China Economics Quarterly 中国经济研究季刊

3rd Quarter 2007

- Growth moderated modestly in 3Q
- Inflation also softened slightly in September
- However, both remain well above the policymakers' comfort zones
- Monetary policy continue to be tightened

Asia Economics Research

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Themes of the quarter:

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China impression – 3Q2007:

- Growth moderated modestly in 3Q on the back of slower net exports growth. Inflation also softened slightly in September after accelerating to a decade high of 6.5% in August (see *Real GDP growth came in at 11.5% for 3Q2007 and CPI inflation at 6.2% for September*, *Inflation in China—Getting into the perilous zone* and *Inflation and Chinese policymakers' dilemma*).

- However, we believe both activity growth and CPI inflation remain well above the policymakers' comfort zones and the government will maintain its tightening bias, including the enforcement of a stringent credit control (see *More liquidity tightening measures implemented to suppress inflation*).

- We argued that given the combination of high growth/inflation in China, a slowdown in the US economy would help in reducing pressures on growth and inflation in China (see *Assessing the impact of a potential US slowdown on China* and *Decoupling—Why do we believe this time would be different?*).

- We reviewed China's 17th Party Congress and assessed its impacts (see *Early thoughts on the 17th Communist Party Congress (CPC) and the near-term macro outlook* and *A brief review of China's 17th Party Congress*).

What else is in this issue:

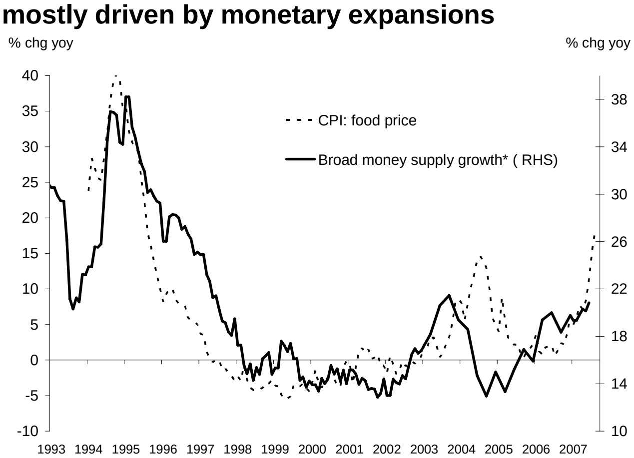
- We review the policy changes implemented so far, including the issuance of special treasury bonds (see the collection of comments in the Policy Issues section).

- We investigate the impacts of currency appreciation on relative upstream/downstream prices and industrial profits (see *Currency appreciation and shifts in relative prices and profits*).

- We introduced the Goldman Sachs China Commodity Index (see *Introducing the Goldman Sachs China Commodity Index*) a high frequency indicator of upstream commodity prices in China.

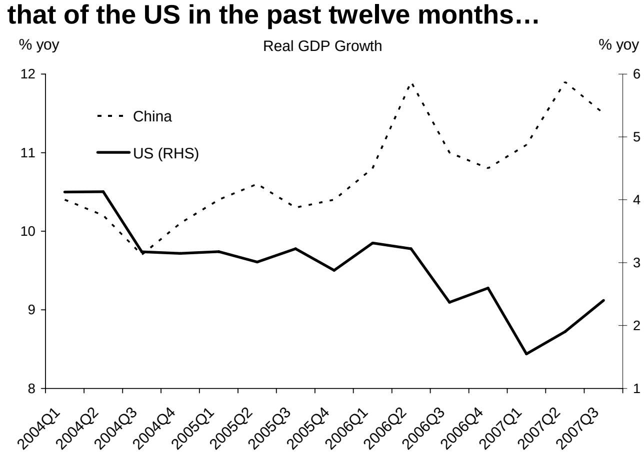
Key charts of the quarter:

Exhibit 1: Food price inflation in China is mostly driven by monetary expansions



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: China's growth has diverged from that of the US in the past twelve months…



Source: CEIC, Goldman Sachs Economics Research.

3Q2007 data summary:

% change, unless otherwise stated

	2007			2006				2005	
GDP	**3Q**	**2Q**	**1Q**	**4Q**	**3Q**	**2Q**	**1Q**	**4Q**	**3Q**
yoy	**11.5**	11.9	11.1	10.8	11.0	11.9	10.8	11.0	11.1
qoq (sa)	**2.2**	3.9	3.0	2.1	2.4	3.2	2.7	2.4	3.0
	Sep	**Aug**	**Jul**	**Jun**	**May**	**Apr**	**Mar**	**Feb**	**Jan**
Activity Indicators									
Industrial Production									
yoy	**18.9**	17.5	18.0	19.4	18.1	17.4	17.6	18.5	18.5
qoq (sa, ann)	**9.6**	18.8	22.4	21.4	21.0	24.7	30.9	24.5	19.5
mom (sa)	**2.4**	0.0	-1.5	3.7	2.0	1.2	1.1	1.1	4.7
Retail Sales									
yoy	**17.0**	17.1	16.4	16.0	15.9	15.5	15.3	16.9	12.7
qoq (sa, ann)	**19.0**	19.3	19.7	19.1	18.2	16.3	14.9	14.3	14.1
mom (sa)	**1.1**	1.6	1.5	1.3	1.7	1.4	1.7	1.1	1.0
Fixed Asset Investment									
yoy	**24.8**	27.3	26.2	28.5	26.9	25.9	26.9	23.4	23.4
qoq (sa, ann)	**8.8**	19.8	32.0	42.3	48.0	49.2	46.1	38.5	27.0
mom (sa)	**-0.4**	0.0	0.5	1.5	2.6	3.3	3.4	3.5	3.4
Price Indicators									
Consumer Price Index									
yoy	**6.2**	6.5	5.6	4.4	3.4	3.0	3.3	2.7	2.2
qoq (sa, ann)	**11.6**	10.7	8.3	5.4	3.9	2.5	3.5	4.9	5.1
mom (sa)	**0.0**	1.2	1.1	1.0	0.6	0.1	0.9	-0.3	0.0
Producer Price Index									
yoy	**2.7**	2.6	2.4	2.5	2.8	2.9	2.7	2.6	3.3
qoq (sa, ann)	**4.0**	4.3	3.8	3.3	2.3	2.4	2.1	1.9	0.9
mom (sa)	**0.2**	0.4	0.3	0.4	0.3	0.4	0.0	0.2	0.1
Trade Indicators									
Exports									
yoy	**22.8**	22.7	34.2	27.1	28.7	26.8	6.9	51.6	33.0
qoq (sa, ann)	**30.9**	60.2	24.7	14.1	-16.7	37.9	45.1	48.4	12.5
mom (sa)	**0.3**	-0.6	5.6	0.6	3.6	18.7	-27.8	20.3	10.7
Imports									
yoy	**16.1**	20.1	26.9	14.2	19.1	21.3	14.5	13.1	27.5
qoq (sa, ann)	**33.6**	30.2	23.9	16.6	16.3	22.3	24.5	16.8	10.0
mom (sa)	**-0.9**	-0.8	8.6	-1.1	1.6	4.0	-2.9	3.5	3.9
Trade Balance (USD bn)	**23.9**	25.0	24.4	26.9	22.5	16.8	6.9	23.7	15.9
Financial Indicators									
M2									
yoy	**18.5**	18.1	18.5	17.1	16.7	17.1	17.3	17.8	15.8
qoq (sa, ann)	**21.2**	21.4	22.4	16.4	14.1	15.8	19.0	21.6	20.9
mom (sa)	**1.3**	0.9	2.6	1.4	1.1	1.3	0.9	1.5	2.0
Total Loans									
yoy	**17.3**	17.0	16.5	16.3	16.0	16.0	15.7	16.6	15.4
qoq (sa, ann)	**17.6**	18.6	17.5	17.0	14.6	19.1	21.0	22.8	17.6
mom (sa)	**0.9**	1.5	1.7	1.1	1.3	1.6	0.6	2.2	2.0
FX Reserves (USD bn)	**1434**	1409	1385	1333	1293	1247	1202	1157	1105
Proprietary Indicators									
GSCA	**12.2**	12.0	12.9	12.7	12.5	12.1	10.9	13.1	13.2
CEMAC-GS Coincident Indicator	**102.64**	102.64	102.51	102.46	102.38	102.13	102.04	102.08	101.69
CEMAC-GS Leading Indicator	**103.76**	104.12	104.16	103.92	103.52	103.06	102.51	102.76	102.97
GS China FCI	**106.8**	107.0	106.7	107.4	107.3	106.9	107.1	107.2	107.8

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

Real GDP growth came in at 11.5% for 3Q2007 and CPI inflation at 6.2% for September

This comment was first published on October 25, 2007.

1. Activity growth moderated modestly

Real GDP growth slowed modestly to 11.5% year on year (yoy) in 3Q2007 from 11.9% in 2Q2007. On a quarter-on-quarter (qoq) basis, GDP growth softened to 2.2% from 3.9% in 2Q (see Exhibit 1). Net exports remain a key growth driver, though its contribution to nominal GDP moderated to 17% in 3Q down from 25% in 2Q (see Exhibit 2).

Monthly activity indicators had mixed signals in September. Industrial production growth accelerated to 18.9 % yoy in September from 17.5% yoy in August. Fixed asset investment growth softened to 24.8% yoy in September, down from 27.3% yoy in August. Retail sales growth stayed largely flat at 17.0% yoy in September, compared with 17.1% yoy in August.

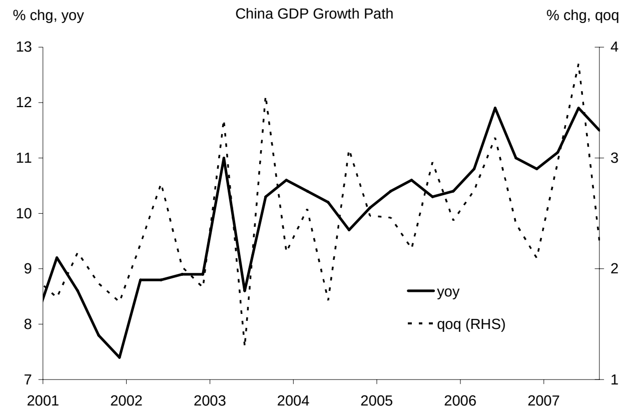
2. Headline inflation rate moderated to 6.2% in September

Headline CPI inflation moderated to 6.2% yoy in September from 6.5% yoy in August, partly due to the stabilization in pork prices. Sequential growth inched up to 11.6% qoq (annualized) from 10.7% qoq (see Exhibit 3). The yoy reading of PPI inflation in September inched up to 2.7% from 2.6% in August. Its sequential momentum moderated to 4.0% qoq from 4.3% qoq.

3. We expect the government to maintain its tightening stance

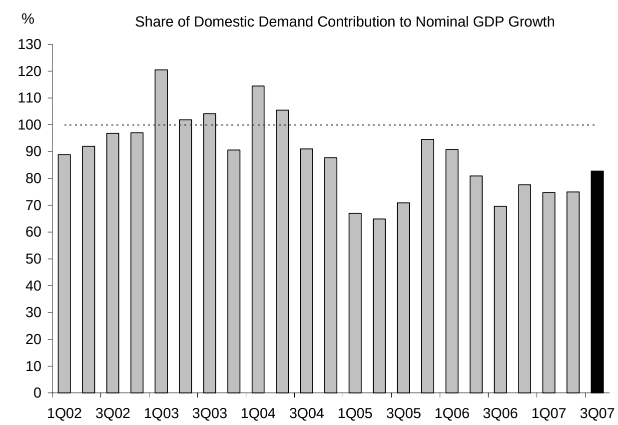
Despite the modest moderation in activity growth and inflation, they remain above the comfort zone for policymakers. The government has already implemented a slew of policy measures to slow down money supply growth over the past month. These include strict orders from the central bank for commercial banks to abide to the 15% total CNY loan growth target set for the year, a Rmb150 billion direct issuance of PBOC bills, and another 50 bp reserve requirement ratio hike (see *More liquidity tightening measures implemented to suppress inflation*, China Views, October 15, 2007). Anecdotal evidence suggests commercial banks have been following the window guidance measures which should lead to a meaningful slowdown in money supply in the coming months. We maintain our view that administrative measures such as setting loan quotas are not the more efficient way to manage the economy and that market-based adjustments, in particular exchange rate adjustment, are preferable. However, we recognize

Exhibit 1: More moderate growth in 3Q2007



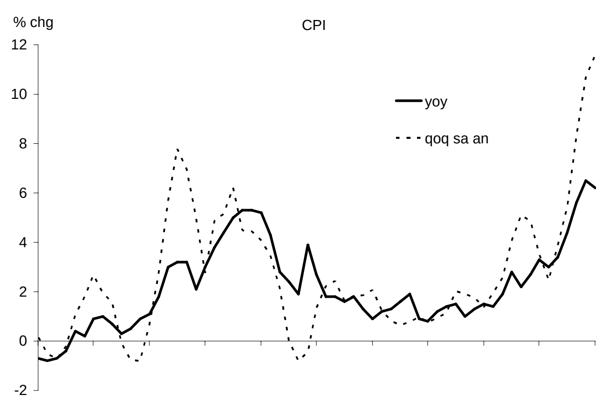
Source: NBS, CEIC, Goldman Sachs Economics Research.

Exhibit 2: Contribution of external demand contributed moderated



Source: NBS, CEIC, Goldman Sachs Economics Research.

Exhibit 3: CPI inflation stabilized



Source: NBS, CEIC, Goldman Sachs Economics Research.

the likelihood of a major change in exchange rate policy in the near term is low and we expect the central bank to continue to depend on credit rationing as its main policy tool.

Hong Liang
Yu Song

Box 1: The timeline of policy tightening in China (2007 year to date)

October 13, 2007
The PBOC raised the reserve requirement ratio (RRR) on October 13 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.

September 6, 2007
The PBOC raised the RRR on September 6 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.

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.

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

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 on February 25.

January 5, 2007
The RRR was increased by 50 bp, effective on January 15.

Inflation in China—Getting into the perilous zone

This article was first published on August 3, 2007.

- CPI inflation will likely breach the 5% level in the near term,…
- …driven by fast monetary expansion and buoyant consumer demand.
- If decisive monetary tightening continues to be delayed, both CPI and asset inflation will likely accelerate further,…
- …and the eventual "landing" of this overheating episode may be a "harder" one.

Since we first warned investors that CPI inflation may soon rise above 4% two months ago,[1] the acceleration in inflation has advanced faster than expected, largely because of muted monetary policy adjustments relative to the rapid acceleration in the growth of demand and price pressures. In other words, policy adjustments have gotten even more behind the curve.

We now see significant risk of CPI inflation breaching the 5% level in the near term,[2] **and rising further if decisive monetary tightening continues to be delayed**. More importantly, the speed of price hikes is likely to further accelerate when inflation expectations are becoming unstable, as evident by the fast pass through of pork price inflation to other items in the food category.

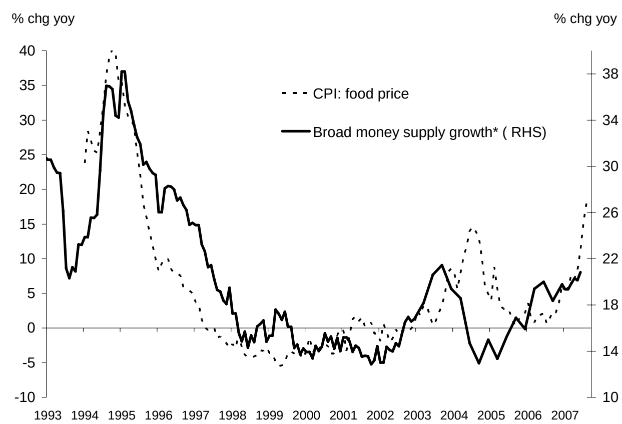
Therefore, the risks of sharp monetary tightening have also risen. If inflation breaches 5% with an accelerating upward momentum, the debate on whether China is overheating will likely soon be overtaken by concerns about whether the economy will have a soft, hard, or "not-so-soft" landing. In our view, the longer the policy adjustments get put off, the less likely it is for this overheating episode to end without some serious bruises for the economy.

Why should we care about headline inflation in China?

After headline CPI inflation hit the 3-year high of 4.4% in June, it was dismissed by many as a temporary phenomenon driven by the "transitory" increases in pork prices, while the "core" CPI, or the non-food inflation, remained under 1%. Some argue that there is no material inflation risk in China, and consequently no need for aggressive monetary tightening.

We do not share this view.

Exhibit 1: Food price inflation in China is mostly driven by monetary expansions



* Broad money supply only contains M2 before 2003, since non-M2 components in M3 supply take up very small weight back then. We use 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.

1. **Food price inflation in China mostly reflects demand expansion rather than transitory supply disruptions, in our view**. We have long argued that inflation in China, including food price inflation, is mainly driven by monetary easing and the consequent buoyant expansion in aggregate demand.[3]

   Exhibit 1 shows that food prices generally react to changes in broad money supply with a short time lag.

   On the other hand, although supply-side disruptions may lead to upward price pressures,

[1] See *CPI inflation on the rise*, China Views, May 25, 2007.

[2] Our estimate of July CPI, which is scheduled to be released on August 13, is 5.1% year on year.

[3] See *Growth-Inflation Nexus Part 1: China*, Asia Economics Analyst, May 26, 2006 and *Assessing inflation risks in China*, Asia Economics Flash, March 26, 2007.

the buoyancy of demand plays a key role in determining actual price movements. For instance, neither meat nor chicken prices rose when the avian flu led to a sharp reduction in poultry production in late 2005-2006.

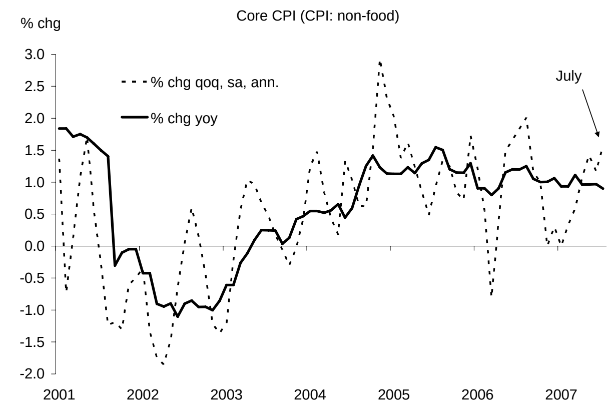
2. **Food takes up a significant weight in China's consumer basket, and an inflation measure without food price components does not make a credible inflation target.** As a developing country, food products in China take up a significantly larger weight (33.2% of the overall CPI basket) than those in developed countries. For example, food only takes up 15% of the CPI basket in the US. Therefore, in China's case, it is hard to argue that non-food CPI is a credible representation of the overall inflation trend when it fails to reflect the price actions of one-third of the household consumption basket.[4]

3. **Furthermore, given wide-spread concerns of an under-estimation of inflation by the official CPI index, ignoring headline inflation and emphasize "core CPI" may leave inflation expectations even more ill-anchored**. The Chinese public is most familiar with headline CPI rather than the non-food CPI. With CPI inflation reaching 4.4% in June and still trending higher, anecdotal stories have already suggested that the public has sped up their current spending and even began to "hoard" certain consumer products in anticipation of higher price levels in the near future.

