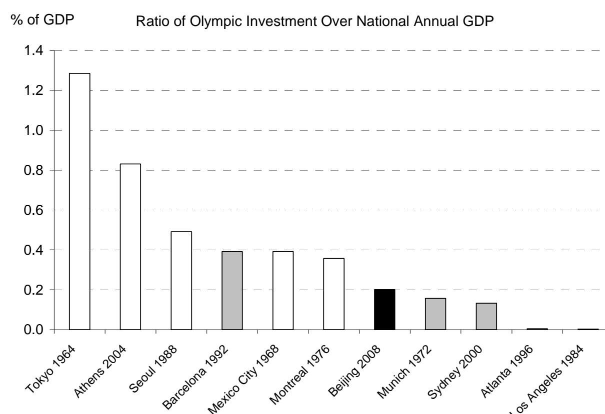
(i) The size of the economy matters

Hosting the Olympic games may affect the real economy of the hosting countries through two channels: a) "extra" investments in infrastructures and sports facilities; and b) "extra" consumption by visitors to the host city. Both of these "extra" demand sources tend to dissipate after the games finish. Therefore, it is not surprising that for countries that had experienced large swings in economic activities around the Olympic games, we find:

1. Olympic investments are large relative to the size of the economies (see Exhibit 3).

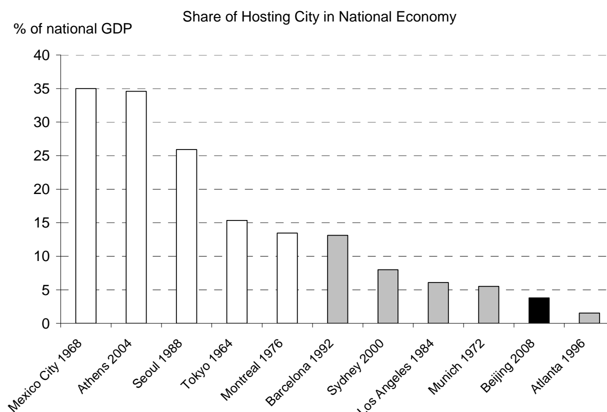
2. Host cities account for large shares in the national economy (GDP of host city/national GDP) (see Exhibit 4).

Exhibit 3: Tokyo and Athens had the highest Olympic investment/GDP ratios



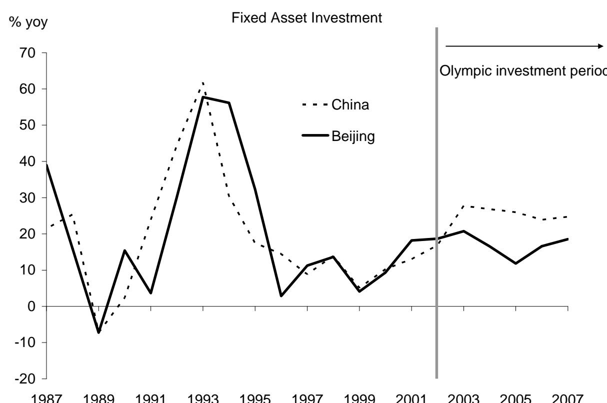
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Mexico City, Athens and Seoul had the highest shares in their national economies



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Beijing's investment growth has been lagging the national average during the "Olympic investment period"



Source: CEIC, Goldman Sachs Economics Research.

By both matrices, the direct economic impact from hosting the 2008 games on the broad Chinese economy look to be fairly limited, especially when compared with Japan and Korea whose experiences are often used for clues on China's post-Olympic development.

In terms of the share of the host city in the national economy, Beijing is only higher than Atlanta, with 4% of national GDP. For it to drive the national economy in any meaningful way, the growth swings in Beijing would need to be very large. Interesting to note, reported investment growth in Beijing continues to lag the national average (see Exhibits 5).

Therefore, in our view, the US experiences in hosting the games may serve as a better comparison for what may happen after the games in China.

(ii) Economic policies matter more

For large countries, we believe economic policies adopted before the Olympic games were mainly responsible for the hosting country's growth trajectory after the game. The US economy experienced different cyclical growth paths after hosting the Olympic games in Los Angeles (1984) vs. Atlanta (1996). Despite being the cheapest Olympic games since 1964, the Los Angeles Olympic Games was associated with a peak in real economic growth of 7.2% in the US economy in 1984. Growth subsequently softened to 3%-4%. Rather than the games itself, the boom-bust of economic growth surrounding 1984 was largely induced by the expansionary monetary and fiscal policies adopted between late-1981 till mid-1984, which included both a cut on personal taxes and substantial cuts in the Fed fund rates. On the other hand, the 1996 Atlanta Olympic Games brought no visible swings in economic activity according to the timing of the games. Interest rates were being raised and the fiscal balance improved before the 1996 games in the US.

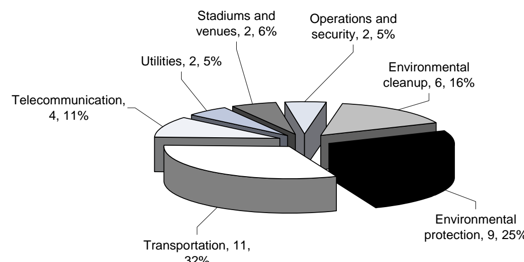
In the cases of Japan, Canada and Mexico, monetary easing and/or expansionary fiscal policies were adopted in the year(s) before the Olympic games, and therefore, contributed to the cyclical swings of the hosting countries' economies afterwards.

(iii) Host city's property market tends to benefit

While the games tends to have a mixed record of its impact on the hosting country's national economy, experiences do suggest that the host city tends to get a boost in its infrastructure investment, and thereby its property market in years to come. In the case of the Beijing games, **90% of the Olympic-related investments are spent on improving the environment, the transportation system, utilities, and telecommunication systems** (see Exhibit 6). We expect these investments to benefit residents, business and tourists over the medium term with improved environment, telecommunication and transportation systems, recreational facilities, and utilities.

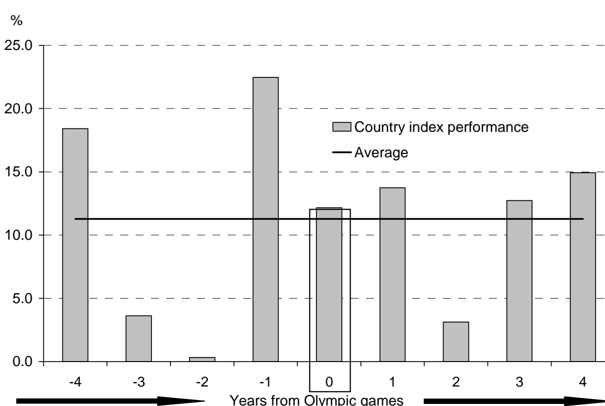
Exhibit 6: Most of the Olympic-related investments will have long-lasting positive effects on the city

"Olympic-related Investments" by Components, US$ billion, % Share in Total Investments



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7: On average, the market tends to perform well one year ahead of the Olympics year and stay firm in the two subsequent years



Source: CEIC, Goldman Sachs Economics Research.

(iv) Equity market also tends to benefit

Our Asia-Pacific Strategy Team has highlighted that local stock indices tend to perform well one year ahead of the Olympic year (certainly true for China in 2007 until late October), likely reflecting investors' optimism on the potential benefits of the games on the economy and corporate earnings. The market tends to retreat during the year of the games but would typically bounce up again in the following year.[1]

[1] They identified two groups of companies which could potentially benefit from the Olympic games: 1) one group is those Beijing-based companies which can utilize their home advantage in benefiting from

Regulatory policy changes can cause additional volatilities in economic activities

To ensure a safe and relatively clean environment for the games, the Chinese government is widely expected to suspend some economic activities during the summer. The suspension would be mainly implemented in Beijing and its surrounding regions, including Shanxi, Shandong, Hebei, Tianjin and Inner Mongolia. Outside this region, Shenyang, another co-host city, is also likely to take some measures to control industrial pollution as well. The suspension is likely to start towards the end of July and may last as long as the closing of the Paralympics (September 17). At this point, it is unclear whether activities around the other two hosting cities, Shanghai and Hong Kong, would also be affected.

There have already been anecdotal reports of front-loading production and goods hoarding by companies in anticipation of the potential disruptions in the summer time. If economic activity in a significantly large area of the country is restricted for any significant period of the time, volatility in economic activity within the year will be exacerbated. In addition, significant anticipations of such disruption by corporates could lead to the same effect, that is, demand may be front-loaded in 1H2008, followed by subdued activity during the summer time, and then by a "recovery" in the fall.

Given the heightened uncertainties surrounding global demand this year, coupled with policy tightening in China, these potential Olympic-game-related demand fluctuations might make it much more difficult for investors to extract "signal" from "noise" in the summer time.

Concluding thoughts

Despite being a popular perception, an Olympic-games-induced "boom and bust" of economic activities is not an inevitable fate for the hosting country, particularly not for a large continental economy like China. Rather, the choice of macro and regulatory policies adopted by the hosting countries prior to the games will be the key to watch for potential cyclical volatilities.

On this note, we see the major challenge for China in 2008 remains to be how to bring inflation down without overly restraining its domestic demand. Macro data until April 2008, 4 months prior to the games, has shown some progress towards slowing down money supply growth. However, such progress was achieved mainly through stringent domestic credit rationing, while real interest rates remain negative and the CNY significantly undervalued. Therefore, any premature easing on credit controls or re-acceleration in external demand in the near term would worsen the inflation and growth outlooks for late-2008 and 2009.