4. **Inflation is spreading from primary agricultural products to other consumer goods with accelerated speed.**

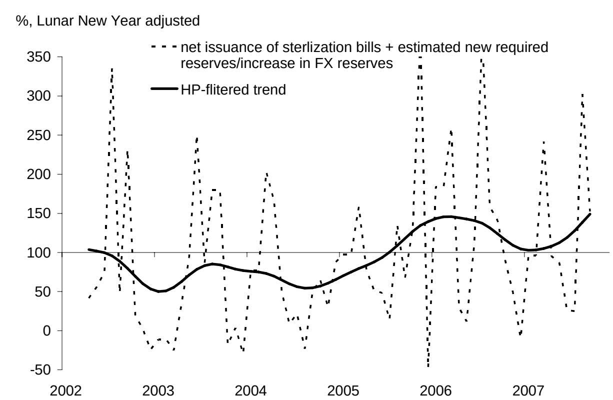
   Alarmingly, the up-tick in inflation impulse is no longer limited to meat prices, but is spreading quickly to other primary and processed food products, as well as catering services. The accelerated pass-through of price inflation from primary inputs to finished food products suggests that consumer demand is buoyant, which likely reflects the strong wage growth and positive wealth effect over the past year. Therefore, inflation pressures will likely be quickly passed on to non-food items as well. Indeed, non-food CPI inflation growth has already been picking up steam on a sequential basis (see Exhibit 2).

Exhibit 2: Core CPI inflation is also on the rise



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: Sterilization operation has been insufficient lately



Source: CEIC, Goldman Sachs Economics Research.

Where is the current inflation trend going?

In our view, the rapid rise in food prices this time round is again driven by the excessive broad money expansion rather than any temporary supply disruption,[5] and therefore, overall inflation pressures will *not* subside without decisive monetary tightening. Despite some modest adjustments in interest rates and the reserve requirement ratio (RRR), meaningful tightening of liquidity is yet to happen, as the central bank's sterilization operations remain muted relative to the large foreign exchange inflows (see Exhibit 3).

Our base case scenario assumes that a decisive monetary tightening will take place in the very near term (see

[4] Following international norm, the weights of China's CPI basket is adjusted every five years based on consumer expenditure surveys. The latest adjustment took place in 2006.

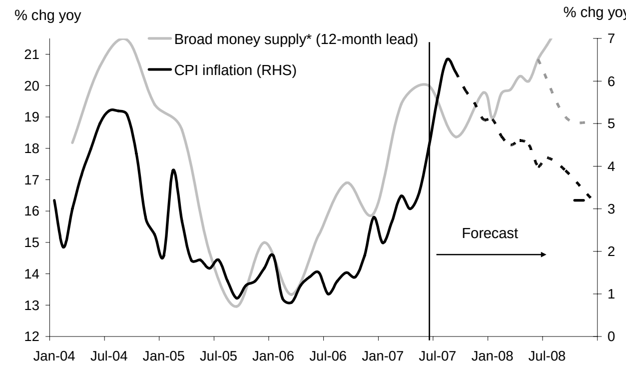
[5] See *China: M2 growth may have understated the speed of monetary expansion*, Asia Economics Flash, July 5, 2007 and *China: Why should we care about M3 growth?* Asia Economics Flash, July 9, 2007.

Exhibit 4 for our baseline forecast of broad money supply and CPI inflation), and it will involve mostly administrative measures such as more aggressive withdrawal of liquidity by the central bank (possibly through larger or more frequent RRR hikes), stepped-up moral suasion on commercial banks to curb lending, as well as other administrative measures to curb investment demand. Benchmark interest rates may also get adjusted by 1 more 27-basis-point hike. But without meaningful adjustment in the currency, we believe it is unlikely that China would raise interest rates aggressively due to fears over further acceleration in foreign exchange fund inflows.

If the needed policy adjustments get further delayed, both CPI and asset inflation may be further boasted as real interest rates sink deeper into negative territory. In that case, the eventual "landing" of this overheating episode could end up being "harder" than the one experienced in 2004.

Hong Liang
Eva Yi

Exhibit 4: Broad money supply and CPI inflation forecasts under our base case scenario



* Broad money supply is a "M3 proxy," which includes net foreign assets and domestic credits. The only item in M3 that is not included in the M3 proxy is "other assets," whose level is only attainable since 2006, but it should not have much impact on M3 growth due to its small share and very stable growth.

Source: CEIC, Goldman Sachs Economics Research.

Inflation and Chinese policymakers' dilemma

This article was first published on September 12, 2007.

Since we first warned investors of the significant upside risks to inflation in May, CPI inflation has continued to advance faster than expected. The year-on-year (yoy) CPI inflation has already jumped from less than 3% four months ago to more than 6%. It appears to us that the probability of seeing a 7% or higher CPI print is fairly high in the coming months.

How far can CPI inflation run up to? Unfortunately, in our view, the risks are still on the upside. The seasonally-adjusted; sequential growth rate of CPI inflation continued to accelerate in August, recording double-digit advancement for two months in a row (see Exhibit 1). Even though non-food price inflation remains stable (in our minds, this component is likely to move up soon as well), other food products continued to run up despite some stabilization of pork prices. There are also concerns that grain prices may soon join the price hike ratchet.

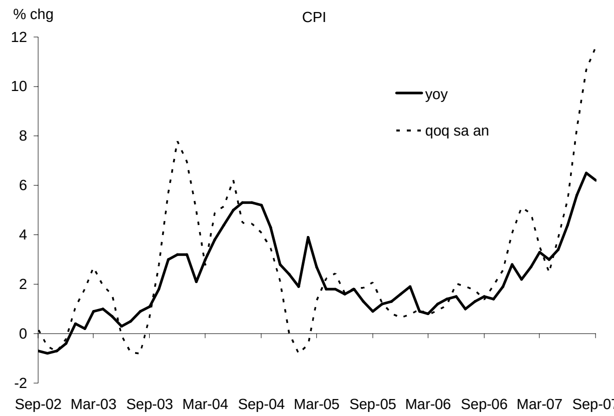
Should we be worried about headline inflation if it mainly surfaces in the food area? ABSOLUTELY. In our view, the latest August CPI reading of 6.5%, together with other buoyant macro data points, should put an end to the debate on whether there is material inflation risk in China. The People's Bank of China (PBOC) should care about headline inflation for a number of important reasons:

1. Food price inflation in China reflects demand expansion rather than transitory supply disruptions. Exhibit 2 shows how food price inflation has moved in tandem with monetary expansion since 1994, the last high/hyper inflation episode in China's recent history. To people who believe that headline inflation is driven by the shortage of pork, it is worth noting that aside from the highest CPI inflation rate in the past 11 years, China is also reporting record-high GDP growth and industrial production growth in recent months.

2. Food takes up significant weight in China's consumer basket, and therefore, it has significant representation of the overall price stability. It also tends to feed back into minimum wage pressures, as agricultural prices reflect a major part of the opportunity costs for migrant workers when they seek jobs in the cities.

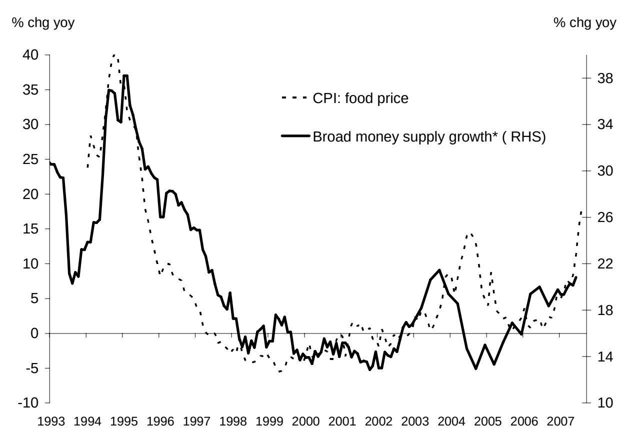
3. Consequently, forward-looking inflation pressures, including that in the non-food space, have clearly risen significantly. It is on this note that we believe the central bank should and can take actions to clam down on inflation.

Exhibit 1: Surging CPI inflation



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Food price inflation is largely driven by monetary expansion



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.

What should the central bank do? In our view, the optimal policy choice should involve a modest interest rate hike plus a significant appreciation of the CNY, similar to what the Indian central bank did earlier this year. India's inflation accelerated to 6.7% in late January 2007, mainly driven by rising food prices. The central bank responded by hiking the banks' cash reserve ratio by 100 bp, raising the policy rate by 50 bp, and by allowing the rupee to appreciate by close to 9% within a few week's time. In addition, the government also cut the tariff and tax rates on a number of imported goods. As a result of these policy actions, activity and the Indian stock market took a breather, but have since then regained its solid footing, while headline inflation has gradually came down to below 4% in recent weeks.

A fast appreciation of the CNY can kill a couple of birds with the same stone: it can help reduce China's trade surplus, leave more room for domestic demand to grow, and reduce inflation on imported goods. If CNY appreciates by 10%, the CNY costs of imported oil, soybean, and lately pork etc., can immediately be cheaper by 10%.

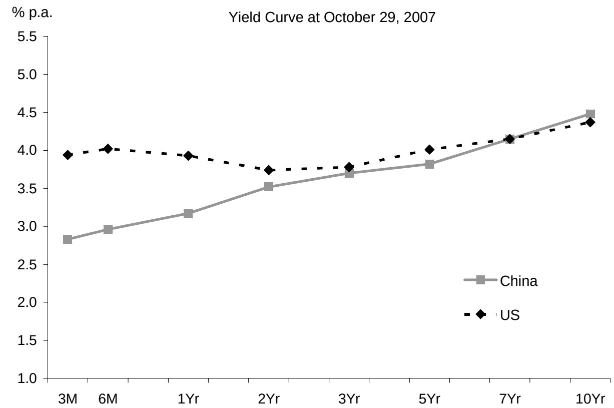
In addition, the interest rate differentials between the USD and CNY are disappearing quickly, and will likely reverse soon (see Exhibit 3). If our expectations on the USD and CNY rates are realized (75 bp rate cut by the Fed, and 54 bp rate hike by the PBOC by the end of this year), it will likely become even more difficult for the PBOC to contain domestic inflation pressures through rate hikes while keeping the CNY "basically" stable.

What will the government likely do? The likelihood of a major currency appreciation in the near term remains low, despite the fact that it is obviously the right policy choice. Consequently, we believe the likelihood of aggressive interest rate hikes, of a magnitude sufficient to push real rates into a positive territory, is also low. Therefore, the policy choice is likely to be a mix of a little bit of everything, including some modest rate adjustments, attempts to directly control prices, and liquidity tightening. Moral suasion, or direct quantity control on commercial banks' lending, will likely be an important part of the tightening package.

Will these measures work? Yes, if the government really enforces its credit quota. Looking back at the 2003-2004 inflation episode, Exhibit 2 on page 8 shows graphically how a policy engineered credit crunch had killed headline/food inflation (without any adjustment in the currency and a mere 27 bp rate hike). However, for some reason, the quantity control on monetary expansion has so far been pursued much less decisively; the strong credit number in August is a case in point. One reason might be the upcoming political party Congress (to take place on October 15, 2007). If so, we should expect more decisive policy actions after the political reshuffling is done, and it might not be too late then.

On a more worrisome note, many policymakers and their advisors continue to try to deny there are genuine inflation risks facing China despite the 6.5% headline CPI inflation, an 11-year high. It is indeed puzzling, to say the least, to see some previous inflation hawks, who used to argue that CPI inflation is significantly understated because of regulated prices and missing property prices in the CPI basket, now advocate that there is little real inflation risk despite soaring commodity prices, property prices and headline CPI. They either argue short-term supply factors are the main reason behind the surge in inflation or that a rise in agricultural prices is structural and therefore good news for farmers' income. In our view, the first argument will likely be proven wrong, and the second one is a wrong argument for not taking actions to control inflation (price increases always lead to winners and losers, but inflation is a regressive tax on the poor).

Exhibit 3: Interest rate differentials will likely to reverse in the near term, especially on the long-end



Source: Bloomberg, CEIC.

If policy inactions (or muted policy actions) are driven more by a true misreading of the macro picture, upcoming data points should push the consensus, including that within the broad government, towards the right diagnosis of the macro challenges. Will 7% CPI inflation be too high or is the limit of tolerance higher than that? How about soaring equity prices and property prices, if real rates are kept in deeply negative territory? When will the policymakers say enough is enough and begin to take action? Unfortunately, being analysts of the dismal science, we cannot make a precise forecast of when such policy actions may take place, but can only predict that they will have to be implemented to bring down the current inflation upsurge in the future. Moreover, the longer the policymakers wait to see more confirmation of more broad-based inflation pressures, the messier it would likely be to eventually bring inflation down to their comfortable zone (which seems to us to be below 3%).

Will a slowdown in the US help alleviate these inflation pressures? Yes, if the US slowdown can materialize a slowdown in China's export growth quickly and significantly, but I think this scenario is unlikely. Although rising uncertainties of the US economy may argue for some caution in the intensity of policy tightening, it does not take away the need for tighter monetary policy nor for some quick actions to prevent inflation expectations from running up further. Even under the scenario of a sharp weakening of the US economy, two 27 bp adjustments in China's benchmark deposit rates will likely still leave those rates far below where the "neutral" level should be. However, they will be valuable steps for China to move towards using more market-based means to anchor inflation expectations and manage the cycle more efficiently.

How China deals with its inflation problem will have significant impact on the rest of world, especially when uncertainties in the US economy have risen markedly. We believe a heavy-handed administrative tightening will clearly aggravate the already rising downside risks to global growth. However, allowing inflation pressures to run free will ultimately take a costly toll on China's growth down the road. Therefore, a timely, decisive, and efficient tightening of financial conditions is much preferable than seeing the central bank being further behind the curve. Furthermore, we believe letting the currency take more of the brunt of adjustment will help preserve the strength of domestic demand, while allowing the rest of the world to benefit more from the robust economic growth in China through increases in China's imports and its investment outflows.

Hong Liang

More liquidity tightening measures implemented to suppress inflation

This article was first published on October 15, 2007.

A slew of policy measures have been adopted to slow down money supply growth over the past two weeks. These include strict orders from the central bank for commercial banks to abide to the 15% total CNY loan growth target set for the year, a Rmb150 billion direct issuance of PBOC bills to a selected group of banks, and another 50 bp reserve requirement ratio hike announced on the past Saturday.

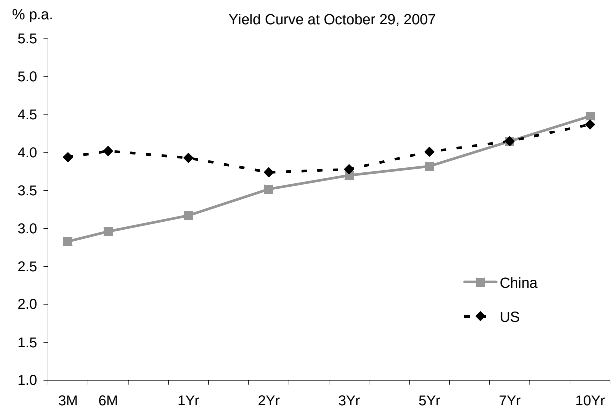
We believe these measures will lead to a meaningful slowdown in money supply growth in 4Q2007. Information we collected from various commercial banks suggest that the 15% loan growth target will likely be achieved this time because of the potential severe negative consequences for any banks that breach such targets. If total CNY loan growth slows from 17.4% yoy as off end-September to 15% at the end of December, (equivalent to a total of Rmb140 billion in incremental new loans for the remaining three months of the year combined), it will imply a sequential slowdown of credit provision from 15.3% in 3Q to 6% at the end of 4Q. As a result, M2 growth will likely slow to around 16% yoy by the end of the year, down from the current mid-18% range.

We expect such a marked sequential slowdown in money supply growth to bring a deceleration in growth and inflation in the next 3-6 months. Real GDP growth will likely slow to about 11% in early 2008, and CPI inflation will likely continue to decelerate from the peak of 6.5% reached in August this year to below 3% later next year.

We have expected more intensified liquidity tightening by the central bank to reduce heightened inflation risks, and view them as positive policy moves, even though we would prefer a more market-based approach to achieve such a goal. These measures, although likely to result in some deceleration in growth in the short run, will help ensure macro stability, and thereby the duration of the cycle in China in the longer term by giving investors more confidence that inflation will not become real macro instability.

However, continued heavy reliance on administrative controls has again highlighted the inefficiencies of maintaining a significantly undervalued currency. Policy choices remain limited for the central bank when the CNY stays significantly undervalued and quasi-fixed against the USD. The five rate hikes in China coupled with a 50 bp rate cut by the Fed this year have already narrowed the interest rate differentials between the two economies substantially, making it more “painful” for

Exhibit 1: Bond yield differential has narrowed between China and the US



Source: CEIC, Goldman Sachs Economics Research.

the PBOC in the future to use the interest rate tool to combat inflation pressures (see Exhibit 1). Therefore, we expect quantity control of credit growth to continue to be the main policy tool for the Chinese authorities to achieve macro stability so long as its policy on the CNY remains unchanged.

Furthermore, quantity rationing of credit has led to a stop-and-go pattern in intra-year lending by commercial banks in the past few years. That is, commercial banks tend to rush to expand their loan books at the beginning of the year, fearing the central bank would slow/stop their lending later in the year, while such behavior has also indeed generated intensified credit rationing by the PBOC in the second half of the year. In our view, the incentives for the commercial banks to increase lending remain very high given the buoyant macro. Therefore, the slowdown in money and credit growth in 4Q2007 is also likely to be temporary before banks rush to lend again early next year.

In summary, we take these quantity tightening measures as positive policy moves because of the heightened inflation risks. We also see limited negative impact on the economy or the market over the longer term. However, in the short run, the sharp liquidity tightening may exert some negative impact on the equity market, while providing some support to the domestic bond market as inflation risks subside and liquidity is forced back to the interbank bond market.

Hong Liang

Assessing the impact of a potential US slowdown on China

This article was first published on August 22, 2007.

- In this article, we assess the impact of a potential sharp US slowdown on China's growth following the recent turmoil in the US credit market.
- We argue that a solid case can be made for China's decoupling, since 1) China's growth experiences since 2H2006 have already proven that it can decouple from a slowdown in US growth from 3.2%-3.3% to about 1.5%-1.8%,…
- …and more importantly; 2) at present, a slowdown in external demand would reduce the overheating pressures in China, and thereby reduce the risks of more aggressive policy tightening.
- In the case of a sharper or more prolonged contraction of the global economy, the negative impact on China's growth may also be more visible, but the tightening bias in policy stance would also be reduced.
- On the other hand, if the external demand softening remains muted, the need for China to rein in growth and inflation will persist.

Subprime woes have generated serious concerns on the US economic outlook and the financial market turmoil expanding beyond the US markets. Consequently, many investors are again focusing on the question: how much will China's growth be negatively affected by the subprime crisis? Can China really decouple from a sharp deceleration in US consumer demand?

We revisit these issues in this article. We argue that:

1. China's growth experiences since 2H2006 have already proven that it can decouple from a slowdown of US growth from 3.2%-3.3% to 1.5%-1.8%.

2. At present, a slowdown in external demand, led by a weakening US, would reduce the overheating pressures in China, and thereby reduce the risks of more aggressive policy tightening.

3. China's direct losses from holding subprime-related financial assets are likely to be small and its domestic financial markets remain shielded from external turmoil by capital controls.

4. In the case of a sharper or more prolonged contraction of the global economy, the negative impact on China's growth may also be more visible. Therefore, sound macro policy management is of crucial importance.

Our thoughts are presented in detail as follows:

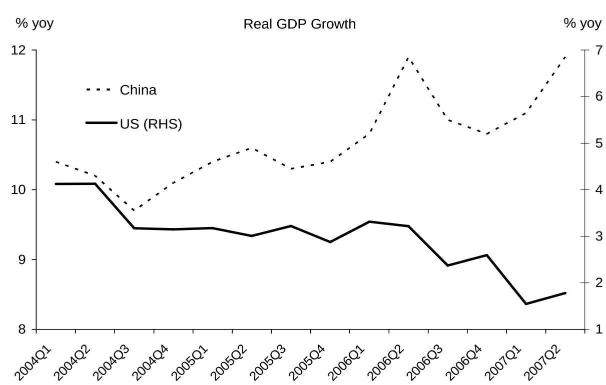
Decoupling: The empirical evidence

Whether China (or the rest of the world) can decouple from a weakening US economy has been a focused question for many investors since the middle of last year. Ultimately, the answer to this question is an ***empirical*** one, although ex ante analysts may have different views based on different model estimations.

The empirical answer to this question so far is an unambiguous "yes":

- China's economy accelerated to a record high growth rate in the past 10 years in 1H2007, while the US economy slowed from 3.2%-3.3% year on year (yoy) in 1H2006 to 1.5%-1.8% yoy in 1H2007, or about 1 percentage point (pp) below its potential growth (see Exhibit 1A).

Exhibit 1A: China's growth has diverged from that of the US in the past twelve months…



Source: CEIC, Goldman Sachs Economics Research.

- The central bank in China has raised interest rates four times so far in 2007, while the Fed just cut the rate on its discount window and is set to cut the Federal Funds rate.

- The renminbi (CNY) trade-weighted index (TWI) appreciated by 1.8% in 1H2007, while the USD TWI depreciated by 3.5%.

Subprime: What if things get worse from here?

Just as the market began to feel a bit more comfortable with the decoupling theme based on the strong performance of the rest of the world in 1H2007 (see Exhibit 1B), the subprime crisis has again raised the risks of a sharper and/or more prolonged correction in the US housing market, which in turn could exert significant downside pressure on consumer spending.

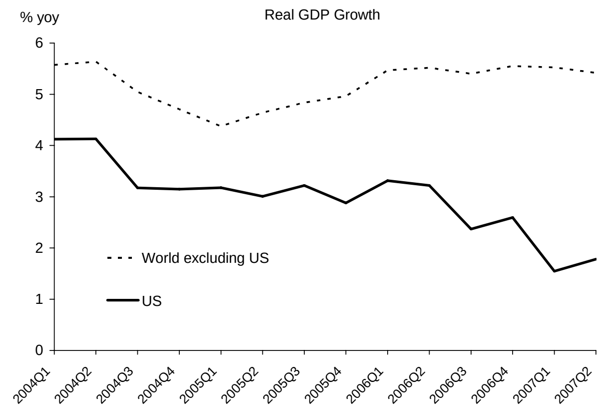
We acknowledge these risks have risen significantly on the back of recent events. However, we argue that because aggregate demand (including exports) is now overheated in China, a slowdown in external demand would in fact "*accidentally*" help alleviate such overheating pressures. Specifically, a slowdown in export demand can 1) leave more room in China's supply capacity for the growth of domestic demand (including investment demand), and thereby reduce the risks of aggressive policy tightening; and 2) to the extent a slowing US softens global demand for commodities, it may improve the terms of trade for China (for that matter, Asia as well).

<u>*How leveraged is China to US and global growth?*</u>

There is no doubt that China's growth is directly leveraged to the US economy through the export channel. We believe a slowdown in US consumer demand will reduce its import demand from China as well as from the rest of the world. Therefore, its impact on global demand will be the key to assess the total negative impact on China's export performance (see Exhibit 2).

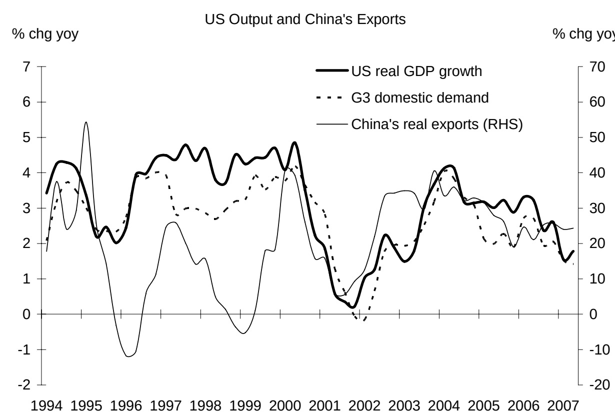
In an article we published last year,[1] we estimated the impact on China's exports from a potential slowdown in global demand induced by weaker US consumption growth using a restricted vector-error-correction model. Our estimates suggest the elasticity of China's export growth vs. global demand is around 6.2, while the elasticity vs. changes in the real exchange rate is about 1.5. In other words, a 1 pp slowdown in real global demand will on average bring down China's real export growth by 6.2 pp.

Exhibit 1B: ...so has the rest of the world



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: China's export growth moving in tandem with global demand



Source: CEIC, Goldman Sachs Economics Research.

<u>*Can we get a number estimate on the range of likely outcomes?*</u>

In a stress test below, we assess the impact on China's economic growth under three different scenarios, based on three different sets of assumptions on the magnitude and pace of a potential US slowdown and its impact on global demand. Scenario 1 is the closest to our current US growth forecast, which assumes real GDP growth in the US to be 2.0% quarter-on-quarter annualized (qoq ann) at trough between 4Q2007 and 1Q2008. Scenario 2 assumes a more negative growth shock than the one factored in our US Economics Team's baseline and also less decoupling from the rest of the world. Scenario 3 postulates a larger negative spillover from the housing slowdown to the rest of the US economy as well as to the rest of the world (see Exhibit 3).

[1] See *Q&A on China's vulnerability to a US slowdown*, Asia Economics Analyst, June 26, 2006.

Exhibit 3: Stress test of a US slowdown on China's real growth

		Scenario 1	Scenario 2	Scenario 3
US GDP growth at trough (qoq, ann)	-	2.0	1.0	0.0
Elasticity of global demand vs. US growth	-	0.6	1.0	1.2
	2Q2007	4Q2008(F)		
China real exports growth (% yoy)	25.8	23.6	18.4	11.6
China industrial production growth (% yoy)	18.2	17.8	16.5	14.1
China GDP growth (% yoy)	11.9	11.5	10.5	9.5

Source: CEIC, Goldman Sachs Economics Research.

We conclude from our analysis that a solid case can be made for China's decoupling. While our estimates support the view that a US slowdown will likely result in a deceleration in China's growth, the bar is fairly high for a case of a severe China slowdown. Not only does the US economy have to unravel quickly, the rest of the world has to perform even worse. Unless the US economy dips into recession, China is likely to be able to maintain its growth rate at 10% or above.

In Scenario 1, if there is not much further slowdown of the US economy compared with the past two quarters, that is, if the US economy soft lands and the rest of the world manages to hold up their demand better than average, we expect China's growth would be barely affected and may continue to grow at a pace above its potential without any policy changes. In this case, the need for policy tightening will persist.

In Scenario 2, we assume the US economy gradually slows to around 1% growth in the next 6 quarters and the rest of world's demand performs negatively to the same extent. As a result, China's growth could also decelerate by about 1.4 pp from its current level, with most of the deceleration taking place in industrial production and the export sector. However, overall growth in China is likely to be still close to its potential growth rate of 10%.

In the worst case scenario (Scenario 3), we assume the US economy hard lands, with its real GDP growth trailing to zero by 4Q2008, and the demand in the rest of the world unravels even worse than expected. In this case, we believe China's exports could be seriously bruised and could decelerate by a whopping 14 pp in 6-quarter's time, leading the overall economy to grow slightly below its potential. The manufacturing sector would be most severely hit, and industrial production growth can weaken to about 14% yoy compared with its current level of above 18%. Corporate earnings in this case would be significantly damaged as well.

The 2001 experience serves as a good back-of-the-envelope check on how plausible our estimates are.

A sharp US slowdown: What did history tell us?

Among the many cycles and mini-cycles in China after 1978, there is only one episode in which a cyclical recession in China was purely driven by a sharp US slowdown: the tech bubble burst in mid-2000-2001. Real GDP growth in the US weakened by 4.8 pp in 6 quarters, and China's real export growth dropped sharply by almost 30 pp. During this period, industrial production growth was shaved by 4 pp, while real GDP growth declined by 1.3 pp and deflationary pressures re-emerged in China.

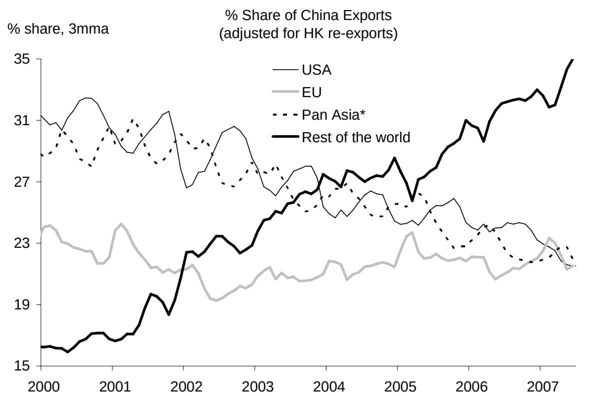
However, the economy bounced back quickly, partly supported by monetary easing and expansionary fiscal policies. By mid-2002, China was clearly back on a strong cyclical-recovery path driven by rising domestic demand as well as exports.

There are real differences between now and then

One important difference is the starting points are very different: back in 1H2000, China's economy grew by 8.2% (CPI inflation rate was 0.1%), and it only began to emerge from the recession years of 1997-1999 following the Asian crisis. In other words, back then, the economy, in particular China's domestic demand, was still pretty weak cyclically. This stands to significant contrast to the present cyclical strength of the economy (close to 12% real GDP growth and 5.6% CPI inflation).

Furthermore, there has been significant diversification in China's exports, both in terms of its trading partners and its product mix. The share of China's exports going to the US has been falling continuously since 2000, while the share to the rest of the world, i.e., the non-G3 and Asia markets, has been on the rise (see Exhibit 4). In the meantime, Chinese exports have significantly moved up the value chain, with more than 50% of its exports now being investment-related goods, rather than the

Exhibit 4: China's dependence on exports to the US has been declining, as the share of exports to the rest of the world rises



* Pan Asia: Japan, Korea, Taiwan, Singapore, Thailand, Malaysia, Philippines, Indonesia.

Source: CEIC, Goldman Sachs Economics Research.

traditional low-end consumer products. The contribution of consumer-related goods to total export growth to the US has also declined (see Exhibit 5). Arguably, these changes in China's export structure may help shield demand for China's exports during a slowdown of US consumer demand.

Winners and losers

Who could get hurt in the export sector?

In our view, the manufacturers of consumer-related products, such as textiles, apparel, footwear, and consumer electronics are likely to be the most adversely impacted. Unlike 2001 when the bubble bursting in the U.S. mainly affected capex spending and therefore import demand for investment goods, we believe the impact would come through consumer goods this time, primarily due to the negative wealth effect on consumer spending (see Exhibit 6). If retail sales during the Christmas season are set back by the housing weakness and financial market turmoil in the coming months, further contraction in consumer good orders from China could emerge as early as 1Q2008.

How about contagion through the financial market?

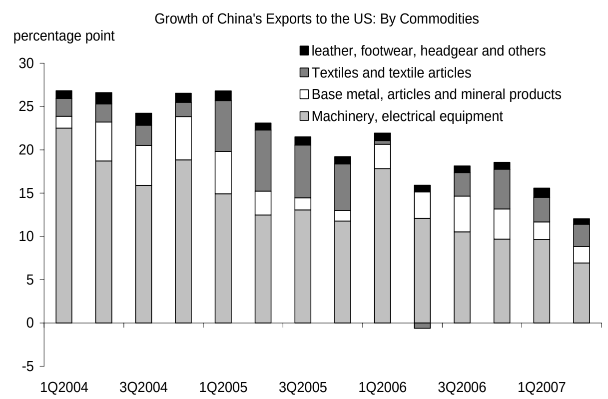
With stringent controls on short-term capital flows, China's domestic capital markets are shielded from global market turmoil, as evident by the sharp divergence of domestic A shares vs. Hong Kong H shares' performance since the beginning of August (see Exhibit 7). Therefore, there is likely to be limited financial condition tightening in China through falling equity prices even if global equity markets weaken further.

Exhibit 5: China's exports are now more leveraged to investment demand in the world

* Consumer goods include textile, garment, consumer electronics and misc. consumer goods.

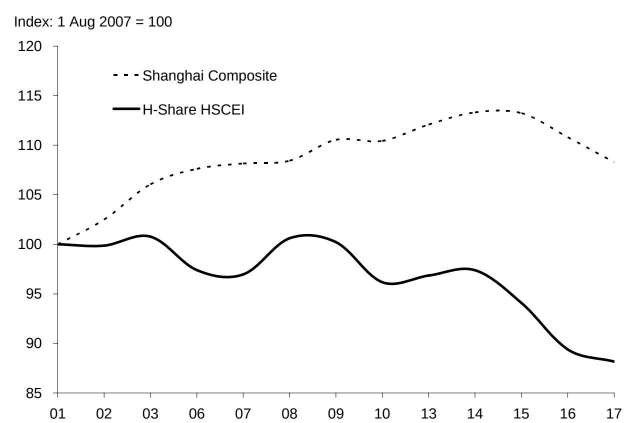
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: Consumer-related exports could be vulnerable to a US slowdown due to the negative income effect, but their share is small



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7: The A-share market outperformed the Hong Kong H-share market after the US credit market turmoil (August 1-17, 2007)



Source: CEIC, Goldman Sachs Economics Research.

There are some direct financial losses incurred by Chinese financial institutions from their holdings of subprime-related assets. We think these losses are likely to be small relative to the total foreign exchange (FX) assets held by the government and the banking system.

According to the US Treasury's Annual Portfolio Survey released in May 2007,[2] China held merely US$9.45 billion worth of mortgage-backed securities (MBS) (excluding agency bonds) as of June 30, 2006,[3] which is equivalent to 10% of the combined holdings within Euroland countries. Compared to the sheer size of its US$1.3 trillion FX reserves and US$266 billion foreign assets held by commercial banks as of June 2007,[4] China's exposure to non-agency MBS seems to be rather trivial.

Will a slowing US reduce the need for policy tightening in China?

Yes, if a weakening US economy does translate into a slowdown in China's export growth.

In our recent articles, we have highlighted the upside risks to growth in China and the urgent need for decisive policy tightening measures to be adopted.[5] Admittedly, accelerating global demand could further exacerbate the overheating problem in China, while a slowdown in the U.S. and elsewhere would potentially help reduce inflationary pressures in China and encourage policymakers to place more emphasis on the need to preserve domestic demand.

With rising uncertainties from the global financial markets and risks to the real economy, central bank policy conduct in major economies will likely be more data-dependent. In our view, China's macro policy will also likely tilt towards a more cautious stance, if the US economy continues to show weakness. If growth momentum is undermined as a result of the US weakness, economic policies in China would likely ease up, and the risks for policy errors of over-tightening in an adverse global environment should be limited, especially considering the reluctance to tighten policy by the authorities this year. Furthermore, a more pronounced slowdown in external demand may call for counter-cyclical stimulating policies. In this regard, the strong fiscal position does provide China with quite a sturdy war chest to conduct counter-cyclical expansionary fiscal policies if needed.

On the other hand, if external demand softening from a US slowdown remains muted, the need for China to rein in growth and inflation will persist. We continue to believe that currency appreciation remains the most optimal policy adjustment in this scenario, as it helps reduce China's dependency on external demand while preserving the strength of its own domestic demand.

We would watch closely for further developments in the credit markets and how that may impact the global growth outlook. We maintain our above-consensus GDP growth forecasts of 12.3% and 10.9% yoy for 2007 and 2008 respectively. These growth forecasts have incorporated a decisive policy tightening program (including intensified credit rationing) that will slow down domestic demand growth in 2H2007. If export demand does slow in the near term, we expect the government to ease up their tightening on domestic investment demand, and thereby, overall aggregate demand growth will not be overly affected.

Hong Liang
Helen (Hong) Qiao

[2] See *Report on Foreign Portfolio Holdings of U.S. Securities* as of June 30, 2006, Department of Treasury, Federal Reserve Bank of New York, Board of Governors of the Federal Reserve System, May 2007. http://www.ustreas.gov/tic/shl2006r.pdf.

[3] The majority of China's holding of US mortgage-related credit instruments are agency bonds (US$107.46 billion as of June 30, 2006 according to the US Treasury survey, May 2007), which continue to trade well. On the other hand, the non-agency mortgage-backed debt (China's holdings: US$9.45 billion according to the same survey) is considered to be more vulnerable to the recent credit market turmoil.

[4] Source: Balance sheet of other depository corporations, PBOC website.

[5] See *Inflation in China—Getting into the perilous zone*, Asia Economics Flash, August 3, 2007, and *Our stance on inflation and policy outlook in China*, China Views August 5, 2007.

Decoupling—Why do we believe this time would be different?

This article was first published on September 24, 2007

- In a previous article, we estimated China's potential to decouple from a US slowdown using data since 1997. In this article, we take a different approach and re-examine the case for decoupling from a bigger picture perspective.
- We argue that the macro divergences between the US and emerging Asia—some serious home-grown challenges facing the US in the coming year(s) vs. the endogenous growth strength enjoyed by Asia, resemble more the divergences between these two regions in the 1980s as opposed to the 1990s.
- In this context, we believe the strong and improved fundamentals in China as well as in the rest of emerging Asia stand a good chance of decoupling from a further weakening of the US economy or its continued sub-potential performance.
- Because of rising uncertainties in the US economy and policy risks in China, some cautiousness for the near-term macro outlook are understandable. However, we remain comfortable with our bullish assessment of the region over the next few years.

The sub-prime crisis coupled with signs of weakness in the US labor market has significantly raised the downside risks to global growth in the coming year(s). Many analysts, including us,[1] have used historical data to estimate the likely impact of a further sharp weakening of the US economy on China's growth. While these exercises are valuable, it still leaves many concerns unaddressed; in particular, will the estimated elasticity change if US growth falls below a certain threshold? Or will the rapid structural changes of the Chinese economy make these historical-data-based estimates less reliable?

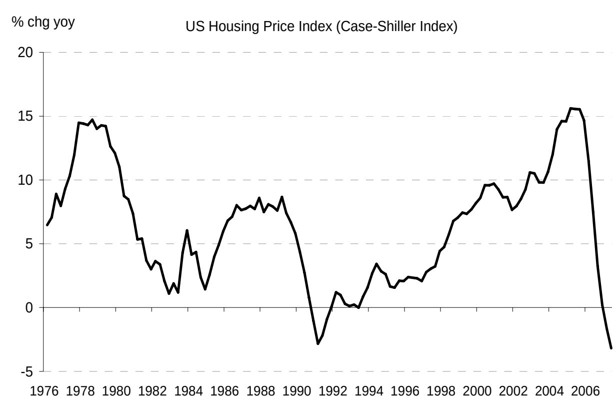
These questions and doubts are understandable, given that the US remains the largest economy in the world. But if we take a step back and look at the big picture of how the global economy has been evolving in the past few years, and is likely to continue to evolve over the medium term, we still feel very comfortable with our view that China, together with emerging Asia, stands a very good chance of outperforming and decoupling from the US economy in the coming few years.

In our view, the home-grown problems facing the US economy vs. the endogenous growth strength enjoyed by Asia resemble more the macro divergences between the two regions in the 1980s as opposed to the 1990s. In this context, China, together with emerging Asia, have the potential to become a more independent engine of growth as the global economy rebalances with a weaker growth engine in the US. Indeed, the BRICs consumers, with China and India leading the charge, may have already contributed more to global demand than US consumers in 2007.[2]

Housing woes, large current account deficits, and leftover wounds from a protracted war on foreign soil—how did the world do when the US was last facing all these troubles?

Indeed, when one lists the challenges facing the US economy today, many of them were once brought up back in the 1980s:

Exhibit 1: Long cycles in US housing prices



Note: home price is Case Shiller, spliced with OFHEO before 1987.
Source: CEIC, Goldman Sachs Economics Research.