On the other hand, if China succeeds in maintaining its macro stability in 2008, we believe its economy can sustain 9%-10% real growth in the years after the Olympic fanfare is over. In addition, China's growth driver will likely increasingly shift towards domestic demand going forward.

Yu Song
Hong Liang

higher investment and consumption. They include Beijing Capital International Airport, Beijing Capital Land and Air China. 2) The other group is Olympic sponsors/partners at various levels (there are four levels of sponsorships: i) Worldwide Olympic Partners; ii) Beijing 2008 Partners; iii) Beijing 2008 Sponsors; and iv) Beijing 2008 Exclusive Suppliers. They believe this is a cost effective way to enhance the brand image of these companies because of the wide audience base of the Olympic Games. Companies in this group include Lenovo, Bank of China, China Mobile and Tsingtao Brewery (see *2007 Outlook: Warming up for Olympics 12000*, China: Portfolio Strategy, January 3, 2007)

Changing tides in corporate earnings

This article was first published on May 2, 2008.

Corporate earnings may grow more slowly than nominal GDP growth in 2008 for the first time since 2001.

The declining share of profits is the flip side of the rising shares of government revenues and overall wage income. More importantly, it also reflects a sharp decline in the trade surplus as a percent of GDP because of slowing global demand and a large negative terms-of-trade shock, while China's domestic demand is constrained by policy tightening.

The persistent surge in external surpluses in the last 5-6 years has surely contributed to China's corporate earnings positively. Therefore, a sharp correction in these surpluses due to external factors, without the support of other mitigating domestic policies, would likely result in a decline in corporate profit growth, even possibly a sharp one.

If industrial profits' share of GDP stays flat in 2008, its implied year-on-year growth would be only 15%-20%. If the profit share to GDP comes down by 1 percentage point, the implied profit growth would be below 10% yoy. Moreover, if the expected reduction in trade surplus growth continues to be met with restrictive domestic demand policies, industrial profits growth would likely decline further in the 2008-2009 period.

Furthermore, various government price controls have distorted sectoral profit distributions, favoring banks and non-state-owned-enterprises in the non-financial sector at the expense of state-owned-enterprises in downstream industries. However, an eventual correction of these distortions, or disappearance of fiscal subsidies, would likely lead to a reversal of the current profit distribution pattern across sectors.

The corporate earnings outlook could improve on a sustainable basis, if 1) global commodity price inflation subside significantly because demand outside of China slows; 2) domestic inflation subsides (either because of an external slowdown or domestic tightening), and therefore the government can have room to stimulate domestic demand; and/or 3) there is a meaningful appreciation of the CNY on trade-weighted terms, which can help improve China's terms of trade and help give room for domestic easing polices.

Industrial profit growth reported by the National Bureau of Statistics (NBS) came in at 16.5% yoy for January-February 2008, much lower than the close to 40% yoy performance seen until late-2007. Even though data for the first two months of the year tend to be noisy, we believe they still contain a few very important telltale signs of emerging trends in profit growth and its sectoral distribution for the coming quarters. Specifically, the January-February profit data has raised the following issues:

1. Corporate earnings may grow slower than nominal GDP growth in 2008 for the first time since 2001.

2. The declining share of profits is the flip side of rising shares of government revenues and overall wage income. More importantly, it also reflects a sharp decline of the trade surplus as a percent of GDP because of slowing global demand and a large negative terms-of-trade (TOT) shock, while China's domestic demand is constrained by policy tightening.

3. The persistent surge in external surpluses in the last 5-6 years has surely contributed to China's corporate earnings positively. Therefore, a sharp correction in these surpluses due to external factors, without the support of other mitigating domestic policies, would likely result in a decline in corporate profit growth, even possibly a sharp one.

4. If industrial profits' share of GDP stays flat in 2008, its implied year-on-year (yoy) growth would be only 15%-20%. If the profit share to GDP comes down by 1 percentage point (ppt), the implied profit growth would be below 10% yoy. Moreover, if the expected reduction in trade surplus growth continues to be met with restrictive domestic demand policies, industrial profits growth would likely decline further in the 2008-2009 period.

5. Furthermore, the various government price controls have distorted sectoral profit distributions, favoring banks and non-state-owned-enterprises (SOEs) in the non-financial sector at the expense of SOEs in

downstream industries. However, an eventual correction of these distortions, or disappearance of fiscal subsidies, would likely lead to a reversal of the current earnings distribution pattern across sectors.

6. The corporate earnings outlook could improve on a sustainable basis, if 1) global commodity price inflation subside significantly because demand outside of China slows; 2) domestic inflation subsides (either because of an external slowdown or domestic tightening), and therefore the government can have room to stimulate domestic demand; and/or 3) a meaningful appreciation of the CNY on trade-weighted terms, which can help improve China's terms of trade and help give room for domestic easing polices.

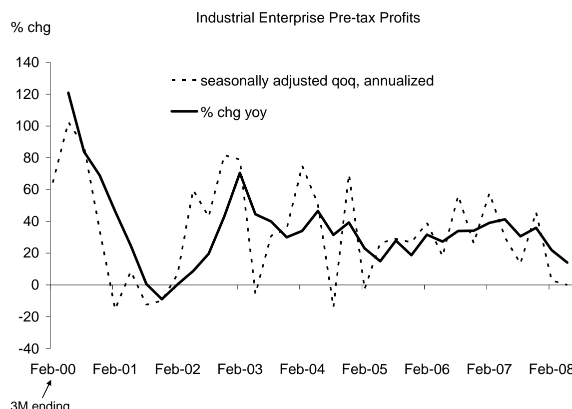
More details on these thoughts as follows:

Industrial profits growth has slowed sharply, and on a broad basis

The decline in industrial profits growth rates reported by the NBS for the first two months of this year was significant both in yoy and sequential terms (see Exhibit 1) In addition, the slowdown in pre-tax profits growth was quite widespread: out of a total of 38 industries, 21 reported slower earnings growth, and 31 reported lower profit margins than during the period of September-November 2007, the latest reporting period for this data. Furthermore, 29 industries experienced an increase in pre-tax earning losses in January-February 2008, and the magnitude of the losses jumped by 98% yoy.

While data for the first two months of the year tend to be noisy historically, we believe they may contain a few important signals for changes in corporate earnings in the coming quarters.

Exhibit 1: Industrial profits growth slowed in 2008, in both yoy and sequential terms



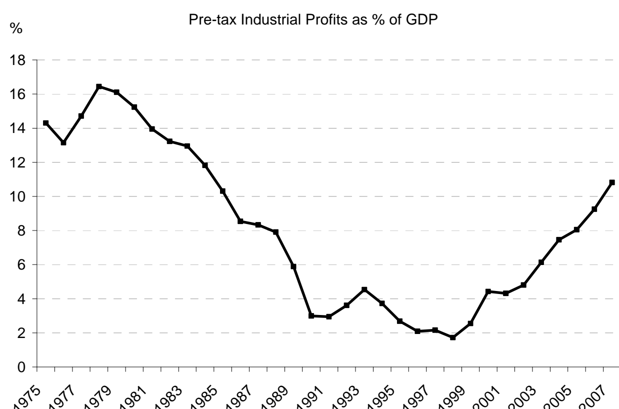
Source: CEIC, Goldman Sachs Economics Research.

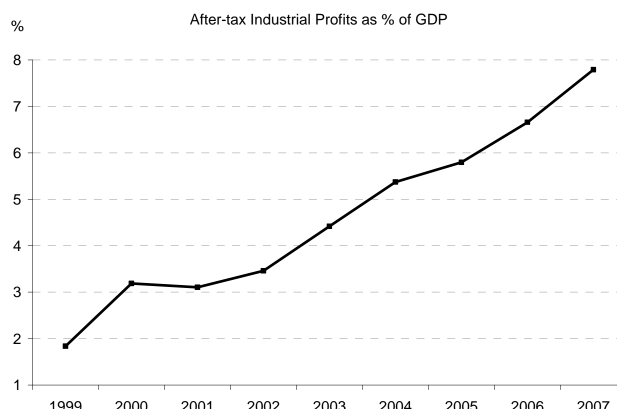
Industrial profits may grow slower than nominal GDP in 2008

After rising faster than nominal GDP continuously since 2001, industrial profits may grow at a slower pace in 2008. **Therefore, the share of industrial profits in GDP is likely to stop rising, and may even decline for the first time in 6 years** (see Exhibit 2). This is consistent with the rising share of government revenue and widely reported strong wage pressures.[1]

More interestingly, a declining share of profits in national income is consistent with the sharp decline in the trade surplus as a percent of GDP in 1Q2008, when China's fiscal balance continues to improve and households' net savings decline only gradually.

Exhibit 2: Uptrend of profits share in national income will likely come to an end





Note: effective corporate income tax data is unavailable before 1999, due to the tax reform and change in the corporate income tax regime.

Source: CEIC, Goldman Sachs Economics Research.

[1] Fiscal revenue rose by 40% yoy in January-February 2008, but high frequency wage data is not available in China.

By national accounting identity, a country's total savings must equal its total investment:

$$S_{aggregate} \equiv I_{aggregate} \equiv I_{domestic} + CA\ Surplus \quad (1)$$

Where: CA: Current Account; I: Investment; S: Savings

That is, aggregate national savings equals the sum of domestic investment plus capital exports abroad via the current account. Current account balance can then be broken down into saving-investment balances of a country's three economic agents: households, corporates, and the government (see Equation 2).

$$CASurplus \equiv S_{aggregate} - I_{domestic} \equiv (S_{household} - I_{household}) + (S_{corporate} - I_{corporate}) + (S_{government} - I_{government}) \quad (2)$$

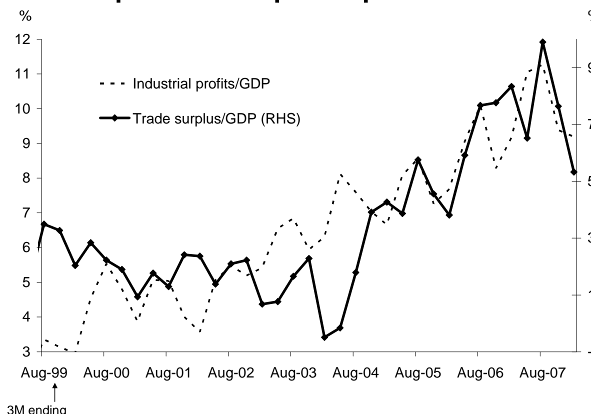
Dividing both sides of equation (2) by nominal GDP, we get equation (3), which identifies a positive relationship between the current account balance to GDP ratio vs. the net savings-investment balance ratios of the three economic agents.

$$\frac{CA\ Surplus}{GDP} \equiv \left(\frac{S_{household}}{GDP} - \frac{I_{household}}{GDP}\right) + \left(\frac{S_{corporate}}{GDP} - \frac{I_{corporate}}{GDP}\right) + \left(\frac{S_{government}}{GDP} - \frac{I_{government}}{GDP}\right) \quad (3)$$

Although many structural factors are responsible for changes in a country's savings rate in the long run, sizeable swings in the current account balance in the short term tend to be caused by short-term cyclical factors, particularly factors affecting corporate savings and investment. A sharp reduction in the current account surplus may reflect either a rise in investment expenditures by the various economic agents, or a reduction of savings by them. Therefore, a reduction in the trade surplus as a percent of GDP itself is not necessarily bullish or bearish, but whether this reduction is caused by buoyant investment demand or a reduction in earnings makes the difference. For example, China's brief encounter with a trade deficit in 1Q2004 was mainly the result of buoyant investment demand at the time (fixed asset investment recorded 47.8% yoy growth in 1Q2004), but this time around, the sudden decline in trade surplus growth seems to come more from a reduction in retained earnings growth as corporate investment growth has stayed largely flat.

Slower global demand and a large negative TOT shock are, in our view, the main culprits behind China's declining trade surplus and corporate earnings growth this year. Our Global Commodity Price Index rose by about 40% in 1Q2008 versus being largely flat in 1Q2007, and global demand, mostly demand from the US, was clearly weaker. If both these headwinds persist, China's trade surplus as a percent of GDP may decline sharply in 2008-2009 compared with 2007.

Exhibit 3: Clear positive correlation between trade surplus and corporate profits



Source: CEIC, Goldman Sachs Economics Research.

The flip side of this declining share of the trade surplus in GDP would likely be a declining share of corporate profits in national income, without any significant acceleration in domestic expenditures. We believe the government could certainly transfer some of its savings to the corporate or household sectors to facilitate such acceleration, and clearly has a strong fiscal position to do so through tax cuts or subsidy increases. However, the government is also at the moment preoccupied by the task of trying to bring inflation down. Any fiscal easing, therefore, will run against the macro tightening stance. As a result, we believe the risks are high that China's profits share in national income will shrink in 2008-2009 when its trade balance adjusts.

Furthermore, if it is corporate earnings that have taken the beating from negative external shocks, the risks will rise that corporate investment may slow as well, leading to a slowdown in import demand. As a result, the "second round" effect from a negative external shock could lead to *an improvement* in external balance. Rising trade surpluses in China and other Asian countries after the 1997 financial crisis are a case in point. China is now clearly at a much better cyclical position to withstand the current external headwinds (and may even benefit from it through its potential cooling effects on growth and inflation) compared with 10 years ago. However, a prolonged external slowdown, and/or potential policy mistakes, could still result in weaker-than-expected corporate earnings and investment spending.

How much may profits growth come down? While changes in many other factors can affect corporate earnings, **the persistent surge in external surpluses in the last 5-6 years is likely to have positively contributed to China's corporate earnings** (see Exhibit 3). Therefore, a sharp correction in these surpluses due to external factors and policy adjustments, without the support of other mitigating domestic policies, would in our view likely result in a decline in corporate profit growth, even possibly a sharp one.

Our baseline forecast projects China's trade surplus as a percent of GDP to drop from 7.9% in 2007 to 6% in 2008, and further to 5% in 2009. In 1Q2008, merchandize trade surplus as a percent of GDP declined to 4.8%, as compared with 7.2% in 1Q2007.

If these changes in the trade surplus are mapped to a flat share of industrial profits in GDP in 2008, industrial profit growth would be 15%-20% yoy, compared with 35%-37% yoy in 2007.[2] If the profit share declines by 1 ppt, industrial profits growth would be only 6.3%. If the profits' share in GDP declines by 2 ppt, industrial profits growth would be -5.3%. Our baseline forecast projects profits growth to be around the mid-teens, but the risks are, in our view, on the downside.

Besides declining profits growth, profits distribution among different sectors has also been distorted by the current policy mix to contain inflation pressures.

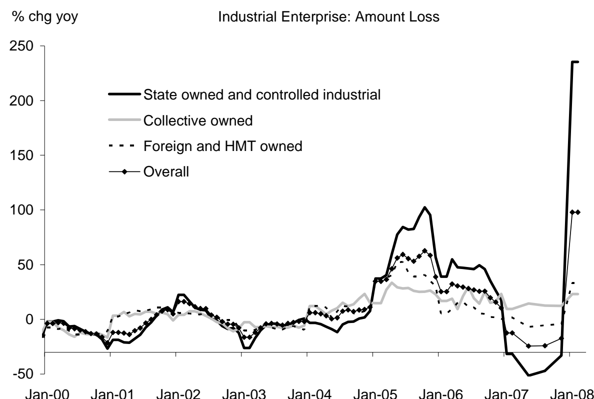
Using various price controls, the government has been giving quasi-fiscal subsidies to end-users at the expense of non-financial sector SOEs, so far. This is particularly noticeable in the energy producing industries. But the overall non-financial SOE sector's pre-tax profits registered a 5.6% yoy decline in January-February this year, compared with the rest of the non-SOE sector's profit growth of 34.7% yoy. Also, if one looks at the amount of losses incurred by different forms of companies, the state-owned sector clearly stood out in 1Q2008 (see Exhibit 4).

In addition, the banking sector's profits growth remains buoyant, driven by robust loan growth and generous regulated lending margins. Their strong profits performance reflects the rising financial costs in the non-financial sector, and in our view, the foregone interest rate income that consumers would have made from their savings if deposit rates were liberalized (see Exhibit 5).

Using explicit fiscal subsidies is quite common for many governments around the world when they try to ease the social pains of inflation. However, using SOEs' profits as a form of quasi-fiscal subsidy reflects the hybrid nature of the Chinese economy, and the fact that the government still performs a large producer role. Both the explicit fiscal subsides and sacrificed SOE profits were utilized during past inflation episodes. The major difference this time round is that many of these SOEs are now listed public companies, and are also much more commercially oriented than 14 years ago.

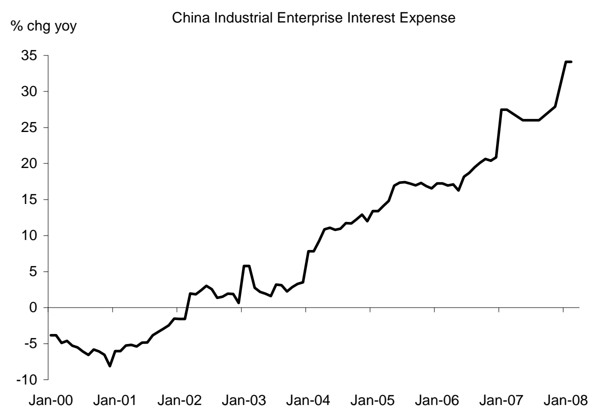
[2] Profit growth for December 2007 is not published, the 35%-37% range is our estimate based on profits data in January-November 2007 and January-February 2008.

Exhibit 4: The non-financial SOEs have born the brunt of the price-control policies



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Rising interest expenses of industrial enterprises



Source: CEIC, Goldman Sachs Economics Research.

Fortunes could turn when price controls are gone

If upstream commodity prices do not subside soon, to avoid widespread energy shortages during peak seasons, we believe the government would face the difficult choice of either increasing substantially their fiscal subsidies to these "losing" SOEs or allowing a price hike in their products. **A normalization of these losing SOEs' margins would lead to a decline in the current winners' (i.e., end users of products under price control) profits**. For example, everything else being held equal, if the pre-tax net profit margin of oil-processing, electricity and water industries recovers to 5% (the average of the overall industrial sector), their profit growth would recover to a positive 31% yoy compared with the current -137% yoy, while the rest of industries' profit growth would only be 14.8% vs. the current 37.8%. If the government chooses to compensate these 3

industries' loss of profits, total subsidies would amount to around Rmb410 billion, or 1.6% of 2007 GDP.[3]

Furthermore, if overall inflation pressures persist, the government would be under pressure to raise deposit rates and tighten liquidity further. Under this scenario, it would be doubtful whether banks' hefty lending margins and buoyant profits growth could be maintained, let alone whether loan provision needs to be raised as the economy slows.

What changes could lead to an improvement in earnings outlook?

For the corporate earnings outlook to improve on a sustainable basis, we identify three potential catalysts:

1. Global commodity price inflation subsides significantly because demand outside of China slows, similar to the experiences in early-2007. Note that China is a large net importer of industrial commodities, and a decline in commodity prices will help improve its terms of trade.