[1] See *Assessing the impact of a potential US slowdown on China*, Hong Liang and Helen (Hong) Qiao, Asia Economics Flash, August 22, 2007.

[2] See *The Changing World*, Jim O'Neill, Global Economics Weekly, September 5, 2007.

Exhibit 2: Evolution of US growth performance and its twin deficits

	GDP	Residential Investment	Fiscal Balance	Current Account
Decade average	% chg yoy	% chg yoy	% of GDP	% of GDP
1980-1989	3.1	2.1	-3.9	-2.1
1990-1999	3.1	3.4	-1.8	-1.7
2000-2006	2.6	3.7	-1.5	-5.1

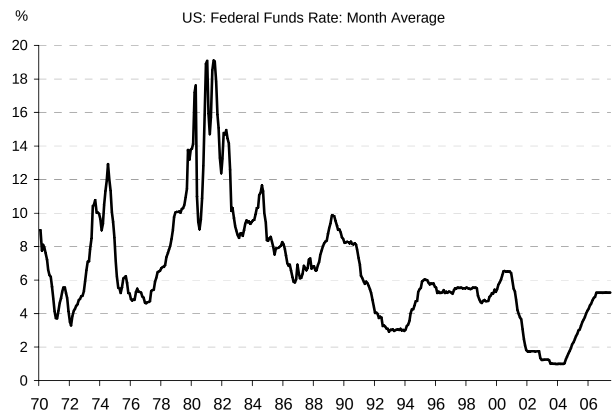
Source: CEIC, Goldman Sachs Economics Research.

The last time the US housing market went through a prolonged adjustment in prices and investment, it was in the 1980s until the early 1990s. Residential investment began to slump and prices to dis-inflation in 1980-1982, triggered by the Fed's contractionary monetary policy to control inflation. The housing market had another boom in the second half of the 1980s before it slumped again in 1989-1992 (see Exhibit 1). The savings and loans crisis, a direct result of the over-investment in the housing sector, was resolved eventually at the beginning of 1990s with a fiscal bailout amounting to US$166 billion.[3] **In fact, during 1980-1992, residential investment in the US recorded negative growth rates in 7 out of 12 years.**

Rising military-related expenditure and tax cuts had also resulted in ballooning fiscal deficits and current account deficits in the US in the 1980s (see Exhibit 2). The recovery of the US economy was supported by the Fed lowering the Fed Fund rates substantially after the weak domestic economy led to reduced inflation risks (see Exhibit 3), and the rebalancing of the global economy back then involved a substantial weakening of the USD (see Exhibit 4).

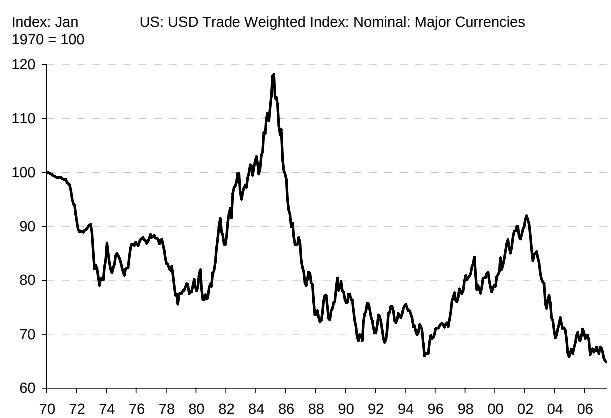
On the other hand, the 1980s were boom years for Asia by most accounts. The rising economies at the time, including Japan and Korea as well as other newly industrialized economies (NIEs, such as Indonesia, Taiwan, Singapore, Hong Kong) enjoyed strong secular growth in the 1980s, with many of them experiencing rapid industrialization and urbanization domestically. Strong domestic demand and confident consumers from Asia were hallmarks of the 1980s. Exhibit 5 shows both overall growth and domestic demand strength were robust in the 1980s, in particular in the major economies of the region at the time.

Exhibit 3: The recovery of the US economy was supported by lower Fed Funds rate...



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: ...and the rebalancing of the global economy involved a substantial weakening of the USD



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Asian growth held up well in the 1980s

		GDP		Domestic demand	
average % chg yoy	Asia ex China	Japan	Korea	Japan	Korea
1980-1989	4.7	3.7	7.6	3.6	7.3
1990-1999	3.6	1.5	6.2	1.4	5.2
2000-2006	3.1	1.6	5.2	1.3	3.8

Source: CEIC, Goldman Sachs Economics Research.

[3] See http://www.millercenter.virginia.edu/academic/americanpresident/keyevents/bush

Not surprisingly, booming equity/property markets and rising domestic currency values in Asia were also part of the well-known stories of the time. **In other words, the decoupling also took place in the asset markets** (see Exhibit 6). Some may argue that Asia had over-stimulated its domestic demand in the late 1980s with accommodative monetary conditions, which led to later woes of excessive asset inflation.

Re-coupling and the disappointing 1990s

The relative fortune between Asia and the US reversed in the 1990s. Rather than being Asia's decade, the 1990s witnessed rather disappointing performance of the Asian economies, and the period of 1997-1999 was marked by a severe financial crisis and economic recession. Excessive asset inflation, weak financial institutions, and mis-management of cyclical policies, particularly a rigid exchange rate system, were among the factors that contributed to Asia's underperformance. As a result of these domestic weaknesses, Asia's growth became increasingly dependent on the demand from the US, who fortunately in the 1990s enjoyed a powerful productivity boom led by the IT revolution.

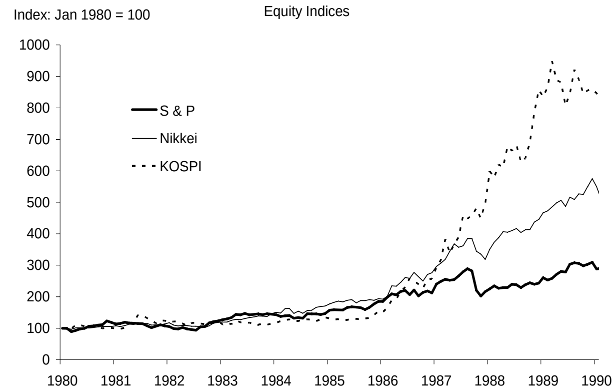
The excess during the IT boom led to a sharp cyclical slowdown in 2000-2001 globally, including in Asia where the budding signs of cyclical recovery in 2000 was undermined and the economies were pushed back into recession. But since 2H2002, China, Asia's new economic pole, has embarked on a powerful cyclical recovery buttressed by significant structural improvements. India, another emerging economic powerhouse in the region, has also seen a substantial lift in its potential growth rates.

The pendulum is swinging back to Asia

The point that emerging Asia is on a much stronger footing than right before the 2001 US slowdown is best illustrated in Exhibits 7A and 7B. The size of many Asia emerging economies has more than doubled in current USD terms over the past 6–7 years. **Emerging Asia now amounts to a US$7 trillion economic block, growing at close to double-digit rates!** More encouragingly, we believe the economic perspectives of the two largest growth engines of the region, China and India, continue to look solid over the medium term.

- Productivity growth continues to be robust, driven by supply-side policy reforms to open up and deregulate, and by rapid advancements in industrialization and urbanization of the economies.

Exhibit 6: Decoupling also took place in the asset markets in the 1980s



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7A: Emerging Asia is on a much stronger footing than right before the 2001 US slowdown…

Real GDP growth % yoy	2000	2Q2007
Japan	2.4	1.6
China	8.4	11.9
India	5.3	9.3
Korea	8.5	5.0
Indonesia	5.4	6.3
Taiwan	5.8	5.1
Thailand	4.8	4.4
Hong Kong	10	6.9
Malaysia	8.9	5.7
Singapore	10.1	8.6
Philippines	6	7.5
Vietnam	6.8	8.0
Macau	5.75	37.9
Asia including Japan	6.1	7.8
Asia ex Japan (AEJ)	7.4	9.9
AEJ ex China	6.1	7.5

Source: CEIC, Goldman Sachs Economics Research.

- Corporate earnings remain strong, and corporate balance sheets are in their best shape ever.

- Consumers' balance sheets are also very strong, with very limited leverage.

- The government is in a solid fiscal position in China, with ample room to maneuver if needed.

- There is also little risk of any external margin call for China, given its large external surplus and hefty foreign exchange reserves.

Concluding thoughts

Undoubtedly the downside risk to US growth has risen significantly since the outbreak of the subprime crisis. In the meantime, the higher-than-expected inflation data in August has also increased policy tightening risks in China. However, if we look through these short-term uncertainties, the big picture of Asia's renaissance remains unchanged. While the US economy may likely face some multiyear growth challenges, growth in China and the rest of emerging Asia will likely continue to be driven by their own strong and improved fundamentals.

As a result of these divergences in fundamentals, we believe the strategic case for Asian assets, including its equities and currencies, remains intact.[4] In this decade, in emerging Asian countries including China, we will likely witness a substantial rise in peoples' living standards and wealth accumulation, supported by strong local asset price performance and appreciation in their currency values. We continue to like the position of owning a basket of Asian currencies, and our Global Economics Team has recommended going short USD/CNY via 2-year NDF as #9 of their Top 10 Trades.

Hong Liang
Helen (Hong) Qiao

Exhibit 7B: ...which now amounts to a US$7 trillion economic block

Nominal GDP levels (US$ bn)	2000	Latest-annualised
Japan	4750	4656
China	1198	3057
India	461	1171
Korea	512	954
Indonesia	166	441
Taiwan	321	376
Thailand	123	245
Hong Kong	169	198
Malaysia	90	181
Singapore	93	156
Philippines	76	141
Vietnam	31	70
Macau	6	14
Asia including Japan	7996	11661
Asia ex Japan (AEJ)	3246	7004
AEJ ex China	2048	3947

Source: CEIC, Goldman Sachs Economics Research.

[4] See our Asian Strategy Team's recent report, *Consuming concerns: Asian earnings and US consumption*, Asia Pacific Portfolio Strategy, August 31, 2007, for their thoughts on equity markets across the region.

Early thoughts on the 17th Communist Party Congress and the near-term macro outlook

This comment was first published on October 8, 2007.

October shall be a busy month for China observers, with the upcoming 17th CPC and the release of 3Q GDP data. A key concern on investors' minds has been whether we may see some more aggressive policy tightening following these political and economic events.

Our thoughts at this point is that it is unlikely. We think the combination of a potential continuation in the core of the political leadership after the 17th CPC and a slight moderation in the overheating pressures would keep the risks of any drastic policy shift (tightening) fairly low in the near term. Specifically,

1. Politics: the latest news flows from China suggest that the core of the senior leadership in China, that is, the top 3 posts for the country (the President, the National People's Congress Chairman, and the Prime Minister) would likely stay on for another 5-year term (The 17th CPC will begin on October 15, and likely run for 1 week. Past experiences have shown that the key personnel decisions will not be announced until the last day of the Congress). As a result, we see little probability in the short term of a major breakaway from the current macro policy package, which has a tightening bias, but prefers incremental gradualist changes and heavy reliance on administrative controls.

2. Data for 3Q and October: we expect the activity data (to be released on October 24) to show a modest moderation in growth momentum in 3Q relative to the sharp acceleration seen in 2Q this year (we will issue a full preview for the 3Q GDP and October data later this week). This is mainly driven by a softening in export growth, partially reflecting the impact of export tax and other export policy changes. On the inflation front, we see some softening in the sequential acceleration momentum in CPI inflation, and possibly a drop in the yoy CPI inflation rate as well. This is mainly the result of stabilizing pork prices, although yoy CPI will likely stay at elevated levels (above 5%) until 1Q next year. Such modest moderation in growth and inflation momentum would provide policymakers with some breathing room to observe how external demand may evolve in the coming months.

Risks to our view: If our view of the "status quo" policy stance and moderation in overheating pressures turns out to be correct, it will likely provide some positive tailwind for China-related assets, particularly the bank stocks. Where we could be wrong, in our view, mainly rests with the potential upside risks to growth and inflation, whereas the downside risks to growth from a sharper-than-expected slowdown in exports are real but much less significant. In particular, bank credit data until end-August has shown that the authorities continued to have difficulties bringing down loan growth. In addition, grain prices remain a potential threat for further spikes in food prices. Therefore, if money supply growth shows signs of continued acceleration in October, our relatively benign inflation outlook will be challenged. Consequently, the policy tightening path we projected (which involves more liquidity tightening measures but only one more rate hike for this year) would also be at risk.

Things to watch: We would watch closely money and credit growth, as well as trade data for October, as they will help us assess where near-term risks may lie for growth and inflation. On political developments, we would watch for any potential reshuffling in the government's top economic team (such as at the PBOC, CRBC, and CSRC). Note that the personnel changes at the ministerial level may not be fully completed until early March next year at the annual meeting of the National People's Congress.

Hong Liang

A brief review of China's 17th Communist Party Congress

This comment was first published on October 22, 2007.

With the completion of the 17th National Party Congress, the new leadership of the Chinese Communist Party (CCP) has been revealed today.

The core leadership, namely, President Hu Jintao and Premier Wen Jiabao, remains unchanged, as expected. We believe in the next 5-year term, their emphasis on governing by consensus and making policy decisions collectively will likely continue as well.

The newly elected Standing Committee of the Politburo (see Exhibit 1) includes 5 members from the previous standing committee (Hu Jintao, Wu Bangguo, Wen Jiabao, Jia Qinglin, and Li Changchun) and 4 fresh faces (Xi Jinping, Li Keqiang, He Guoqiang, and Zhou Yongkang). These new committee members will likely assume leadership positions at vice premier, state councillor and ministerial levels in the cabinet between now and the National People's Congress next spring.

However, the core leadership for Generation V is still unclear. In the next 5 years, these newly elected party leaders are expected to demonstrate their capabilities and skills in policymaking as well as political maneuvering before the consensus on the next generation core leadership is formed within the CCP.

After the intra-party personnel changes, we expect the government reshuffling to continue, possibly from now until the 11th National People's Congress in March 2008. Expected personnel changes could take place at the People's Bank of China, the China Security Regulatory Commission, the National Development and Reform Commission, the state-owned Assets Supervision and Administration Commission, the Ministry of Commerce, and provincial leaders from Guangdong, Beijing, Tianjin, and Chongqing, etc.

Therefore, it is likely some uncertainties surrounding political appointments and complications in policymaking may persist in the near term. Before the uncertainties about potential personnel changes are removed, current policymakers could shy away from making major policy changes in areas such as the currency or the equity market.

Exhibit 1: Member lists of the Politburo Standing Committee of the CCP Central Committee from 16th and 17th NPCs

17th NPC	16th NPC
Hu Jintao	Hu Jintao
Wu Bangguo	Wu Bangguo
Wen Jiabao	Wen Jiabao
Jia Qinglin	Jia Qinglin
Li Changchun	Zeng Qinghong
Xi Jinping*	Huang Ju (deceased)
Li Keqiang*	Wu Guanzheng
He Guoqiang*	Li Changchun
Zhou Yongkang*	Luo Gan

* denotes newly elected members.

Appendix: Background introduction of the new members of the Politburo Standing Committee

Xi Jinping
Xi's last appointment was the Secretary of the CCP Shanghai Municipal Committee (since March 2007). The son of Xi Zhongxun, a past first-generation party leader, Xi Jinping spent his early years working in the countryside during the Cultural Revolution. After he finished college, Xi started from a political assignment at the county level in Hebei and has gained more experience from his posts in Fujian and Zhejiang afterwards.

Li Keqiang
Li's last appointment was the Secretary of the CCP Liaoning Provincial Committee (since October 2006). Li Keqiang started as the Secretary of the Secretariat of the Central Committee of the Communist Youth League, and was assigned to work as the deputy secretary of the CCP Henan Provincial Committee before he moved to Liaoning. Notably, the combination of the Communist Youth League background and work experience at provincial levels is similar to that of President Hu Jintao.

He Guoqiang
His current position is the head of the Organization Department, Central Committee of the Communist Party of China (CCCPC) and the Secretary of the Secretariat of the CCCPC. He Guoqiang began his political career as a government regulator of the chemical and petroleum industry in Shandong, and served as deputy minister at the Ministry of Chemical Industry and provincial leader in Shandong, Fujian, and Chongqing.

Zhou Yongkang
Zhou's current position is State Councilor and the Minister of Public Security (since March 2003). Zhou Yongkang spent most of his life in the petroleum industry including as the general manager and party committee secretary at China National Petroleum Corporation. He was appointed as the Minister of Land and Resources in 1998 and later to Sichuan as the party secretary before coming back to assume a few positions at the central level.

Hong Liang
Helen (Hong) Qiao

The PBOC raised benchmark interest rates twice as well as the reserve requirement ratio twice in the quarter

The People's Bank of China (PBOC) hiked benchmark lending and deposit rates twice since the end of 2Q (on August 21 and September 14). The 1-year benchmark deposit rate was raised to 3.87% p.a. from 3.33% p.a. and the 1-year lending rate was raised to 7.29% p.a. from 6.84% p.a. The central bank also raised the reserve requirement ratio (RRR) twice (on September 6 and October 13) by 50 bp each to 13.0% from 12.0%.

In our view, these moves, especially in combination with other policy tools such as the direct issuance of central bank bills to commercial banks, have demonstrated the central bank's resolve to rein in inflationary pressures. Furthermore, the high frequency of the interest rate and RRR adjustments indicates a stronger will of the authorities to use market-oriented tools to manage the economy.

Although the RRR already reached the peak level in 1988, the central bank may continue to rely on this measure to sterilize liquidity caused by the intensified external imbalances. We maintain our view that RRR changes are an ineffective policy tool to control monetary expansion.

Going forward, we expect the monetary authority to implement more tightening measures including one more 27-bp interest rate hike, more aggressive withdrawal of liquidity (possibly through further RRR hikes), and intensified moral suasion on commercial banks to curb lending.

Hong Liang
Helen (Hong) Qiao
Yu Song

The PBOC's 2Q monetary policy report highlights concerns on headline inflation

This comment was first published on August 8, 2007.

The People's Bank of China (PBOC) published its 2Q Monetary Policy Report today. In the report, the PBOC highlighted that 1) inflationary pressures are rising; 2) higher meat and egg prices have already passed through to other consumer goods and services; 3) the central bank should not just focus on non-food core CPI because food still constitutes a large share in China's CPI basket and 4) the central bank will tighten monetary policy further to prevent the economy from overheating.

This is in line with our view on inflation that current inflationary pressures are not restricted to pork price inflation, and the central bank in China should watch for headline inflation rather than the non-food component. Recent anecdotal evidence suggests that inflationary pressures are spreading rapidly into other consumption items such as furniture, soap and airline tickets. We expect more decisive tightening measures to be implemented in the near term.

Hong Liang
Yu Song
Eva Yi

China's SAFE announced permission for overseas equity investment by individual investors

This comment was first published on August 20, 2007.

The State Administration of Foreign Exchange (SAFE) has issued an announcement on August 20 allowing individual investors to invest directly in overseas securities.

Specifically:

1. Investors can use their own foreign exchange holdings or purchase foreign exchange from commercial banks. There is no upper limit in terms of the amount that can be purchased, and the regulations do not restrict this program to Tianjin residents either.

2. Investors should open accounts with a Bank of China branch which has an arrangement with the Bank of China Tianjin Branch. The latter will arrange corresponding accounts at Bank of China International Securities in Hong Kong.

3. In the pilot stage, investors can (only) purchase securities listed on the Hong Kong Stock Exchange.

4. Investors can choose to keep the principal and profits in foreign currency or convert them into renminbi.

We view this as a positive move as it marks a key step forward in liberalizing China's capital account and provides additional investment channels for domestic residents. It may also help alleviate the huge price differentials between the domestic and Hong Kong listed Chinese companies. However, the amount of capital outflows that can be generated by this pilot scheme remains to be seen. The turmoil in global markets recently and the inexperience of domestic investors regarding overseas investments may limit the amount of capital outflows in the short term.