2. Domestic inflation subsides (either because of external demand slowdown or domestic tightening), and therefore the government can have room to stimulate domestic demand through tax cuts, increases in expenditures, and easing controls on investment spending and credit; and/or

3. A meaningful appreciation of the CNY on trade-weighted terms. This can help improve China's terms of trade, because changes in its own demand pattern affect both export and import prices, and can help give room for domestic easing polices.[4]

Before these tailwinds arrive, however, we see downside risks for industrial profits in the coming quarters, when profits are squeezed by rising commodity costs, rising wage pressures, declining external demand, domestic investment tightening, and government price controls.

Hong Liang

[3] Sinopec has reportedly received Rmb12.3 billion of subsidies in the past year, and further subsidies and tax benefits granted to Sinopec and PetroChina in 2008 are yet to be disclosed.

[4] For a more detailed discussion on the relationship between CNY appreciation and relative price changes and relative profit distribution across sectors, please see *China: Currency appreciation and shifts in relative prices and profits*, Asia Economics Flash, October 4, 2007.

China's vulnerability to rising oil prices—a revisit after four years

This article was first published on May 23, 2008.

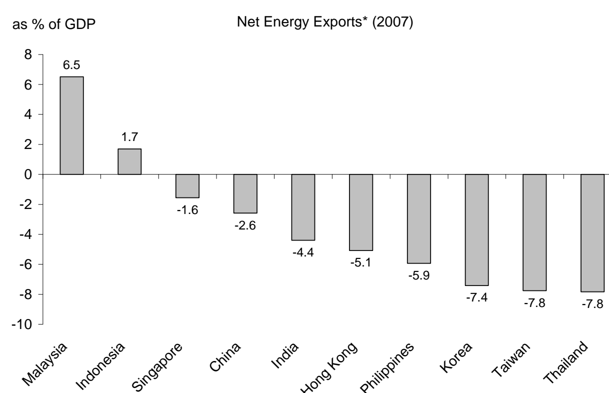
1. Last time when we examined the impact of high oil prices on China it was October 2004. As oil prices are again making new highs every few days, surpassing US$130/bbl lately, questions are pouring into my mailbox and phone box. It is time for me to write about this subject again, although I have successfully avoided it in the past four years, despite oil prices climbing gradually from US$50/bbl to where it is now. The reasons for me not to want to write about it for such a long time are twofold. First, a simple one: the predictions we made 4 years ago on what would happen to China's growth and inflation if oil prices went up to US$60/bbl never played out. Second, a more complex reason: in my view, as a large continental economy, China's own cyclical position and policy choices have a much bigger impact on its own growth and inflation trajectory than the price movement of a single commodity, albeit an important one.

2. Nevertheless, I believe it is indeed a good time to revisit the subject, not so much because oil is now above US$130/bbl, but more because a few important economic backdrops have changed: a) the business cycle in China is now much more "aged" compared with a few years ago, evident by the rising labor costs and the tightness in capacity utilization; b) as a result of a), inflation has already become a real and present macro threat; and c) the strength of global demand has weakened, and will likely weaken further.

3. **Against the backdrop of these changes, the recent surge in oil prices will clearly aggravate the worsening in the near-term trade-off between growth and inflation**. Through three main channels, rising oil prices can negatively affect China's economy: i) the direct negative impact on growth through the negative terms-of-trade (TOT) shock; ii) the indirect negative impact on growth through a weakening in external demand; and iii) rising domestic inflation pressures.

4. **Relatively, the growth impact from high oil prices, in my view, is better cushioned for China and easier for policymakers to manage**, because net energy imports as a percentage of GDP (2.6%) is relatively small and China relies on domestic resources for most of its energy consumption. China fortunately has a large natural endowment of coal reserves, which supplies more than two-thirds of its energy needs. In addition, rising domestic demand in the oil and commodity exporting countries will continue to benefit China's exports. Plus, the government has a robust fiscal position, and can undertake fiscal stimulus if needed.

Exhibit 1: Net energy trade balance as a percent of GDP in 2007



Note: coal, coke and briquettes; petroleum, petroleum products & related materials; gas, natural and manufactured and electric current, if any.
Source: CEIC, Goldman Sachs Economics Research.

5. **But the negative terms-of-trade shock is likely to squeeze corporate earnings in China**. If oil prices stay at US$130, relative to the US$60 in 1H2007, the total terms-of-trade loss would be around 4% of GDP, assuming oil trade volumes do not change. If oil goes to US$141 in 2H2008, as projected by our Commodities Team, the loss would be even larger. Moreover, other commodity prices tend to rise in tandem with persistent high energy prices, resulting in a further terms of trade loss for China. Without a substantial increase in government subsidies, these terms-of-trade losses will likely lead to a meaningful decline in Chinese corporate earnings.

6. **On the other hand, the challenge on inflation is much more daunting**. Rising oil prices will surely exacerbate the pressures for the government to raise domestic energy prices. Chinese gasoline prices are significantly below international levels, and even below its crude costs. More worrisome, the gap has been widening significantly as oil prices continue to climb higher. In addition, rising coal prices, a natural proxy trade to oil, have severely squeezed the power producers' margins, in many cases to negative territories. Such persistent and rising

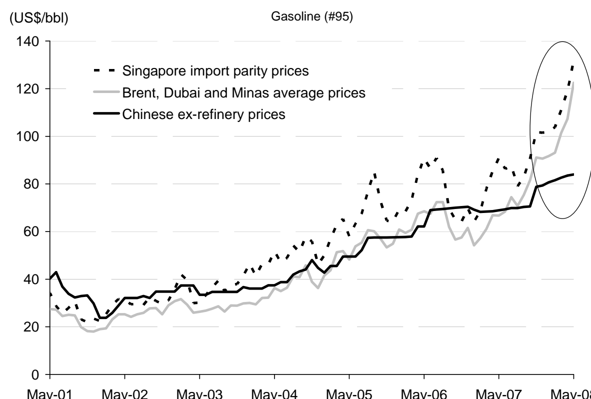
financial losses, if unmitigated soon, would likely lead to serious electricity shortages in the coming peak summer season.

7. **Keeping the price controls, coupled with increases in subsides, would be doable for the government in the short term, but is neither efficient nor sustainable**. With a close-to-balanced budget, limited public debt, and a close-to-double-digit current account surplus as a percentage of GDP, the Chinese government probably can afford all these energy-related subsidies and continue to squeeze its own energy producers for a while. However, such bills would likely continue to expand because the regulated cheap prices would encourage more demand but less supply. Moreover, the energy subsidies are also indirectly subsidizing China's exports as industrial goods constitute 97% of China's total exports, with more than half of them being capital goods. If one looked at the top 4 electricity consuming provinces in China, four of them are also top exporters, with Guangdong province on the top of both lists. ***Why should China increasingly use its scarce resources to subsidize affluent foreign consumers when its own people badly need better food and more roads?***

8. **At some point, energy prices will be raised in China and the central bank needs to deal with the aftermath impact on inflation**. It is unclear whether this would happen after the Olympic games in August this year, or even before that if the energy shortage becomes too acute in the summer time. However, if we are right on the oil price projections, the longer the government waits, the higher eventually the energy prices would have to be adjusted, and the larger the impact might be on downstream industries.

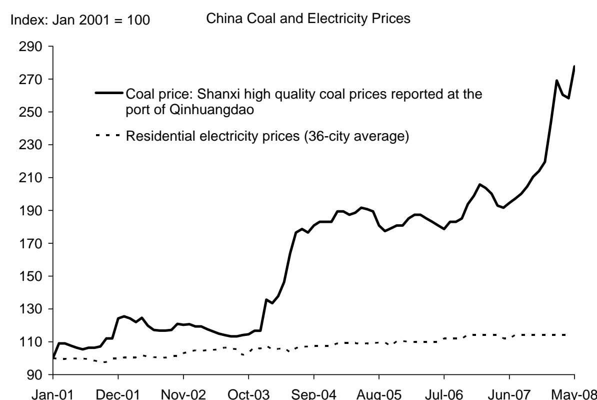
9. **The inflation impact from higher oil prices will ultimately depend on how central banks react, particularly for large countries like China**. If the energy price controls are lifted, the official headline inflation would likely be higher because these price controls have understated the true extent of inflation in the economy. But monetary policy response would determine whether there will be any second-round effects. In this context, rising oil prices may lead to additional monetary tightening in China because of the strength in aggregate demand and the willingness of commercial banks to provide credits. Moreover, the persistent negative real interest rates have also left the inflation expectations ill anchored. ***Therefore, the upward pressures on China's interest rates and currency will likely persist, even after the official headline inflation begins to trend down year-over-year in the near term***.

Exhibit 2: Widening gap between domestic and international oil prices



Source: CEIC, Goldman Sachs Economics Research estimates.

Exhibit 3: Widening gap between electricity and coal prices



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Top electricity consumers vs. top exporters

	Top 5 electricity consumers*	Top 5 exporters in USD
1	Guangdong	Guangdong (92.2)*
2	Jiangsu	Jiangsu (61.6)
3	Shandong	Shanghai (86.8)
4	Zhejiang	Zhejiang (55.7)
5	Hebei	Shandong (22.9)

* Electricity consumption data are 2006 data.
** Exports as a % of GDP in 2007 in parentheses.

Source: CEIC, Goldman Sachs Economics Research.

10. **Furthermore, higher domestic oil prices, and rising import inflation, are partly China's own making because of its currency policy**. Being a price setter for many of its tradable goods, China's currency policy choice affects both the input and output prices of its tradable goods (i.e., its terms of trade) rather than just the other way around. Specifically, we find tentative empirical evidence that suggests when the CNY appreciates in trade-weighted terms, China's terms of trade tends to improve. In other words, a meaningful appreciation of the CNY will not only lower import prices through the pure currency translation effect, but it may also affect global demand for many tradable goods, and thereby their relative prices, in China's favor.