Hong Liang
Yu Song

First installment of Rmb600 billion Special Treasury Bonds issued to the PBOC

This comment was first published on August 29, 2007.

According to media reports, **the first installment of Rmb600 billion (US$79 billion) worth of Special Treasury Bonds (STB) has been issued (effectively) to the People's Bank of China (PBOC) today**. The duration of the bonds is 10 years, and the yield is set at around 4.3% p.a., which is close to the current market rate of 4.23% of the corresponding treasury bonds.

It is reported that the total of Rmb1.55 trillion (US$200 billion) Special Treasury Bonds will likely to be issued in three installments, with sizes of Rmb600 billion, Rmb600 billion and Rmb350 billion, respectively. In execution, the special bonds will be first purchased by the Bank of Agriculture (BOA), then sold to the PBOC by the BOA in exchange for foreign exchange (FX) funds, which will be later injected into the State Foreign Exchange Investment Company.

Under this arrangement, the issuance of the STB to the PBOC will not have any direct impact on market liquidity, and therefore no impact on market interest rates. The issuance of the STB adds another bond instrument to the central bank's sterilization assets, with a much longer duration (maximum of 10 years) than current central bank bills (maximum duration of 3 years).

However, in our view, neither the establishment of the State Foreign Exchange Investment Company, nor the issuance of the STB will change the amount of FX inflows, i.e., the amount of sterilization that needs to be undertaken. **Therefore, the fundamental policy challenge remains unchanged for the central bank: how to conduct independent monetary policy in a very open economy with a significantly undervalued currency**. Pressures in domestic inflation, in particular asset inflation, are reflections of such challenges.

Hong Liang
Eva Yi

China's MOF to auction Rmb200 billion Special Treasury Bonds before the year end

This comment was first published on September 10, 2007.

China's Ministry of Finance (MOF) announced today that it will issue Rmb200 billion Special Treasury Bonds (STB) through market auctions before the year end. Half of this installment will be issued in September. The duration of the bonds is 10 years and 15 years, and the yield will be set by interbank auctions.

We believe the issuance may exert modest upward pressures on the long end of the yield curve.

In our view, the impact on liquidity is likely to be limited, considering: 1) the People's Bank of China will likely scale back the central bank bills issued to commercial banks following the STB issuance, and 2) if some of the STB are issued to non-bank financial institutions.

However, given the rising inflation pressures, the monetary authority will likely continue to tighten liquidity, probably through intensified window guidance on commercial banks.

Hong Liang
Helen (Hong) Qiao

Introducing the Goldman Sachs China Commodity Index

This article was first published on September 21, 2007.

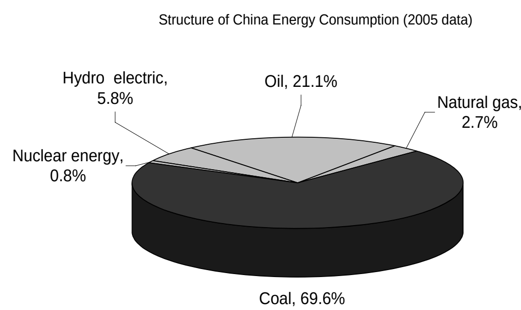
- In this article, we introduce the Goldman Sachs China Commodity Index (GSPCC), a weekly indicator of upstream price movement in China.
- The GSPCC is a weighted average of domestic prices of four commodities: steel, coal, aluminum, and copper.
- Compared with global commodity price indices such as the S&P Goldman Sachs Commodity Index and the official PPI figure, we believe the GSPCC reflects China's domestic demand changes better and timelier.
- The latest readings of the GSPCC suggest that upstream inflationary pressures are building up, mainly reflecting buoyant domestic activities.

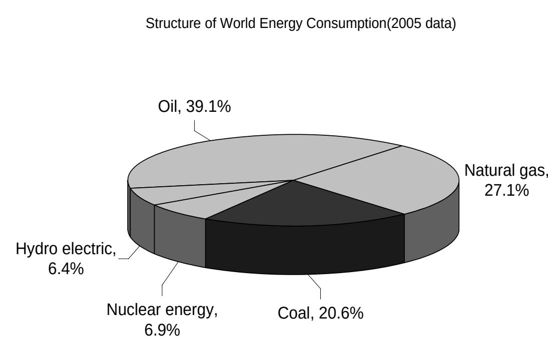
In recent years, strength in commodity prices has often been associated with strength in the Chinese economy. S&P Goldman Sachs Commodity Index (GSCI), a daily global commodity index, is closely followed by market practitioners, often to take their cues of what is happening in the Chinese demand, although the weighting and components of this index are not designed to capture marginal demand changes in China. On the other hand, the Chinese official PPI data is available only once a month, and its quality is also uncertain.

In this article, we introduce the Goldman Sachs China Commodity Index (GSPCC), a weekly indicator of upstream price movement in China. It comprises four domestic commodities: steel, coal, aluminum, and copper, and its weights are estimated using China's consumption values. We believe the GSPCC provides investors with a better and timelier price index to track China's domestic demand changes.

The latest readings of the GSPCC suggest domestic price pressures on these key domestic commodities are on the rise, consistent with other macro data points indicating buoyant domestic activities.

Exhibit 1: Coal is a much more important source of energy to China compared with the rest of the world





Source: BP Statistical Review, Goldman Sachs Economics Research.

Why build a China commodity price index?

Because we believe a high frequency domestic commodity price index is valuable for investors to capture the latest marginal movements in domestic industrial activities. Our China Commodity Index differs from that of global commodity index in terms of:

1. **Choice of components**: the China Commodity Index picks commodities that have significant importance to China's industrialization and urbanization process, even though they may be less important in the global commodity trade; for example, coal and steel.
2. **Weighting**: the weightings of the China Commodity Index are based on China's commodity consumption patterns, which can be very different from that of the rest of the world. For example, coal provides about 70% of China's energy consumption, compared with 21% in the rest of the world (see Exhibit 1).

3. **Choice of price series**: our China Commodity Index uses domestic commodity prices which can be significantly different from international prices, especially in the short run. Exhibit 2 illustrates this point again with the price of coal.

On the other hand, the official PPI, although it has the advantage of surveying China-specific prices, it is only available on a monthly basis and is released with a long lag of 10-25 days after the end of each month.

How is the GSPCC compiled?

The GSPCC is a composite price index of the following four commodities (see Box 1 for a discussion on why some other commodities are not selected):

Coal is the most important source of China's energy consumption and its share has been rising in recent years due to higher oil prices. We use the price of coal produced in Shanxi province (the biggest coal producing province) reported at the port of Qinhuangdao (a key seaport in northern Hebei province) for the 2000-2007 period and Australian Newcastle coal prices before that.

Steel is by far the most important metal used in China's industrialization and urbanization. We use the average price of domestic hot roll and rebar prices to capture the demand from production and construction activities respectively.

Copper is another important commodity used in construction and the power industry. Data source is the same as that of aluminum.

Weighting of each commodity in the index

The overall index is a geometrically-weighted average of the four commodities' price indices. We assign weights to each component based on the value of its domestic consumption, which equals domestic production + net exports + inventory changes. The weights are adjusted annually.

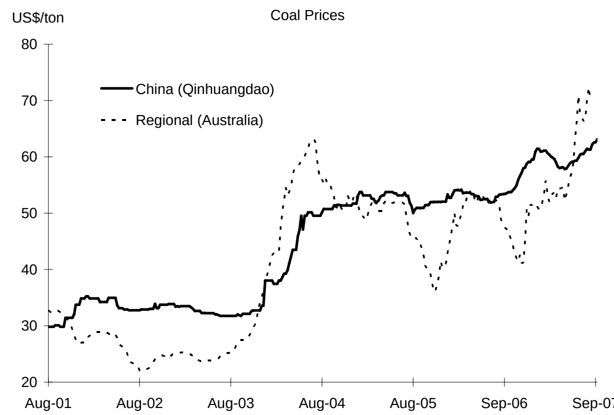
Current weights of the GSPCC are:

- Coal: 45.7%
- Steel: 41.5%
- Aluminum: 6.3%
- Copper: 6.5%

What does the latest GSPCC tell us?

Upstream inflation pressures have been building up. The GSPCC has been accelerating on a sequential basis for several months and the latest year-on-year (yoy) reading picked up as well (see Exhibit 4). Statistical

Exhibit 2: China's domestic coal prices can be significantly different from international prices



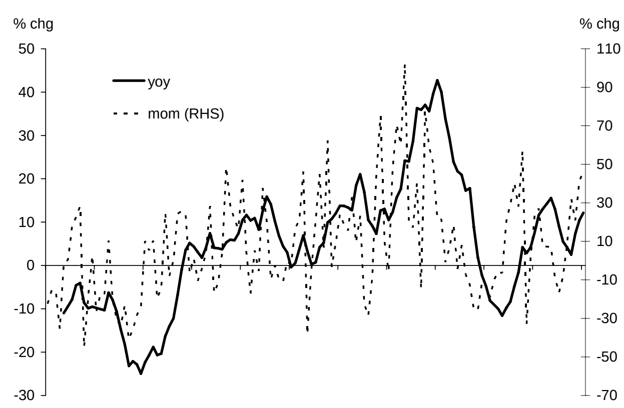
Source: GlobalCoal, China Coal Information Center, Goldman Sachs Economics Research.

Exhibit 3: Comparing the GSPCC with other upstream price indices

Indicator	GSPCC	S&P GSCI	PPI
Compiled by	GS	S&P and GS	NBS
Frequency	Weekly	Daily	Monthly
Weighting	Disclosed	Disclosed	Undisclosed
Prices	Domestic	International	Domestic
Weighting	Domestic consumption value	International production volume	Domestic sales value

Source: Standard & Poor's, National Bureau of Statistics, Goldman Sachs Economics Research.

Exhibit 4: Both yoy and sequential growth of GSPCC picking up

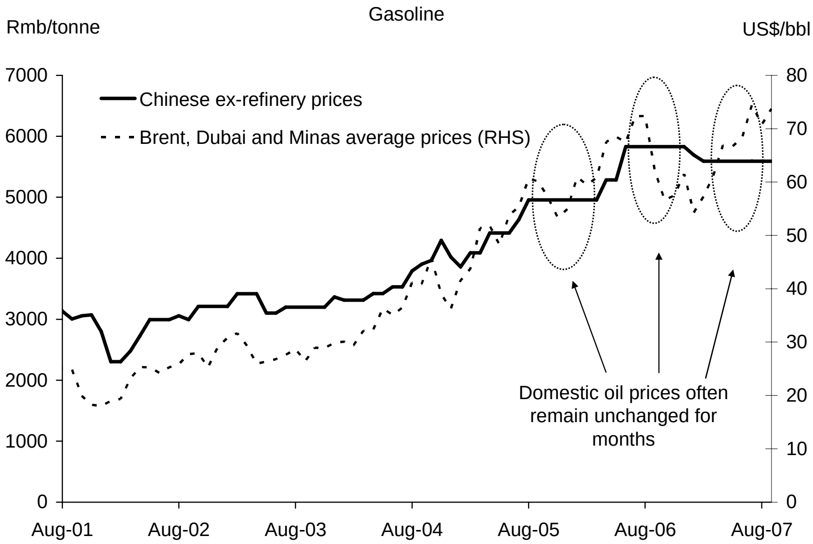


Source: China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Box 1: Why some commodities are not selected?

Oil: although oil is undoubtedly a very important source of fuel as well as raw material for chemical products, its price is still tightly regulated in China under opaque rules and regulations. Hence, it does not provide a timely reading of domestic market conditions (see Exhibit B1).

Exhibit B1: Domestic oil prices are adjusted infrequently under government regulations

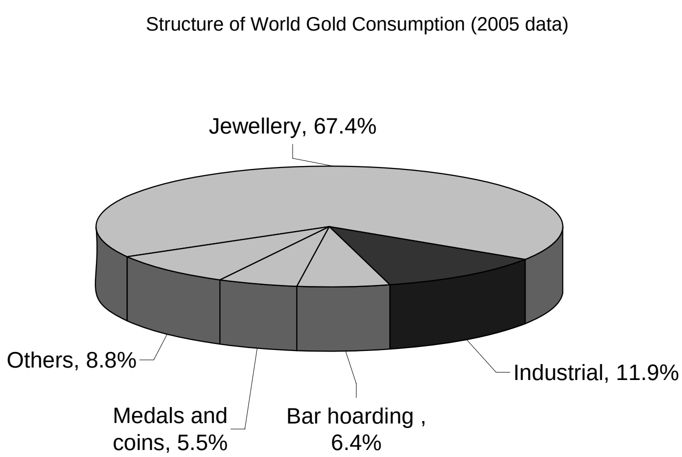


Source: DataStream, Platts, company data, Goldman Sachs Economics Research.

Cement can be a useful indicator of construction activities. However, the domestic markets are heavily segregated and there is no reliable weekly price data.

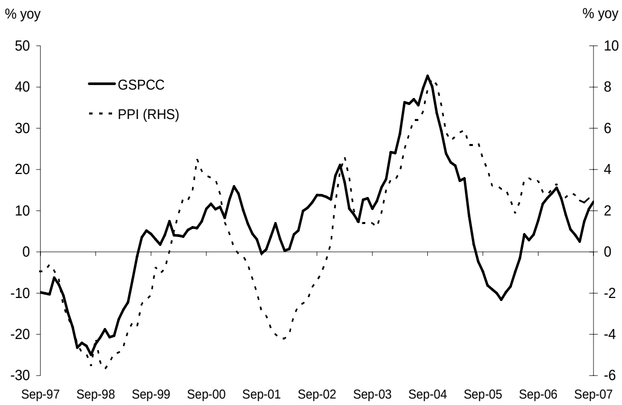
Gold is an important commodity on many fronts. However, industrial usage of this metal is limited (see Exhibit B2).

Exhibit B2: Industrial demand accounts for only 12% of gold consumption



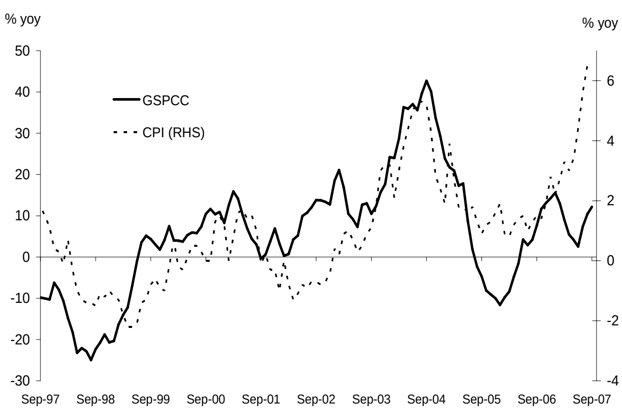
Source: World Gold Council, Goldman Sachs Economics Research.

Exhibit 5: GSPCC leads the PPI by around two months



Source: China Coal Information Center, Mysteel, CEIC, Goldman Sachs Economics Research.

Exhibit 6: GSPCC tends to lead the CPI by around two months as well



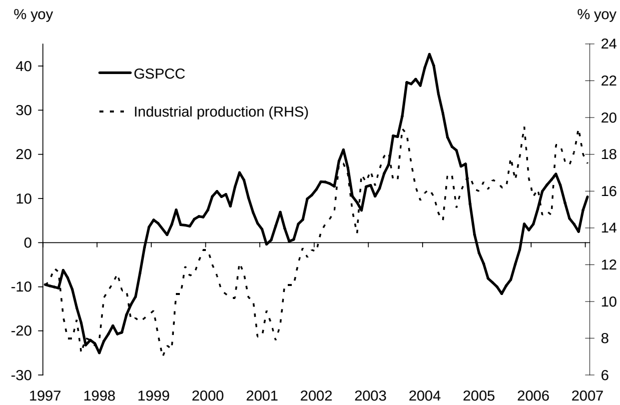
Source: China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

analysis shows that the GSPCC leads PPI and CPI inflation by two months (see Exhibits 5 and 6) [for details on the statistical analysis please refer to the Appendix]. Therefore, we believe the recent pickup in the GSPCC is likely a prelude to a pickup in PPI and CPI inflation in the coming months.

The strength of the GSPCC reflects the strong underlying activity momentum. Since movements in the GSPCC are affected significantly by investment demand and industrial production, it is not surprising to see that changes in the GSPCC tends to move in the same direction as the growth rates of fixed asset investment and industrial production (see Exhibits 7 and 8). The relationship seems to be particularly tight for the GSPCC and the industrial production.

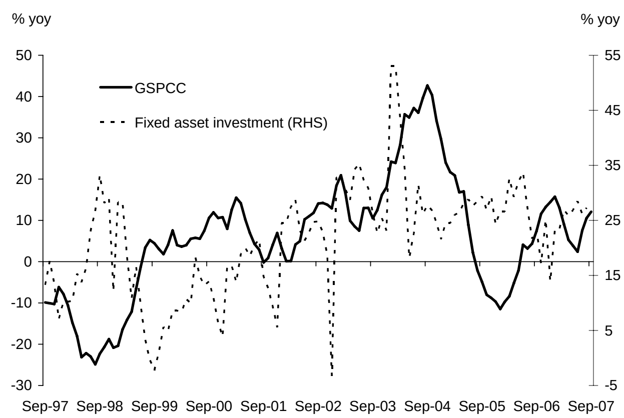
Because of data quality issues, we prefer to use the Goldman Sachs China Activity Index (GSCA) as a more reliable and comprehensive activity indicator for China (see Exhibit 9). Here, we again observe a fairly tight contemporaneous correlation.

Exhibit 7: GSPCC and industrial production growth tend to coincide with each other



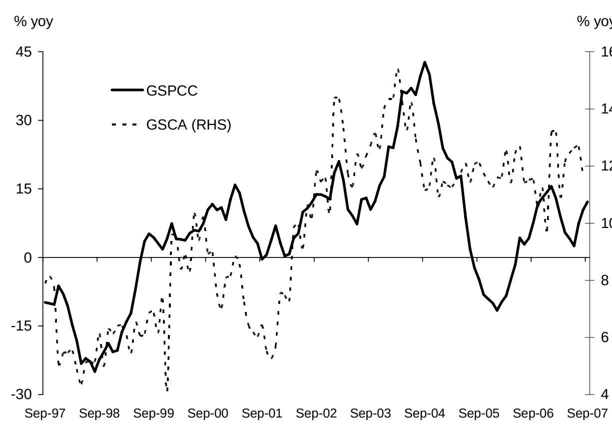
Source: China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Exhibit 8: Fixed asset investment vs. the GSPCC



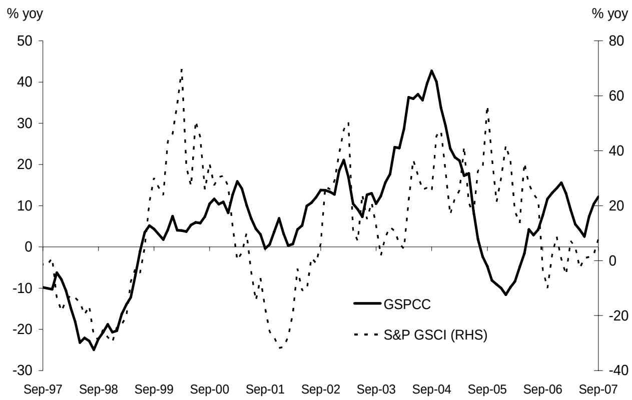
Source: China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Exhibit 9: The GSCA and the GSPCC



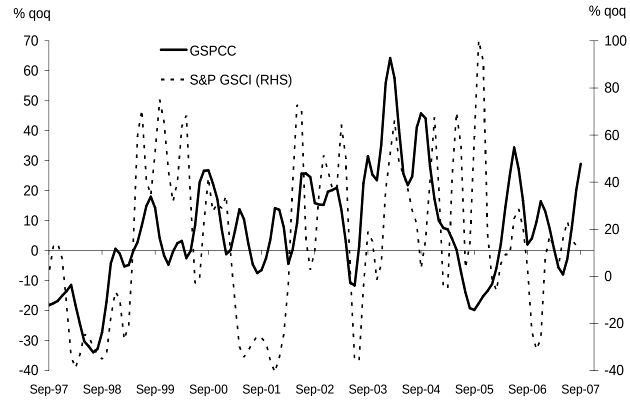
Source: DataStream, China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Exhibit 10: Yoy readings of the GSPCC reflect domestic economic conditions better...