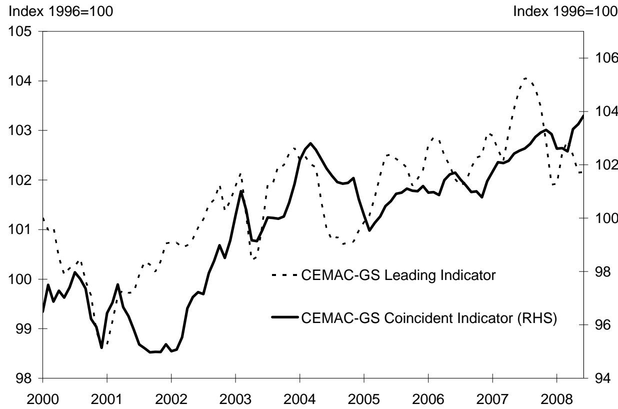
11. In summary, rising oil prices have added downside risks to our baseline growth forecasts and upside risks to the inflation forecasts for 2008-2009, although at this stage we are not revising any of these forecasts, both because of our dismal records of doing so in the past, and because of the complexity involved where China's own demand and policy choice may affect relative tradable prices. Nevertheless, rising global oil prices, elevated domestic inflation pressures, and looming energy shortages clearly call for a more market-based approach to monetary tightening, particularly a faster CNY appreciation.

Hong Liang

Charting China

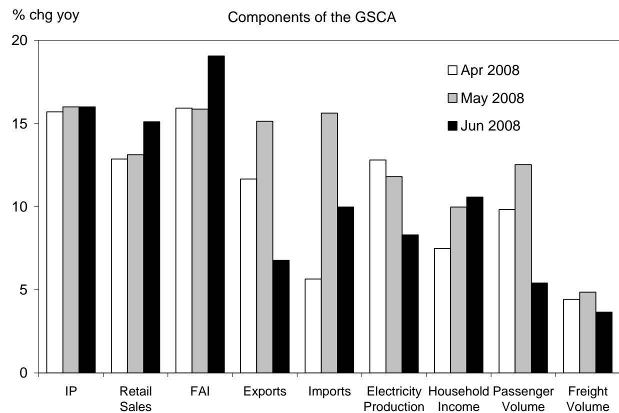
Monthly Activity Indicators

Exhibit 1: The leading indicator has been softening while coincident indicator holding up



Source: CEIC, Goldman Sachs Economics Research.

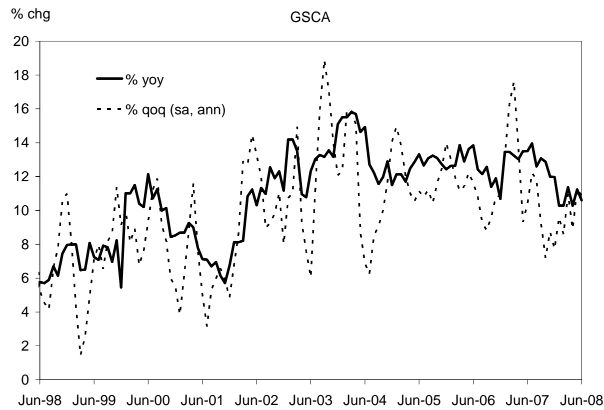
Exhibit 3: Mixed messages from June data reflected higher statistical noises



Note: these variables are measured in real terms.

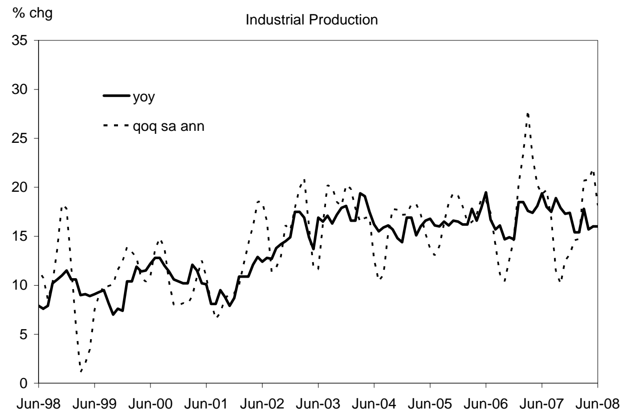
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: GS China Activity Index growth remained at a solid level



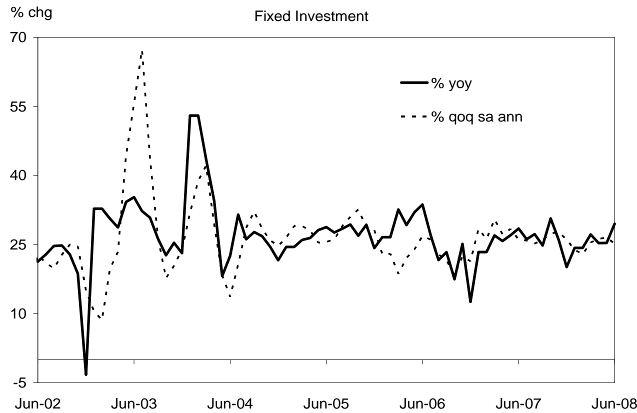
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Industrial production remained robust



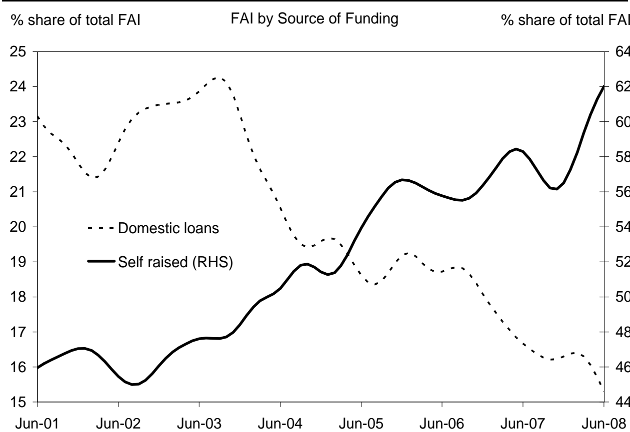
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Fixed investment growth accelerated significantly in June



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: The share of self-financed fixed asset investments continued to rise



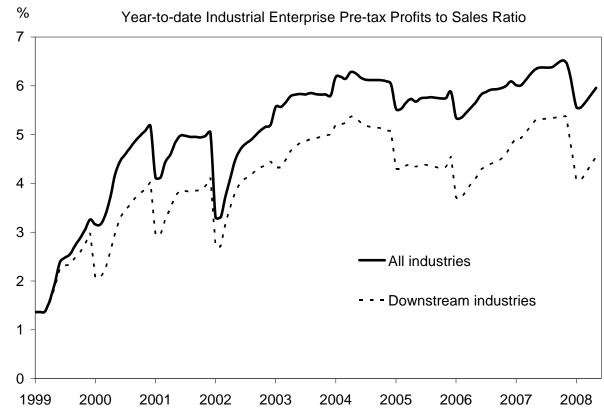
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7: Growth of investment in the pipeline softened

	Investment Under Construction			New Investment Projects		
	Rmb tn (ytd)	% mom	% yoy	Rmb tn (ytd)	% mom	% yoy
Jan-05	7.0	—	21.4	0.5	—	-6.6
Feb-05	7.0	—	21.4	0.5	—	-6.6
Mar-05	9.4	34.3	29.4	1.0	117.0	7.3
Apr-05	10.8	14.7	26.2	1.6	52.4	13.5
May-05	11.9	10.6	28.7	2.1	35.2	24.9
Jun-05	13.2	10.7	28.6	3.0	40.5	24.8
Jul-05	14.1	7.3	26.1	3.5	17.9	28.5
Aug-05	14.8	4.7	29.7	4.0	13.5	28.4
Sep-05	15.2	2.9	27.9	4.5	13.0	27.9
Oct-05	15.9	4.2	27.8	5.1	11.8	28.5
Nov-05	16.5	4.3	28.8	5.5	9.7	28.4
Dec-05	17.8	7.9	29.7	6.5	16.9	32.4
Jan-06	9.8	—	39.8	0.6	—	33.4
Feb-06	9.8	—	39.8	0.6	—	33.4
Mar-06	12.2	25.0	30.1	1.5	131.1	42.0
Apr-06	13.9	13.9	29.2	2.1	41.8	32.2
May-06	15.1	8.6	26.9	2.6	26.4	23.6
Jun-06	16.6	10.2	26.3	3.7	38.9	22.2
Jul-06	17.4	4.3	22.8	4.2	15.1	19.3
Aug-06	18.0	3.6	21.6	4.5	5.9	11.4
Sep-06	18.8	4.6	23.6	4.9	9.1	7.5
Oct-06	19.4	3.3	22.6	5.3	8.6	4.4
Nov-06	20.1	3.2	21.3	5.7	9.0	3.7
Dec-06	21.7	8.0	21.4	6.7	16.6	3.4
Jan-07	10.7	—	9.3	0.4	—	-35.9
Feb-07	10.7	—	9.3	0.4	—	-35.9
Mar-07	14.2	32.7	16.0	1.3	210.2	-13.9
Apr-07	16.4	15.8	18.0	2.0	61.0	-2.2
May-07	17.5	6.9	16.1	2.8	37.2	6.1
Jun-07	19.3	9.8	15.8	3.9	39.2	6.4
Jul-07	20.3	5.6	17.2	4.8	23.9	14.6
Aug-07	21.2	4.2	17.9	5.2	7.9	16.7
Sep-07	22.2	4.9	18.2	6.0	16.1	24.2
Oct-07	23.1	3.7	18.7	6.7	10.6	26.5
Nov-07	24.1	4.4	20.1	7.4	10.3	28.0
Dec-07	26.1	8.5	20.6	8.6	17.2	28.7
Jan-08	13.0	—	22.2	0.4	—	-2.6
Feb-08	13.0	—	22.2	0.4	—	-2.6
Mar-08	16.9	29.8	19.5	1.2	204.4	-4.4
Apr-08	19.2	13.3	16.9	1.9	59.8	-5.1
May-08	20.6	7.5	17.6	2.7	41.0	-2.5
Jun-08	22.6	9.6	17.3	3.9	44.9	1.5