Source: DataStream, China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Exhibit 11: ...the difference is even starker with sequential data



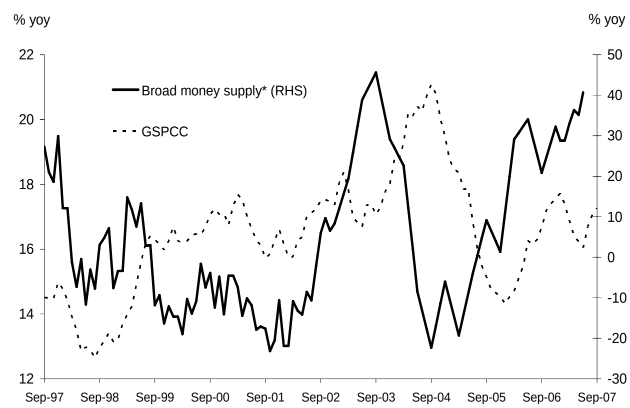
Source: DataStream, China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Compared with our global commodity price index, the China Commodity Index seems to track China's domestic economic cycles better. Yoy growth of the China Commodity Index and the S&P GSCI correlated reasonably well until 2H2004. The China Commodity Index decelerated on the back of the tightening measures implemented in early 2004 but global commodity prices did not soften until 2H2005 (see Exhibit 10). China's commodity prices subsequently had another mini-cycle between late 2005 and the present, while global commodity price increases have largely been flat to down since 2006. The differences in where the sequential momentum turned are even more striking. The sequential growth rate in the China Commodity Index decelerated earlier in 2004 compared with the S&P GSCI, and it has shown a clear pickup in recent months (see Exhibit 11).

What drives the GSPCC?

Since the GSPCC is more correlated with China's own demand swings, it is not surprising to find that changes in China's money supply seem to play a bigger role in driving the fluctuations in the China Commodity Index. An expansion of money supply tends to be followed by acceleration in real economic activity, leading to upward pressures in commodity prices in China. We find broad money supply tends to lead the GSPCC by eleven months (see Exhibit 12). Therefore, fast monetary expansion this year will likely lead to a more notable acceleration in the GSPCC going forward.

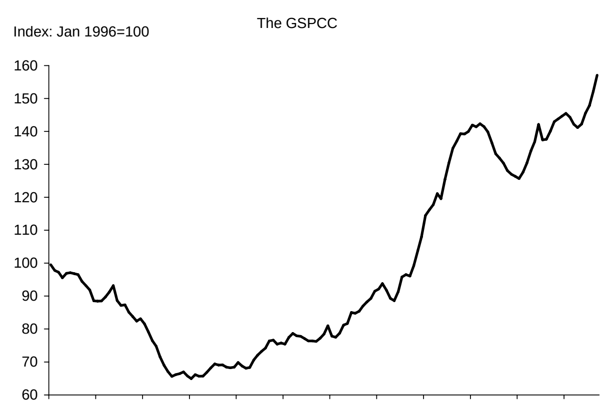
Exhibit 12: Broad money supply tends to lead the GSPCC



* Broad money supply only contains M2 before 2003. We used a "M3 proxy" for broad money supply after 2003. The M3 proxy includes net foreign assets and domestic credits.

Source: China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, CEIC, Goldman Sachs Economics Research.

Exhibit 13: We expect the GSPCC to reach historical highs



Source: China Coal Information Center, Mysteel, CISA, CRU, Great Wall Futures, Goldman Sachs Economics Research.

Summary

The GSPCC provides a weekly indicator of upstream inflation in China. We hope this index can provide investors with a more timely reading of China's domestic economic strength than the monthly official data releases. Recent movements in the GSPCC suggest that upstream inflationary pressures are building up, likely reflecting buoyant underlying domestic activity growth. Going forward, the growth trajectory of broad money supply suggests that GSPCC growth is likely to show further acceleration, which we believe will push the level of this index to new historical highs (see Exhibit 13).

Our Commodities Research Team believes coal and steel producers, in particular long products producers, are likely the main beneficiaries of strong domestic demand. Please refer to *China: Steel: Fundamental upside surprise; four mega themes in play*, August 6, 2007, *China: Metals & Mining: Coal: The next leg of the cycle is poised to be big*, July 5, 2007.

Yu Song
Hong Liang

Appendix

GSPCC vs. the PPI and CPI

We estimate the relationship between the GSPCC and the PPI using the following equation:

(1) sa_ppi = α + @trend(1996m01) + β sa_cci(-2) + AR(p) + MA(q)

where *sa_ppi* is the seasonally-adjusted PPI index. The index is a fixed-based index seasonally adjusted using X12.

@trend(1996m01) is a linear function which captures the upward trend of the indices in the regression.

sa_cci(-2) is the lagged seasonally-adjusted GSPCC.

AR(p) is the autoregressive term and *MA(q)* is the moving average term. These are placed in the equation to capture the persistence of the error terms.

Data used are from January 1997 to August 2007.

Dependent Variable: LOG(SA_PPI)
Method: Least Squares
Date: 17/09/07 Time: 00:41
Sample (adjusted): 1997M01 2007M08
Included observations: 128 after adjustments
Convergence achieved after 26 iterations
Backcast: 1996M12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.907001	3.873433	0.750497	0.4544
@TREND(1996M01)	0.007135	0.010830	0.658786	0.5113
LOG(GSCCI_SA(-2))	0.051122	0.018571	2.752737	0.0068
AR(1)	0.992962	0.011723	84.70516	0.0000
MA(1)	0.338195	0.085600	3.950891	0.0001

R-squared	0.996026	Mean dependent var	4.585474
Adjusted R-squared	0.995897	S.D. dependent var	0.058324
S.E. of regression	0.003736	Akaike info criterion	-8.303314
Sum squared resid	0.001717	Schwarz criterion	-8.191907
Log likelihood	536.4121	F-statistic	7707.007
Durbin-Watson stat	1.888909	Prob(F-statistic)	0.000000

The estimator has high explanatory power with an R2 of 99.6%. The coefficient is statistically significant with t statistic of 2.8. The results suggest that the GSPCC leads the PPI by around two months.

Similarly, we estimate the relationship between the GSPCC and the CPI by the following equation:

(2) sa_cpi = α + @trend(1996m01) + β sa_cci(-2) + AR(p) + MA(q)

Dependent Variable: LOG(SA_CPI)
Method: Least Squares
Date: 17/09/07 Time: 18:14
Sample (adjusted): 1997M01 2007M08
Included observations: 128 after adjustments
Convergence achieved after 6 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.446694	0.070265	63.28505	0.0000
@TREND(1996M01)	-0.000439	0.000621	-0.706736	0.4811
LOG(GSCCI_SA(-2))	0.039332	0.015741	2.498707	0.0138
AR(1)	1.031985	0.019422	53.13536	0.0000

R-squared	0.990891	Mean dependent var	4.635633
Adjusted R-squared	0.990671	S.D. dependent var	0.036496
S.E. of regression	0.003525	Akaike info criterion	-8.427087
Sum squared resid	0.001541	Schwarz criterion	-8.337961
Log likelihood	543.3336	F-statistic	4496.366
Durbin-Watson stat	1.863999	Prob(F-statistic)	0.000000

The estimator has high explanatory power with an R2 of 99.1%. The coefficient is statistically significant with t statistic of 2.5. The results suggest that the GSPCC leads CPI by around 2 months.

GSPCC vs. broad money supply

Lastly, we test the effects of broad money supply on the GSPCC with the following equation:

(3) sa_gscci = α + @trend(1996m01) + β broadmoney(-11) + AR(p) + MA(q)

Dependent Variable: LOG(GSCCI_SA)
Method: Least Squares
Date: 18/09/07 Time: 19:06
Sample (adjusted): 2000M01 2007M09
Included observations: 93 after adjustments
Convergence achieved after 9 iterations
Backcast: 1999M12

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.897903	0.548548	5.282860	0.0000
@TREND(1996M01)	0.002709	0.004516	0.599950	0.5501
LOG(BROADMONEY_SA(-11))	0.511632	0.306005	1.671971	0.0981
AR(1)	0.949962	0.034865	27.24693	0.0000
MA(1)	0.324080	0.103682	3.125719	0.0024

R-squared	0.995661	Mean dependent var	4.649158
Adjusted R-squared	0.995464	S.D. dependent var	0.270804
S.E. of regression	0.018239	Akaike info criterion	-5.118233
Sum squared resid	0.029275	Schwarz criterion	-4.982072
Log likelihood	242.9978	F-statistic	5048.259
Durbin-Watson stat	1.884911	Prob(F-statistic)	0.000000

The estimator has high explanatory power with an R2 of 99.5%. The coefficient is statistically significant with t statistic of 1.67. The results suggest that broad money supply leads the GSPCC by around 11 months.

Currency appreciation and shifts in relative prices and profits

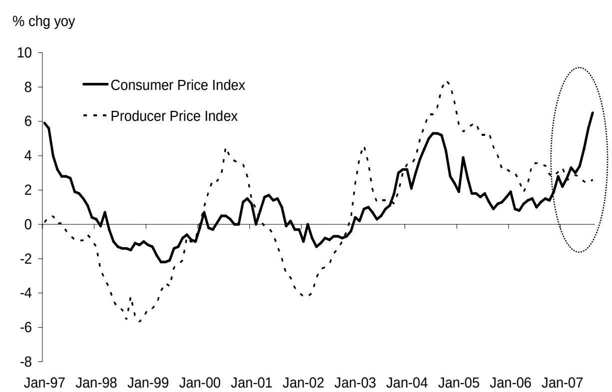
This article was first published on October 4, 2007.

- Upstream price inflation has been lagging behind downstream prices this year.
- This may reflect a broader trend of relative price changes induced by the appreciation of the CNY.
- We believe a more appreciated CNY has led to a shift in relative prices and profit distribution favoring the downstream/non-tradable industries vs. the upstream/tradable sectors.
- As China continues to appreciate its currency, and adopt other policies that support domestic demand, such a shift in trend would likely continue.

After rising faster than CPI inflation for four years, the reported PPI inflation has lagged behind so far this year. Does the lagging PPI inflation suggest subdued upcoming CPI inflation? Or is it an indication of little capacity constraints in the industrial sector? We believe the answer is no to either of these hypotheses. Rather, in our view, the shift in CPI-PPI inflation dynamic may reflect a broader trend of relative price changes induced by the appreciation of the renminbi (CNY).

Specifically, we observe that, as the CNY appreciates, the prices of upstream products (or tradable goods) tend to decline *relatively* to the prices of downstream products (or non-tradable goods). In addition, more interestingly, such a shift in relative performance seems to have also taken place in the share of profit distribution between upstream vs. downstream industries.

Exhibit 1: CPI inflation outpaced PPI this year after four years of underperformance



Source: CEIC, Goldman Sachs Economics Research.

The CNY exchange rate and the relative upstream vs. downstream prices

For an open economy with no capital controls, domestic monetary authorities can determine either its nominal exchange rate, or its domestic inflation rate, but not both (this is the famous impossible trinity theorem). In other words, monetary policy in these economies cannot determine the real exchange rate. However, with effective capital controls, a country like China can control, albeit with strains, both its exchange rate and domestic inflation for a substantially long period of time, potentially leading to large and persistent deviations of its real exchange rate from its equilibrium level. Under these circumstances, either nominal currency appreciation or a rise in domestic inflation rate can lead to real currency appreciation in China.

In this context, a nominal appreciation of the CNY can have a significant impact on the relative prices between tradable vs. non-tradable sectors. When the CNY appreciates in nominal terms, import prices expressed in CNY terms tend to fall. To the extent the law of one price holds for the internationally-tradable products, the domestic prices of these tradable products also tend to fall. On the other hand, the non-tradable sector's prices are expected to be less affected by any currency changes. As a result, a nominal appreciation of the CNY tends to depress the relative prices of tradable vs. non-tradable goods.[1]

Furthermore, if tradable sector price inflation is subdued because of CNY appreciation or because of muted foreign inflation rate, a rise in the overall domestic inflation rate would imply an even higher inflation rate in the non-tradable sector.

Indeed, this seems to be what has been happening to relative prices in China since mid-2006.

[1] The relative price adjustment mechanisms discussed in this article are not the same as the Balassa-Samuelson effect, although they do not contradict to it either.

While it is difficult in practice to separate products' prices along the lines of tradables vs. non-tradables, we think the delineation of upstream vs. downstream prices is a reasonable proxy for these relative prices. We define upstream industries in this article to include mining, petroleum, coal, and natural gas industries, as these are mostly global tradable commodities and China is an important player in these markets.

Another passable proxy for the tradable vs. non-tradable relative prices is the PPI vs. CPI trend, since the PPI basket presumably contains more tradable goods whereas CPI captures more non-tradable goods and services prices.

Exhibit 2 illustrates that both of these proxies indicate that **the rising trend of upstream/tradable sector prices seems to have eased in China since mid-2006**.

If we plot these relative price changes vs. changes in the nominal CNY on a trade-weighted basis, Exhibit 3 reveals a tight relationship between the two series, and the currency changes appear to clearly lead changes in the relative prices.

The turning trend in profit distribution

A more interesting hypothesis is that the relative price changes in China may lead to a shift in relative profit distribution as the CNY appreciates in both nominal and real terms. That is, everything else being equal, the relative profit distribution may become more favorable to non-tradable/downstream industries as the CNY becomes more appreciated.

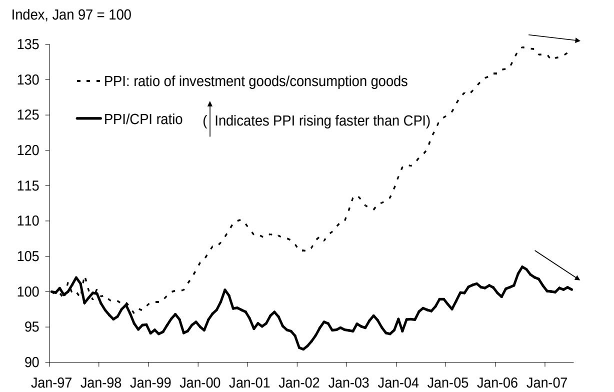
Here again the data seems to support this hypothesis.

Exhibit 4 shows how relative profit growth has been performing between upstream and downstream industries since 2001, and we see a clear pickup in downstream industries' profit growth since 2006.

Plotting the nominal CNY series against the profit share of downstream industries in total industrial profits, we can also see a visible positive correlation between them. That is, the stronger the value of the CNY on a trade-weighted basis, the higher the share of profits generated by the downstream industries (or the non-tradable sector). The currency changes appear to lead changes in the profit share by 3-4 quarters.

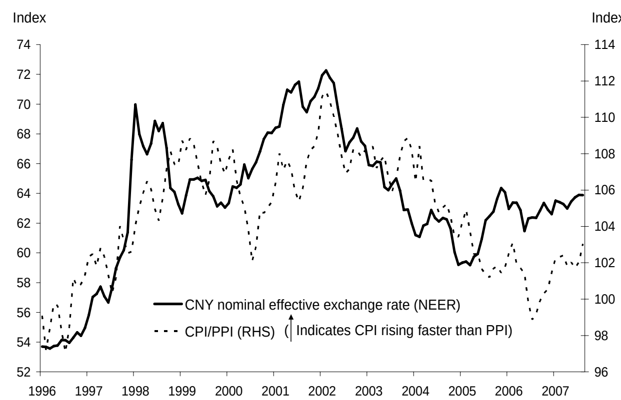
On this note, it is interesting to revisit one popular hypothesis about the relationship between the PPI-CPI gap and profit growth in China. In previous studies, we have argued that this relationship is more complex than

Exhibit 2: Upstream/tradable inflation has eased relative to the downstream/non-tradable prices since mid-2006



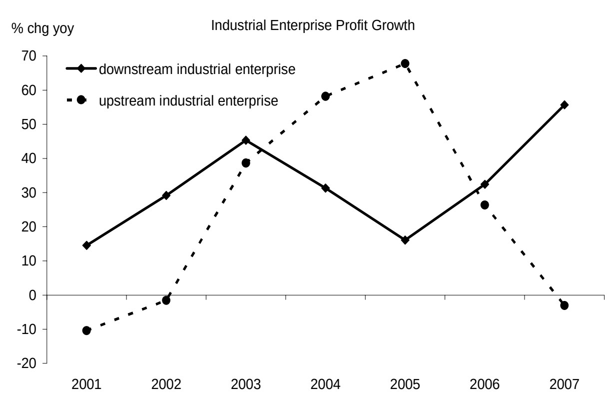
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: Relative price of CPI/PPI ratio is closely correlated with the CNY NEER



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: A clear pickup in the downstream profit growth since 2006



Source: CEIC, Goldman Sachs Economics Research.

first meets the eye.[2] Despite being often cited as an indicator of a margin squeeze for Chinese companies, a rising gap between PPI and CPI inflation has not been empirically associated with declining profit or economic growth. To the contrary, total industrial profit growth in China has often been positively correlated with the PPI-CPI inflation gap (see Exhibit 6).

However, the PPI-CPI inflation gap appears to be a good indicator of profit distribution across sectors. When PPI rises faster than CPI, that is, when upstream/tradable sector inflation is higher than that of the downstream/non-tradable sector, profits tend to concentrate in the upstream/tradable sectors (see Exhibit 7).

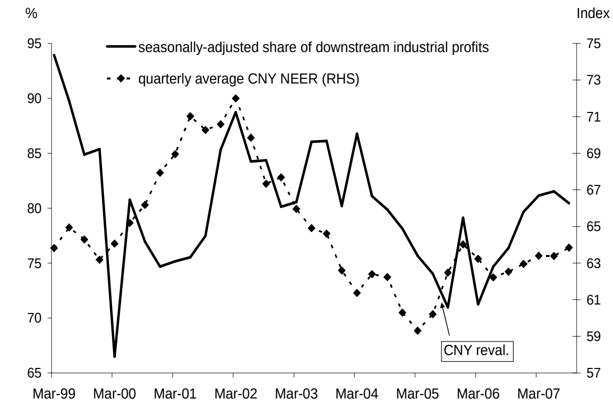
Concluding thoughts

With controls over capital flows and bank credit provisions, the monetary authorities in China can influence both the level of its exchange rate and its domestic inflation rate. Therefore, an appreciation of the nominal exchange rate can lead to a real appreciation of the currency, and thereby changes in the relative tradable vs. non-tradable prices. Such relative price changes have also led to shifts in relative profit distribution, favoring the non-tradable sector.