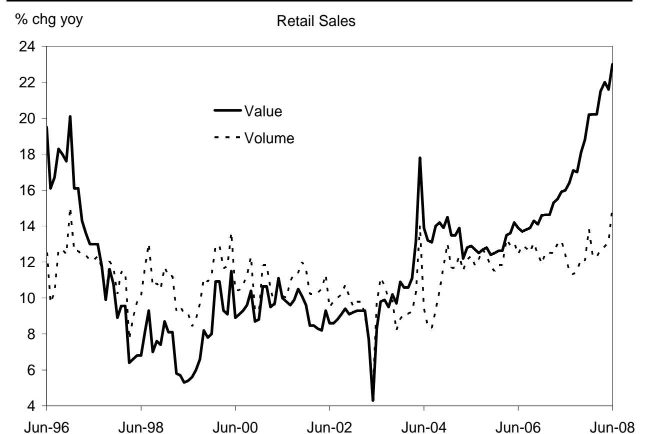
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 8: Corporate profitability improved from a low level in the first two months of the year



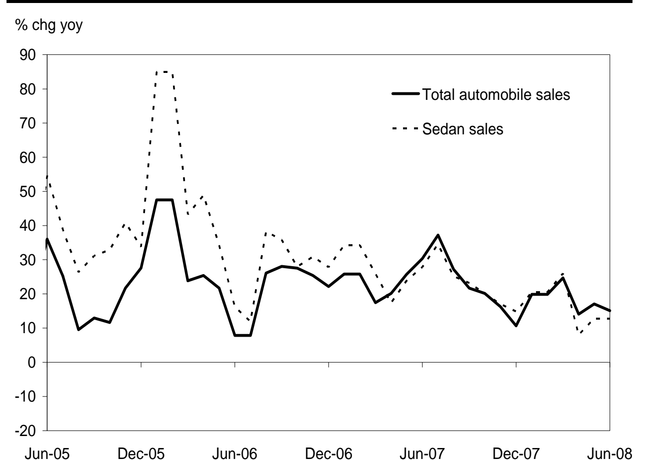
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 9: Nominal and real retail sales growth both accelerated



Source: CEIC, Goldman Sachs Economics Research.

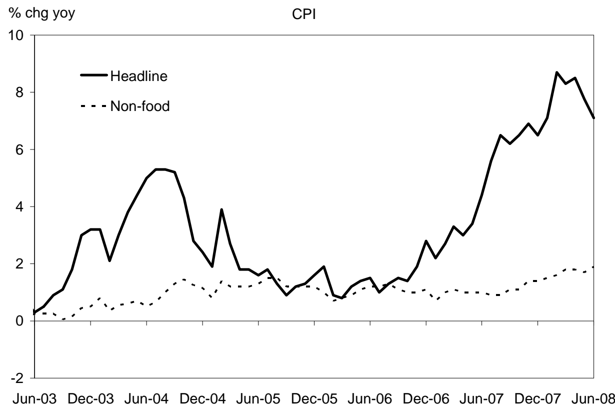
Exhibit 10: Automobile sales growth softened



Source: CEIC, Goldman Sachs Economics Research.

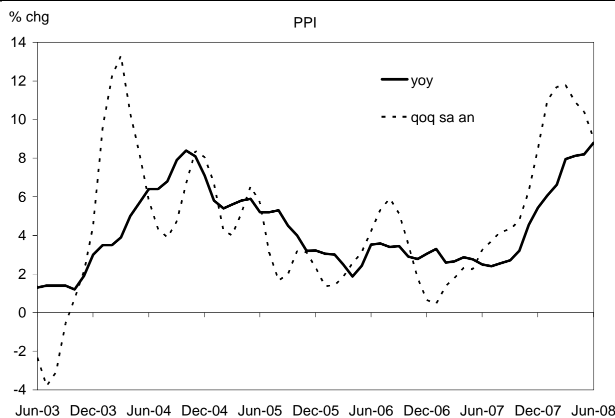
Price Indicators

Exhibit 1: CPI inflation moderated but remains elevated at above 7%



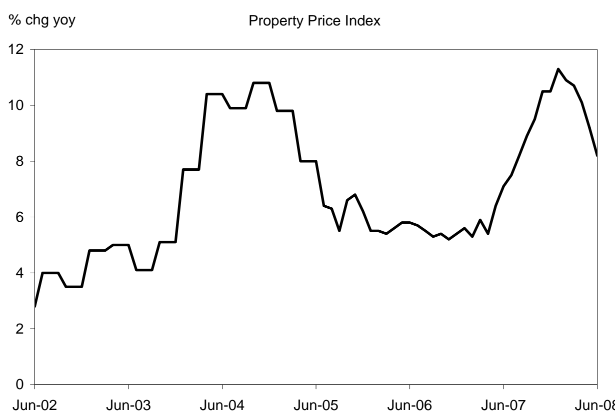
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: PPI accelerated further to a decade high



Source: CEIC, Goldman Sachs Economics Research.

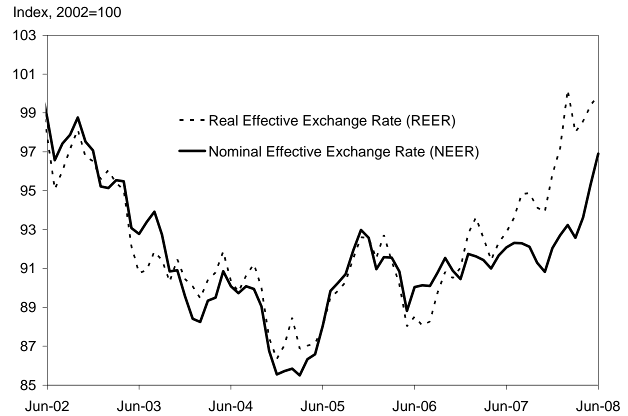
Exhibit 3: Real estate price inflation moderated



Note: quarterly data before July 2005, monthly since then.

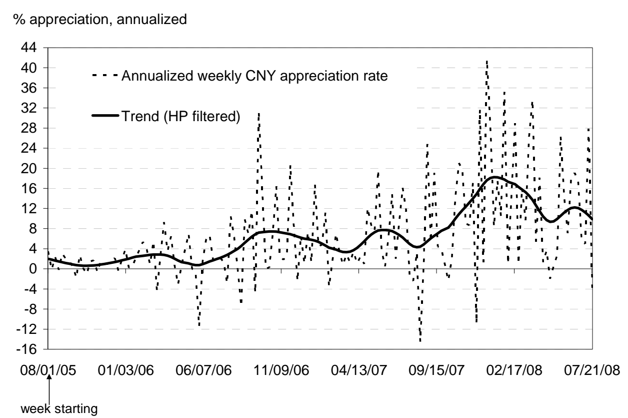
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: REER and NEER both appreciated



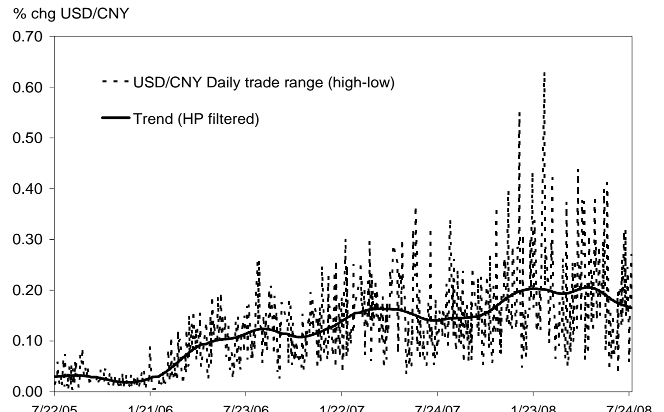
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: CNYUSD appreciation slowed in recent weeks



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: CNYUSD daily volatilities fell as well

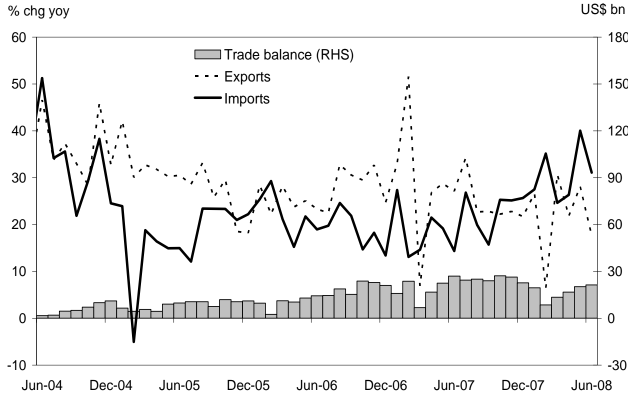


Note: quarterly data.

Source: CEIC, Goldman Sachs Economics Research.