As China continues to appreciate its currency nominally (even if gradually), and adopt other policies that support domestic demand sectors, the relative 'outperformance" of the non-tradable sector prices and profits will also likely to continue. Our Equity Strategy Team has recommended a sector allocation preference to domestic demand, particular consumption and financial services plays.[3]

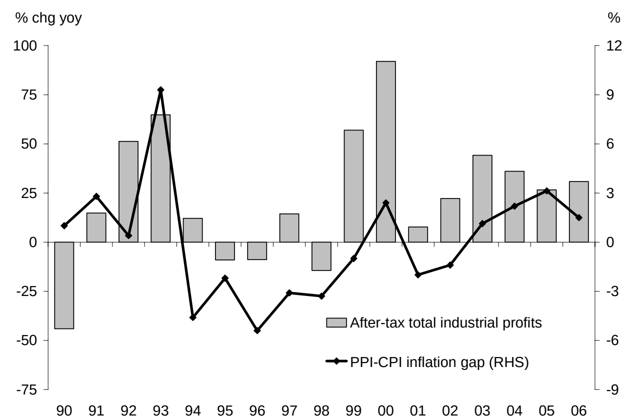
Hong Liang
Yu Song
Eva Yi

Exhibit 5: CNY appreciation leads to a shift from upstream to downstream with a lag of 3-4 quarters



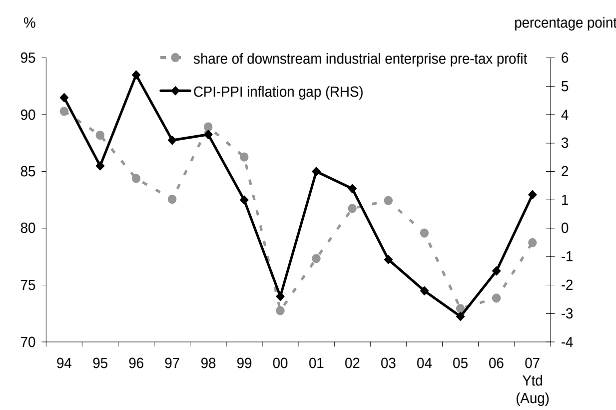
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: PPI-CPI inflation gap is often *positively* correlated with overall profit growth



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7: Profit share of downstream sectors tend to rise when CPI inflation rises faster than PPI



Source: CEIC, Goldman Sachs Economics Research.

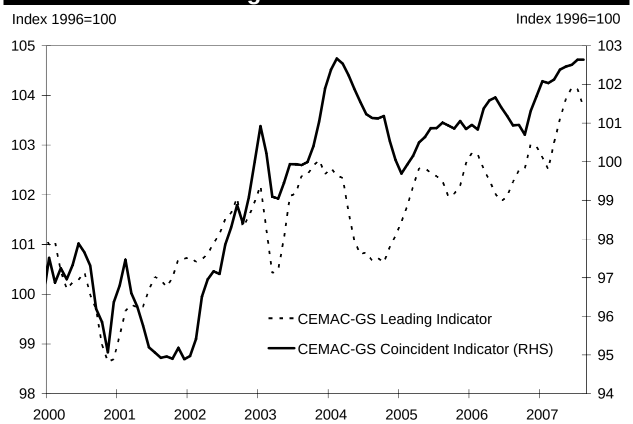
[2] See *Is a widening gap between PPI and CPI inflation an indicator of a profit squeeze?* Asia Economics Flash, June 16, 2005.

[3] See *HSCEI target: 17,000 by end-2008*, China Portfolio Strategy, July 27, 2007.

Charting China

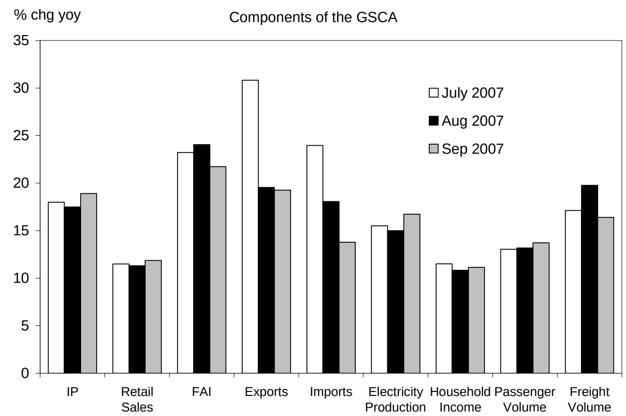
Monthly Activity Indicators

Exhibit 1: The coincident indicator continued to be solid while the leading indicator softened



Source: CEIC, Goldman Sachs Economics Research.

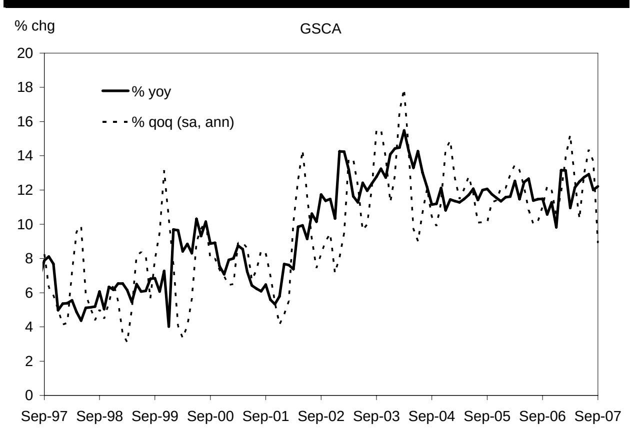
Exhibit 3: ...driven by strong growth in industrial production and electricity production



Note: these variables are measured in real terms.

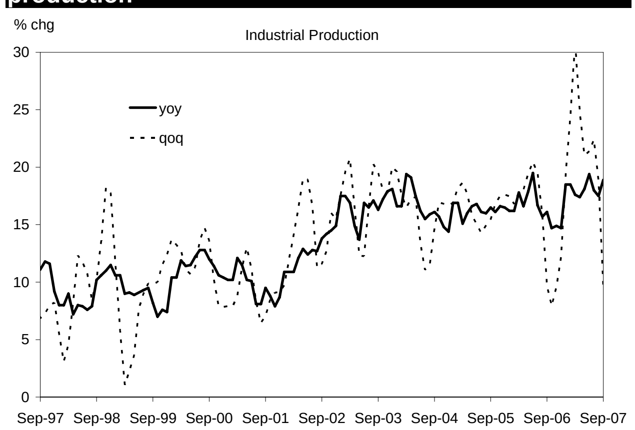
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: GSCA growth also remained solid...



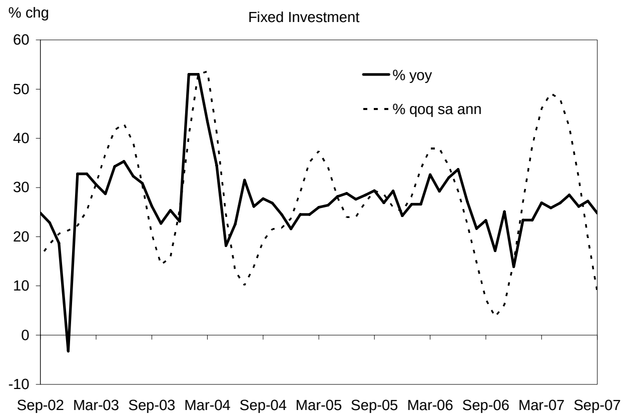
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Continued strong growth in industrial production



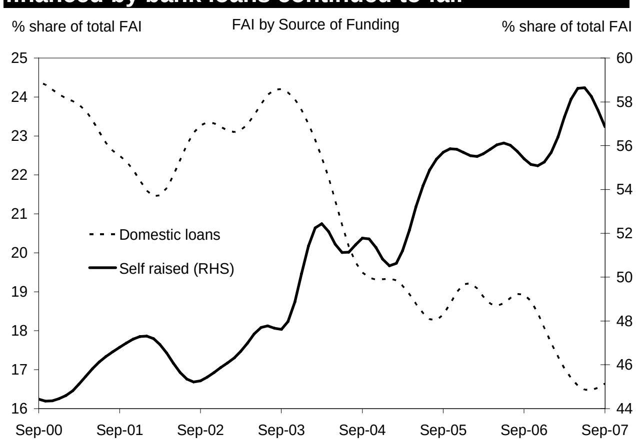
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Fixed investment growth remained largely steady



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: The share of fixed asset investment financed by bank loans continued to fall



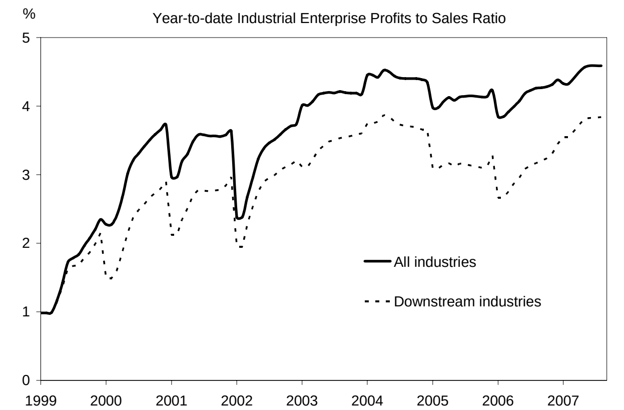
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 7: Growth of investment in the pipeline picked up

	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**	**7.3**
Apr-05	**10.8**	**14.7**	**26.2**	**1.6**	**52**	**13.5**
May-05	**11.9**	**10.6**	**28.7**	**2.1**	**35**	**24.9**
Jun-05	**13.2**	**10.7**	**28.6**	**3.0**	**41**	**24.8**
Jul-05	**14.1**	**7.3**	**26.1**	**3.5**	**18**	**28.5**
Aug-05	**14.8**	**4.7**	**29.7**	**4.0**	**14**	**28.4**
Sep-05	**15.2**	**2.9**	**27.9**	**4.5**	**13**	**27.9**
Oct-05	**15.9**	**4.2**	**27.8**	**5.1**	**12**	**28.5**
Nov-05	**16.5**	**4.3**	**28.8**	**5.5**	**10**	**28.4**
Dec-05	**17.8**	**7.9**	**29.7**	**6.5**	**17**	**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**	**42.0**
Apr-06	**13.9**	**13.9**	**29.2**	**2.1**	**42**	**32.2**
May-06	**15.1**	**8.6**	**26.9**	**2.6**	**26**	**23.6**
Jun-06	**16.6**	**10.2**	**26.3**	**3.7**	**39**	**22.2**
Jul-06	**17.4**	**4.3**	**22.8**	**4.2**	**15**	**19.3**
Aug-06	**18.0**	**3.6**	**21.6**	**4.5**	**6**	**11.4**
Sep-06	**18.8**	**4.6**	**23.6**	**4.9**	**9**	**7.5**
Oct-06	**19.4**	**3.3**	**22.6**	**5.3**	**9**	**4.4**
Nov-06	**20.1**	**3.2**	**21.3**	**5.7**	**9**	**3.7**
Dec-06	**21.7**	**8.0**	**21.4**	**6.7**	**17**	**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**	**-13.9**
Apr-07	**16.4**	**15.8**	**18.0**	**2.0**	**61**	**-2.2**
May-07	**17.5**	**6.9**	**16.1**	**2.8**	**37**	**6.1**
Jun-07	**19.3**	**9.8**	**15.8**	**3.9**	**39**	**6.4**
Jul-07	**20.3**	**5.6**	**17.2**	**4.8**	**24**	**14.6**
Aug-07	**21.2**	**4.2**	**17.9**	**5.2**	**8**	**16.7**
Sep-07	**22.2**	**4.9**	**18.2**	**6.0**	**16**	**24.2**

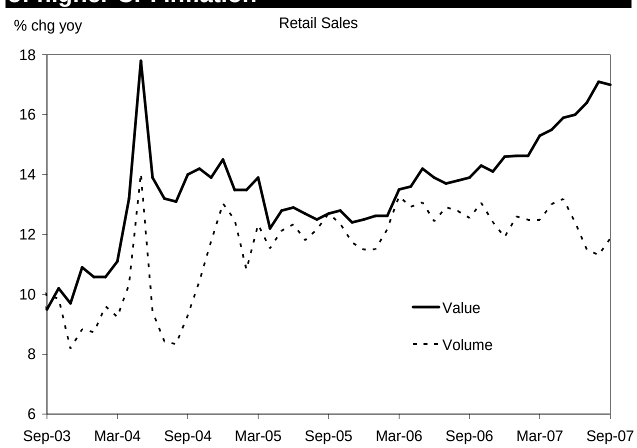
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 8: Corporate profitability growth has been robust and rising



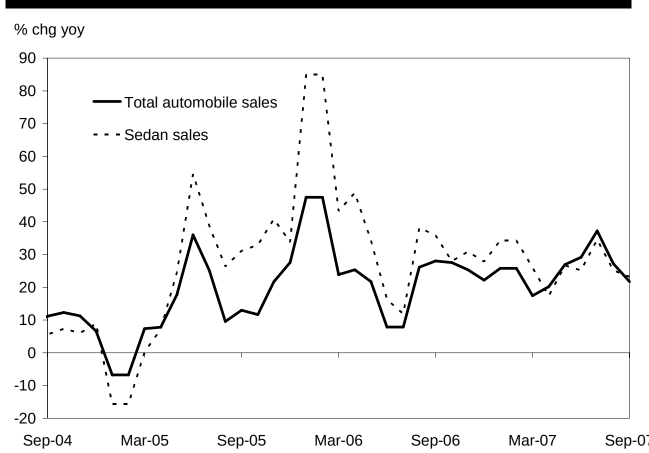
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 9: Retail sales growth accelerated on the back of higher CPI inflation



Source: CEIC, Goldman Sachs Economics Research.

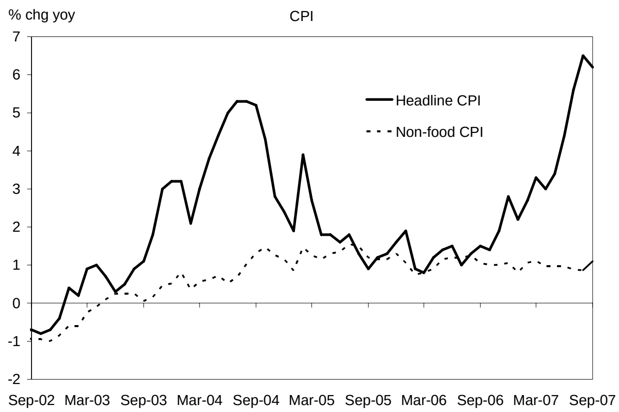
Exhibit 10: Softer growth in automobile sales



Source: CEIC, Goldman Sachs Economics Research.

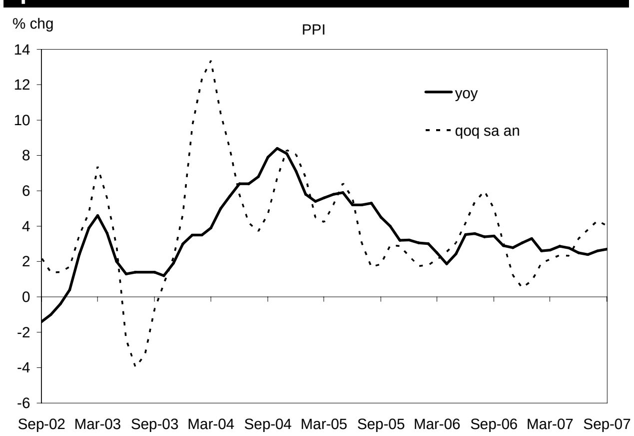
Price Indicator

Exhibit 1: CPI inflation softened slightly in September



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Sequential growth of PPI has been edging up



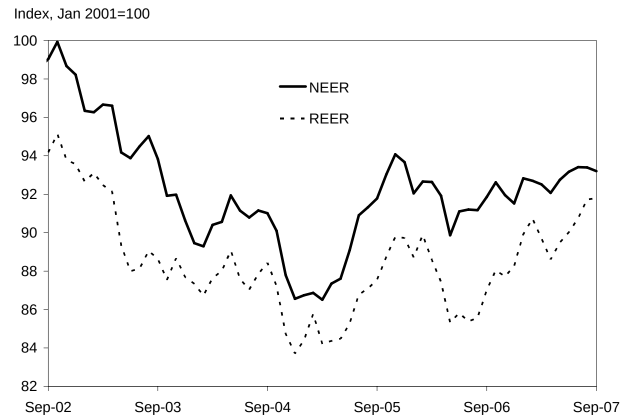
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: Property price inflation accelerated

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

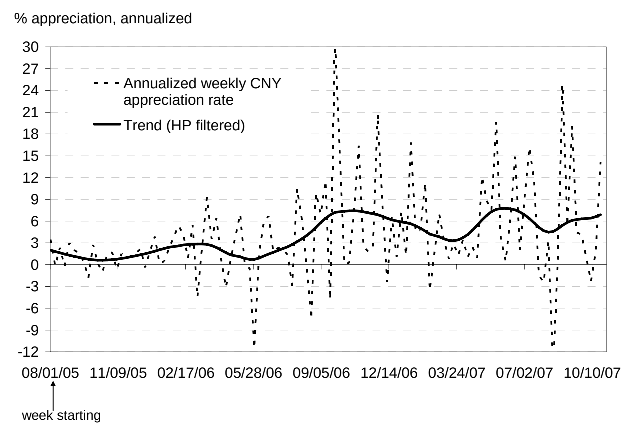
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: The CNY REER appreciated on the back of higher domestic inflation



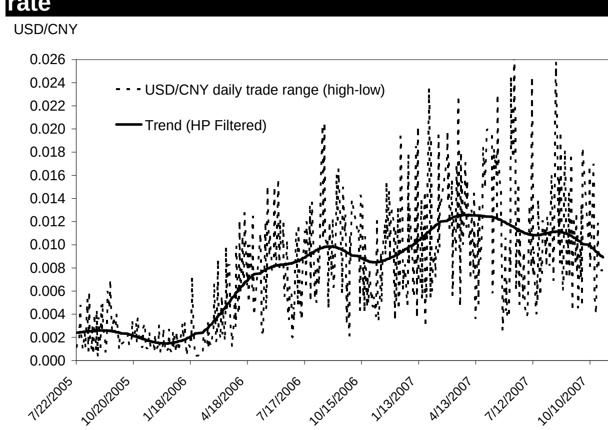
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: The pace of CNY/USD appreciation has accelerated



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: Lower daily volatility of the CNY exchange rate

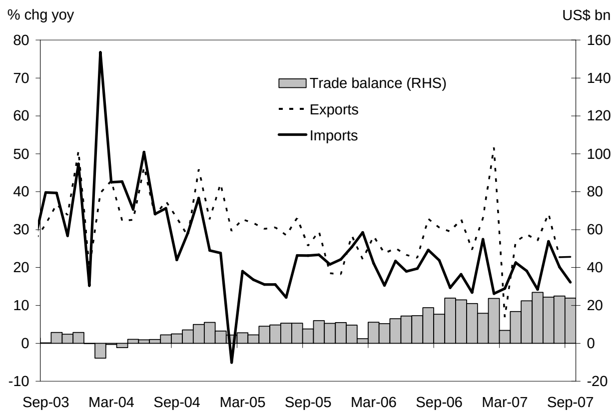


Note: quarterly data.

Source: CEIC, Goldman Sachs Economics Research.