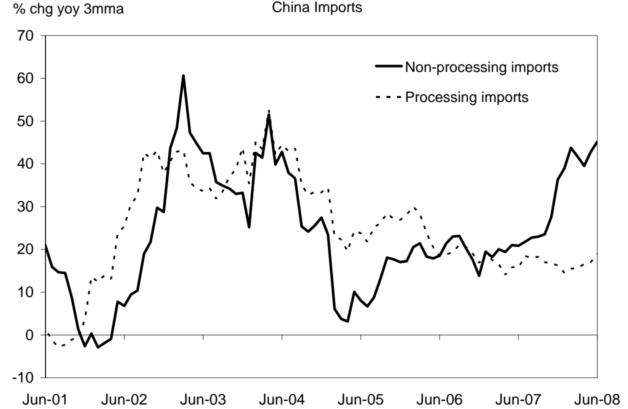
Trade Indicators

Exhibit 1: Exports growth held up while imports growth has been accelerating on higher import prices



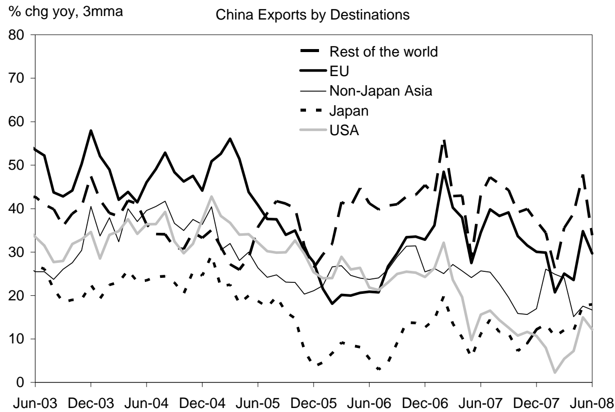
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Non-processing imports growth remained high while processing imports growth remained flat



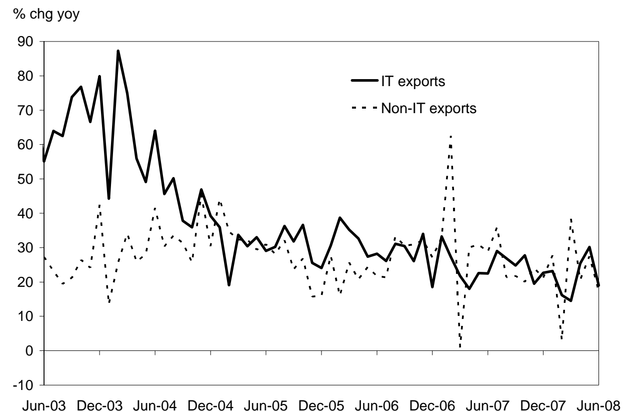
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Exports growth rate to non-traditional markets has been faster than other regions...



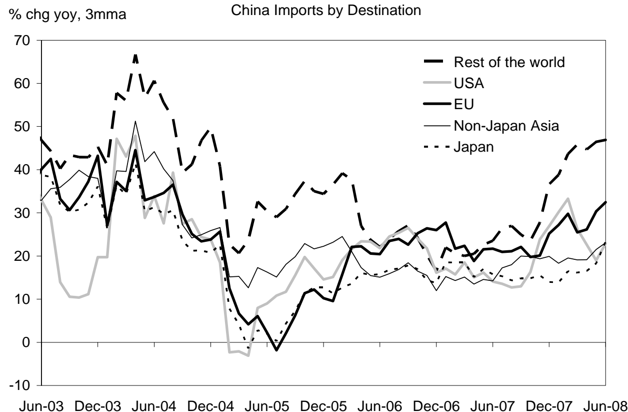
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: IT vs. non-IT exports growth



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: ...so has been the imports growth rate from non-traditional markets



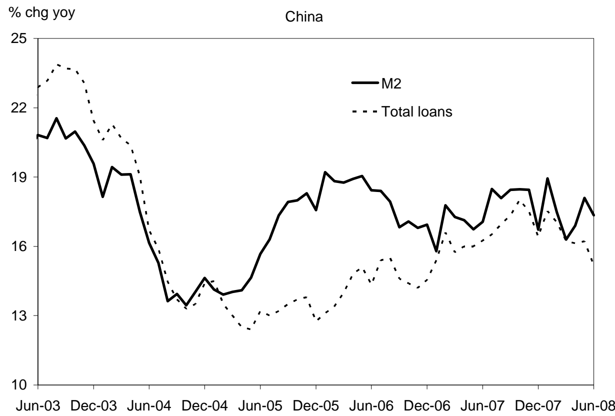
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: China's exports have become less dependent on the US

Source: CEIC, Goldman Sachs Economics Research.

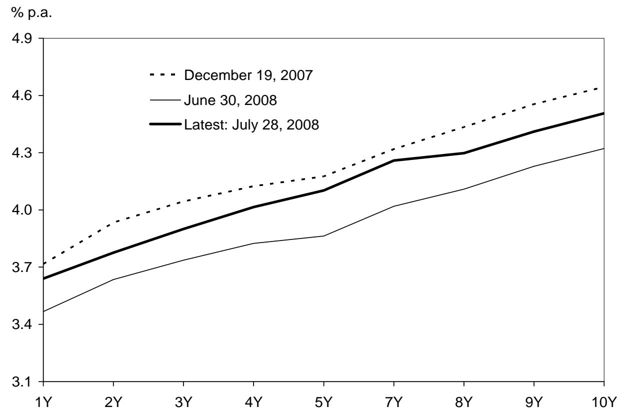
Financial Indicators

Exhibit 1: Money and credit growth moderated in June



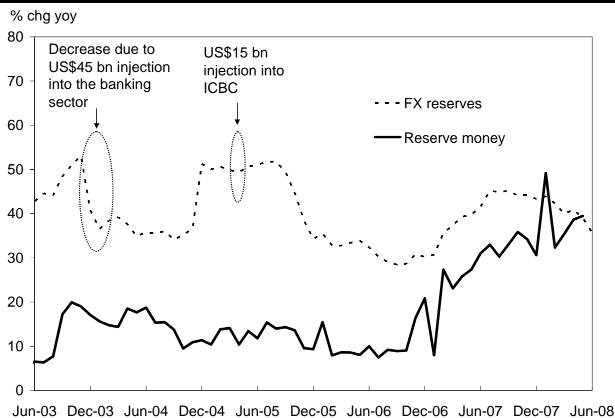
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Bond yields shifted up in recent weeks



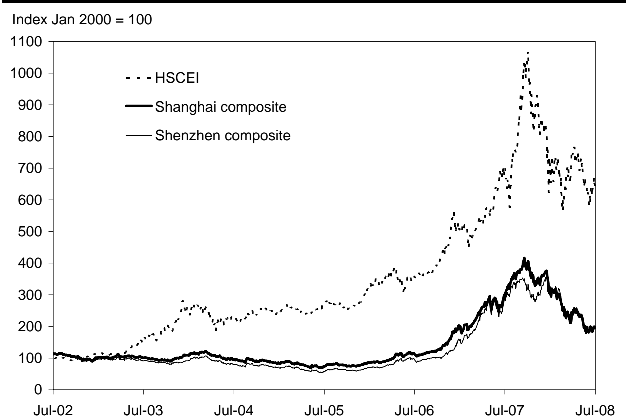
Source: Bloomberg, Goldman Sachs Economics Research.

Exhibit 2: FX reserve growth moderating



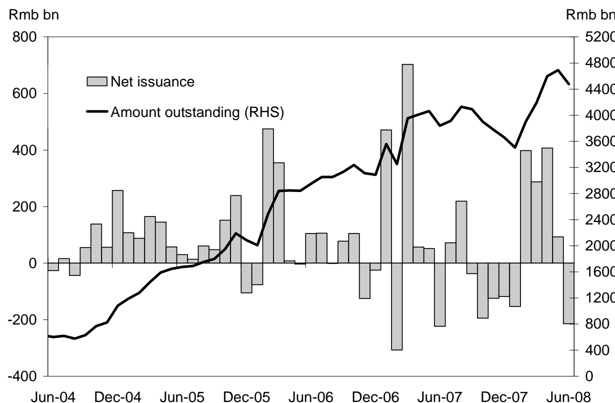
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Further correction in equity markets...



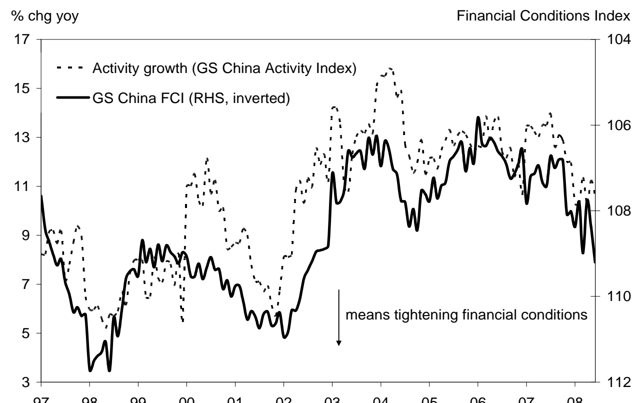
Source: Bloomberg, CEIC, Goldman Sachs Economics Research.

Exhibit 3: Sterilization operations have been scaled back, while RRR hikes continued



Source: Bloomberg, Goldman Sachs Economics Research.

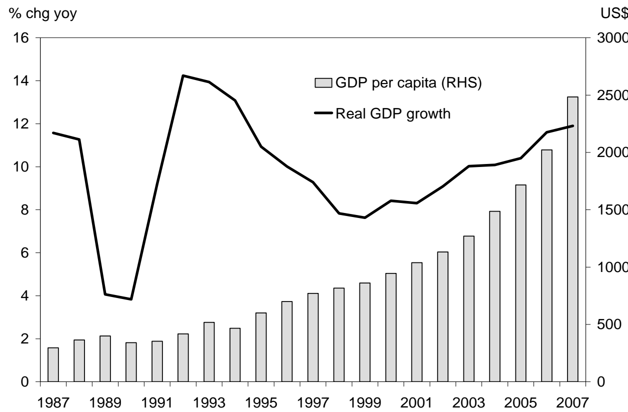
Exhibit 6: ...contributed to tighter financial conditions



Source: CEIC, Goldman Sachs Economics Research.