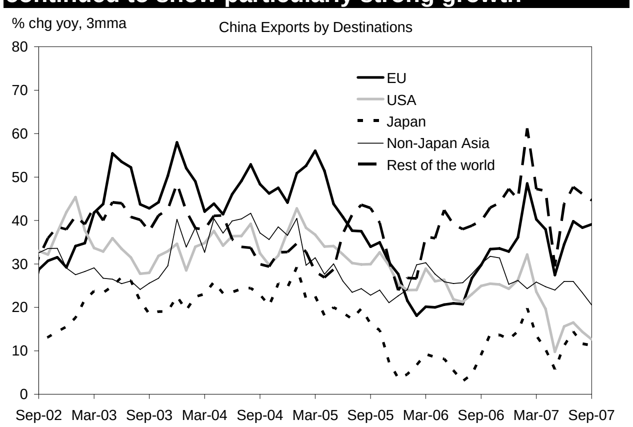
Trade Indicators

Exhibit 1: Trade surplus remained high



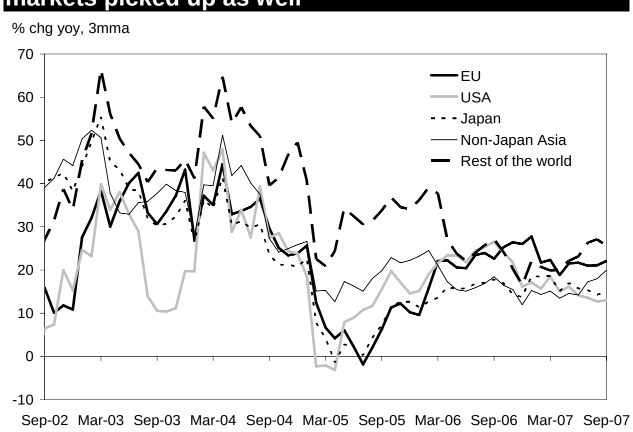
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Exports to non-traditional markets continued to show particularly strong growth



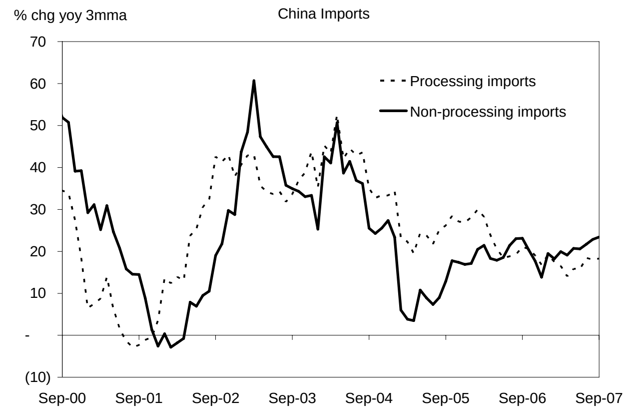
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: Growth of imports from non-traditional markets picked up as well



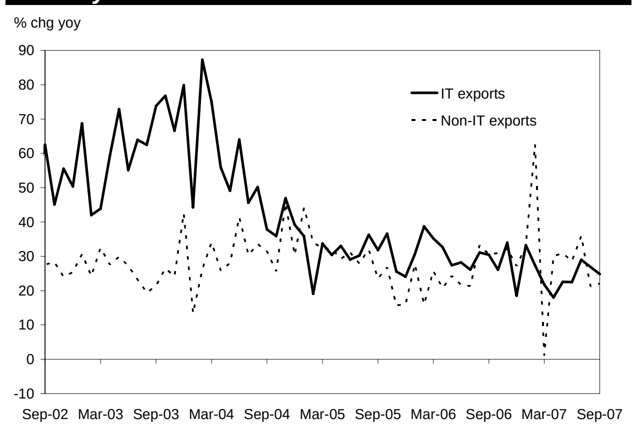
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Processing and domestic-demand-driven imports both holding up



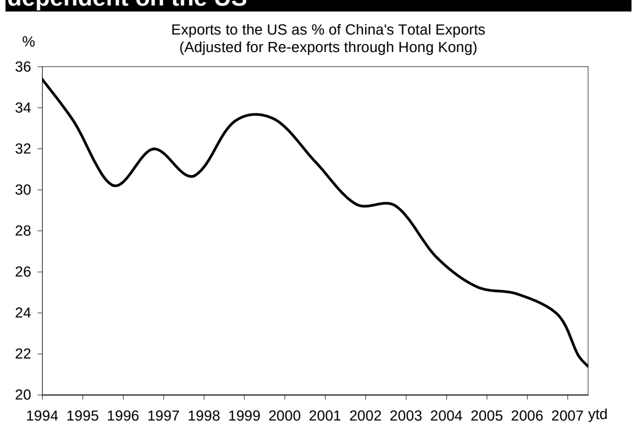
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Growth in non-tech exports showed more volatility



Source: CEIC, Goldman Sachs Economics Research.

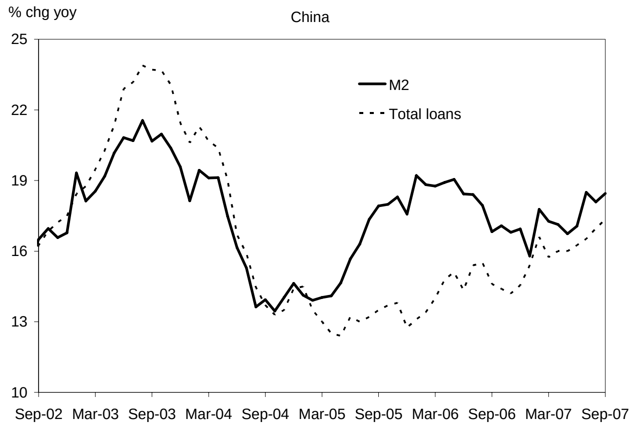
Exhibit 6: China's exports have become less dependent on the US



Source: CEIC, Goldman Sachs Economics Research.

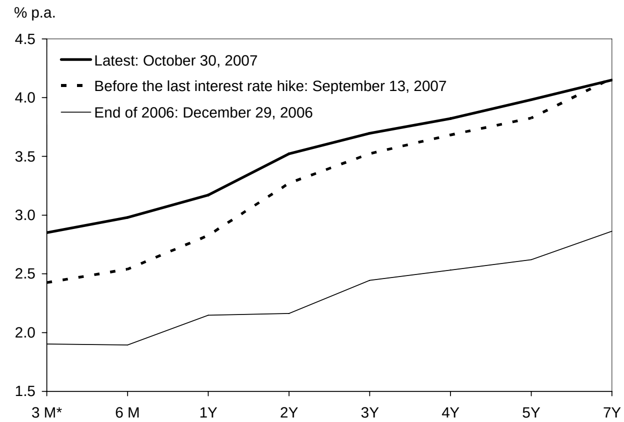
Financial Indicators

Exhibit 1: Strong money and credit growth in the third quarter



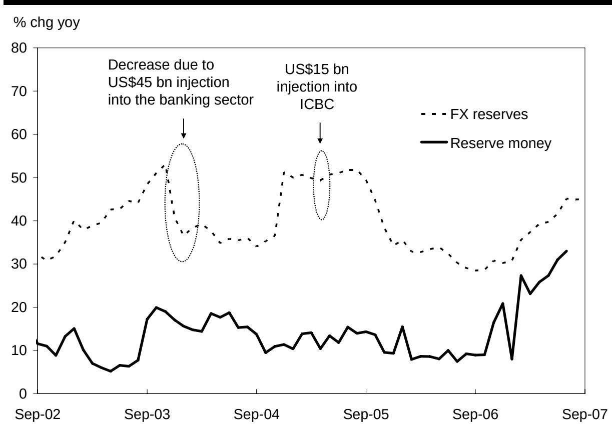
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Yield curve shifted up after the latest interest rate hike



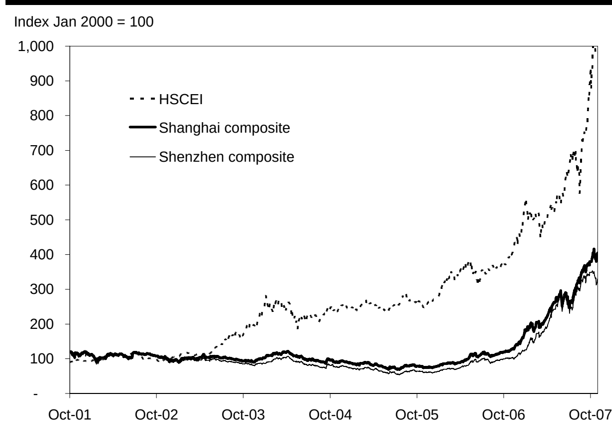
Source: Bloomberg, Goldman Sachs Economics Research.

Exhibit 2: FX reserve growth picked up



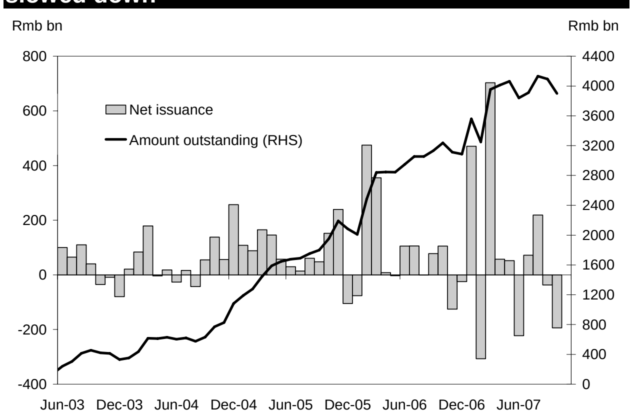
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Stock markets continued their strong runs



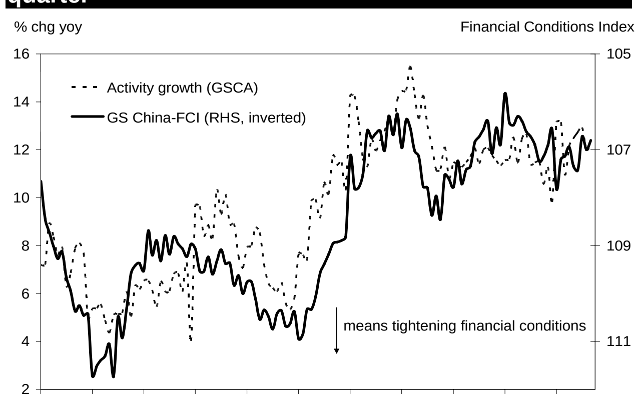
Source: Bloomberg, CEIC, Goldman Sachs Economics Research.

Exhibit 3: Sterilization by PBOC bill issuance has slowed down



Source: Bloomberg, Goldman Sachs Economics Research.

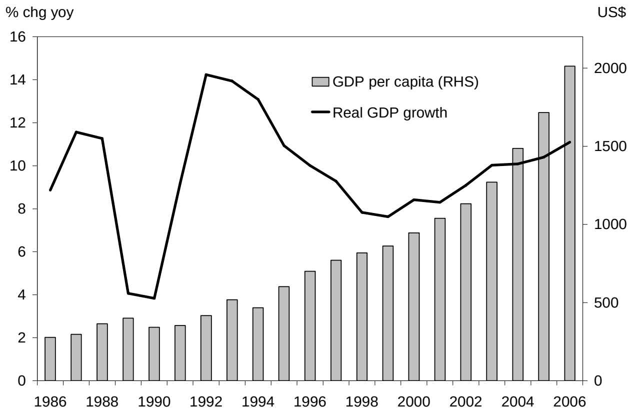
Exhibit 6: The GS China-FCI loosened in the third quarter



Source: CEIC, Goldman Sachs Economics Research.

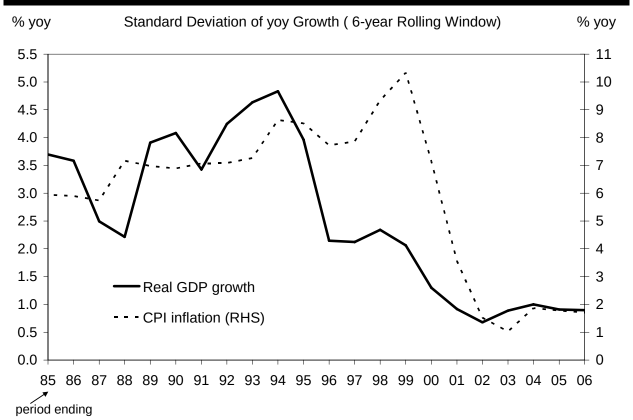
Annual Macroeconomic Indicators

Exhibit 1: GDP per capita rising steadily



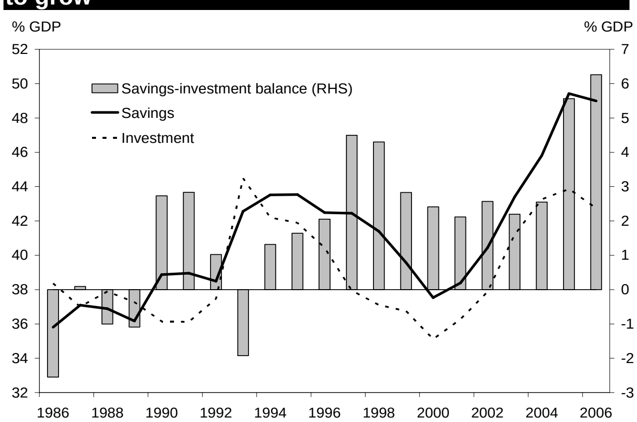
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 2: Cyclical volatility has been significantly reduced



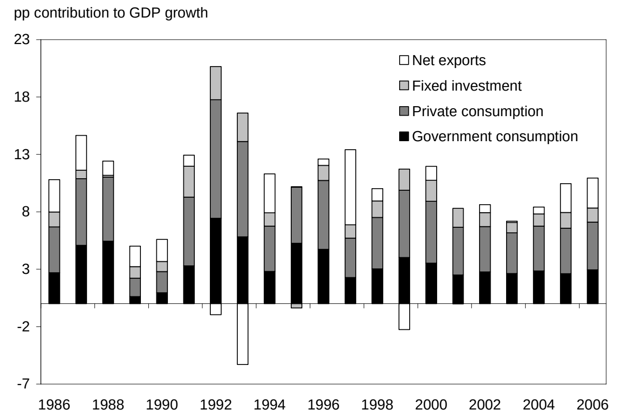
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 3: The saving investment imbalance continued to grow



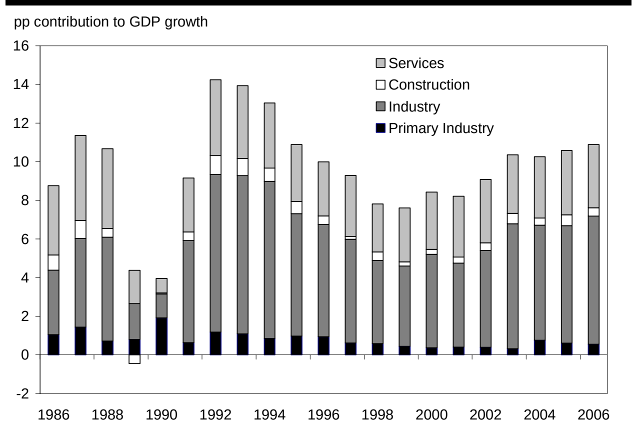
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 4: Domestic demand has remained firm, while growth contribution from external demand stable



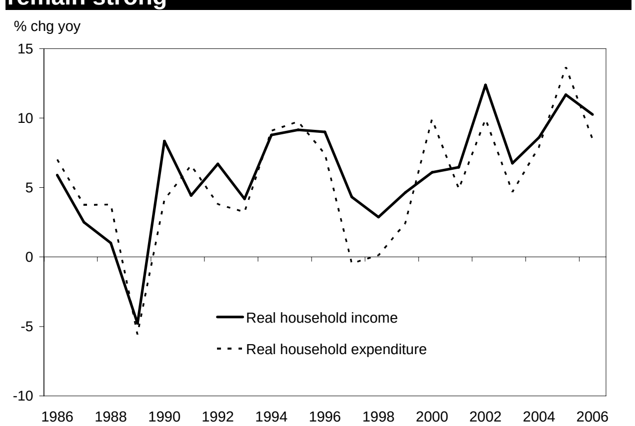
Source: CEIC, Goldman Sachs Economics Research.

Exhibit 5: Manufacturing growth has outpaced other sectors



Source: CEIC, Goldman Sachs Economics Research.

Exhibit 6: Household income and expenditure growth remain strong



Source: CEIC, Goldman Sachs Economics Research.

Summary Indicators (Annual)

(percentage change, unless otherwise indicated)

Per capita GDP (2006): 1998 USD
Total population (2006): 1.3 bn

	2001	2002	2003	2004	2005	2006	2007F	2008F
REAL SECTOR								
GDP by expenditure (at 1990 prices)								
GDP	8.3	9.1	10.0	10.1	10.4	11.1	12.3	10.9
Private consumption	5.7	6.5	6.3	7.1	6.7	7.8	9.6	9.5
Government consumption	11.1	7.9	6.0	7.3	9.7	8.6	9.4	11.8
Fixed investment	9.0	12.9	16.5	12.1	11.4	10.6	11.1	10.3
Domestic demand	8.8	8.8	10.5	10.0	8.3	9.5	10.0	9.9
Net exports (contribution to growth)	0.0	0.7	0.1	0.6	2.5	2.3	3.1	2.0
Exports (G&S)	7.1	24.7	26.9	27.7	22.4	18.6	20.0	16.3
Imports (G&S)	8.1	26.1	29.7	29.0	20.3	16.6	18.0	15.8
GDP by Industry								
Agriculture & resources	2.8	2.9	2.5	6.3	5.2	5.0	5.2	5.0
Industry	8.4	9.8	12.7	11.1	11.7	13.0	13.2	12.4
Manufacturing	8.7	10.0	12.8	11.5	11.6	13.0	13.5	12.7
Construction	6.8	8.8	12.1	8.1	12.6	9.5	10.2	9.0
Services	10.2	10.4	9.5	10.0	10.5	10.8	11.0	10.0
Goldman Sachs China Activity Index (GSCA)	6.9	9.8	12.9	13.1	11.6	11.5	—	—
PRICES								
CPI inflation (period average)	0.7	-0.8	1.2	3.9	1.8	1.5	4.5	4.0
CPI inflation (period end)	-0.3	-0.4	3.2	2.4	1.4	2.0	5.8	3.3
GDP deflator (period average)	2.0	0.6	2.6	6.9	4.2	3.2	7.3	4.8
EXTERNAL SECTOR (USD bn unless otherwise indicated)								
Current account balance	17.4	35.4	45.9	68.7	160.8	249.9	332.9	393.2
(as percent of GDP)	1.3	2.4	2.8	3.6	7.1	9.3	10.0	9.5
Exports	318	388	520	701	904	1144	1398	1623
Imports	301	352	474	632	743	895	1065	1230
Capital and financial account	34.8	32.3	52.7	110.7	63.0	10.0	93.8	46.8
Foreign direct investment	37.4	46.8	47.2	53.1	67.8	60.3	68.4	73.1
Portfolio, net	-19.4	-10.3	11.4	19.7	-4.9	-67.6	-10.0	-35.0
Other capital flow	16.9	-4.1	-5.9	37.8	0.1	17.3	35.3	8.6
Net errors and omissons	-4.9	7.8	18.4	27.0	-16.8	-12.9	0.0	0.0
Overall balance (as percent of GDP)	3.6	5.2	7.1	10.7	9.1	9.1	12.8	10.6
MONETARY & FINANCIAL SECTOR							**Latest in bold**	
Money Supply M2	17.6	16.9	19.6	14.5	16.3	17.0	**18.5**	**(Sep)**
Domestic Credit	7.1	37.5	19.5	9.2	10.8	15.7	**16.2**	**(Jul)**
Stock price index (Shanghai composite)	4.0	-19.9	-6.3	1.0	-22.2	41.3	**216.8**	**(Sep)**
Lending rate (1y, %pa)	5.85	5.36	5.31	5.38	5.58	5.90	**7.29**	**(Sep)**
Deposit rate (1y, %pa)	2.25	2.00	1.98	2.05	2.25	2.36	**3.87**	**(Sep)**
Memo items								
Forex reserves (USD bn)	212	286	403	610	819	1066	**1434**	**(Sep)**
months of imports	10.5	11.6	11.7	13.0	14.9	16.2	**16.6**	**(Sep)**
Exchange rate (end of period, USD/CNY)	8.28	8.28	8.28	8.28	8.08	7.81	7.42	6.87
Real Effective Exchange Rate Index (period avg)	86.7	83.8	79.3	80.7	80.1	81.8	—	—

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