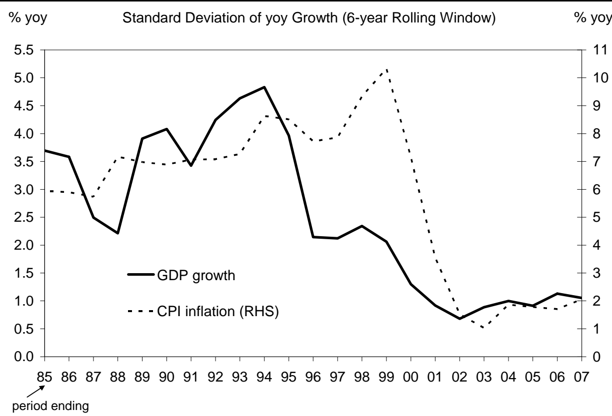
Annual Macroeconomic Indicators

Exhibit 1: GDP per capita rising steadily



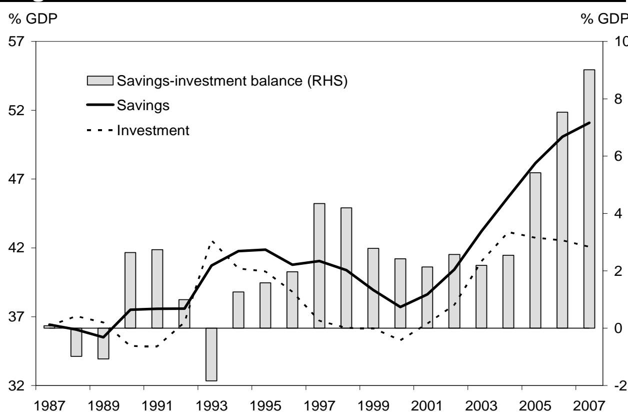
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Cyclical volatility has been significantly reduced



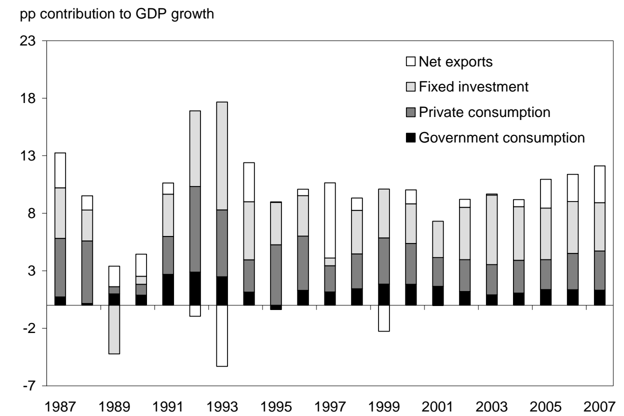
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: The saving investment imbalance continued to grow



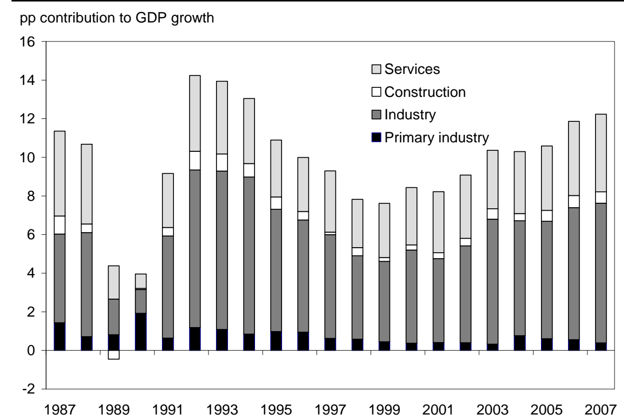
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Domestic demand growth remained firm, but contribution from net exports continued to rise



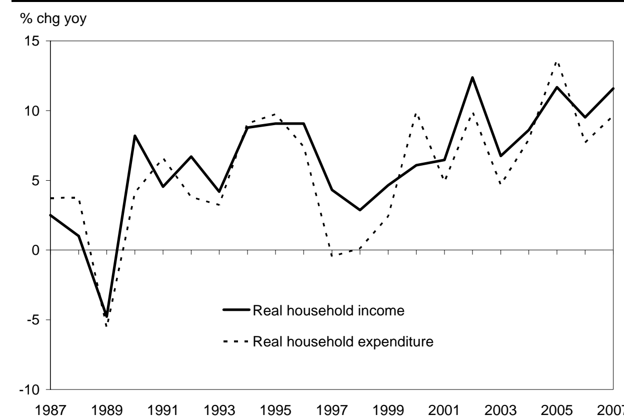
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Manufacturing growth continued to outpace other sectors



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: Household income and expenditure growth remained robust



Source: CEIC, Goldman Sachs Economics Research.

Summary Indicators (Annual)

(percentage change, unless otherwise indicated)

Per capita GDP (2007): 2485 USD
Population (2007): 1321 mn

	2001	2002	2003	2004	2005	2006	2007	2008F	2009F
REAL SECTOR									
GDP by expenditure (at 1990 prices)									
GDP	8.3	9.1	10.0	10.1	10.4	11.6	11.9	10.1	9.5
Private consumption	5.7	6.5	6.3	7.1	6.7	8.4	9.3	9.6	9.9
Government consumption	11.1	7.9	6.0	7.3	9.7	9.7	9.5	10.0	11.8
Fixed investment	9.0	12.9	16.5	12.1	11.4	11.3	10.6	10.5	10.0
Domestic demand	8.8	8.8	10.5	10.0	8.3	9.9	9.4	9.9	10.2
Net exports (contribution to growth)	0.0	0.7	0.1	0.6	2.5	2.4	3.2	1.2	0.3
Exports (G&S)	7.1	24.7	26.9	27.7	22.4	19.6	19.0	12.0	9.0
Imports (G&S)	8.1	26.1	29.7	29.0	20.3	18.1	16.8	12.0	9.8
GDP by Industry									
Primary Industry	2.8	2.9	2.5	6.3	5.2	5.0	3.7	4.0	5.0
Secondary Industry	8.4	9.8	12.7	11.1	11.7	13.0	13.4	9.9	9.6
Industry	8.7	10.0	12.8	11.5	11.6	12.9	13.5	9.8	9.7
Construction	6.8	8.8	12.1	8.1	12.6	13.7	12.6	8.5	8.3
Tertiary Industry	10.2	10.4	9.5	10.1	10.5	12.1	12.6	9.8	10.5
Goldman Sachs China Activity Index (GSCA)	7.5	10.6	13.1	13.7	12.7	12.6	13.1	—	—
PRICES									
CPI inflation (period average)	0.7	-0.8	1.2	3.9	1.8	1.5	4.8	6.8	3.8
CPI inflation (period end)	-0.3	-0.4	3.2	2.4	1.4	2.0	6.6	5.2	3.4
GDP deflator (period average)	2.0	0.6	2.6	6.9	4.2	3.3	5.2	8.3	5.3
EXTERNAL SECTOR (USD bn unless otherwise indicated)									
Current account balance	17.4	35.4	45.9	68.7	160.8	249.9	371.8	481.1	451.2
(as percent of GDP)	1.3	2.4	2.8	3.6	7.2	9.4	11.3	11.1	8.3
Exports	318	388	520	701	904	1144	1468	1701	1802
Imports	301	352	474	632	743	895	1096	1220	1351
Capital and financial account	34.8	32.3	52.7	110.7	63.0	10.0	73.5	123.9	102.8
Foreign direct investment	37.4	46.8	47.2	53.1	67.8	60.3	121.4	138.9	152.8
Portfolio, net	-19.4	-10.3	11.4	19.7	-4.9	-67.6	18.7	-45.0	-80.0
Other capital flow	16.9	-4.1	-5.9	37.8	0.1	17.3	-66.6	30.0	30.0
Net errors and omissons	-4.9	7.8	18.4	27.0	-16.8	-12.9	16.4	0.0	0.0
Overall balance (as percent of GDP)	3.6	5.2	7.1	10.7	9.2	9.3	14.1	14.0	10.1
MONETARY & FINANCIAL SECTOR								**Latest in bold**	
Money Supply M2	17.6	16.9	19.6	14.5	16.3	17.0	16.7	**17.4**	**(Jun)**
Domestic Credit	7.1	37.5	19.5	9.2	10.8	15.7	17.6	**15.0**	**(May)**
Stock price index (Shanghai composite)	3.9	-19.9	-6.3	1.0	-22.2	41.3	160.0	**-28.4**	**(Jun)**
Lending rate (1y, %pa)	5.85	5.36	5.31	5.38	5.58	5.90	6.78	**7.47**	**(Jun)**
Deposit rate (1y, %pa)	2.25	2.00	1.98	2.05	2.25	2.36	3.28	**4.14**	**(Jun)**
Memo items									
Forex reserves (USD bn)	212	286	403	610	819	1066	1528	**1809**	**(Jun)**
months of imports	10.5	11.6	11.7	13.0	14.9	16.2	19.2	**19.1**	**(Jun)**
Exchange rate (end of period, USD/CNY)	8.28	8.28	8.28	8.28	8.08	7.81	7.30	6.54	6.05
Real Effective Exchange Rate Index (period avg)	102.0	98.3	91.0	88.3	87.7	88.3	92.0	—	—

Source: NBS, CEMAC, PBOC, CEIC, Goldman Sachs Economics Research.

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