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Taiwan

2Q GDP Beat Expectations by Wide Margin

September 6, 2010

Greater China Economics Issues in Focus

China: Moderation Continues

Against the backdrop of the authorities' redoubled efforts to shut energy-inefficient production units, industrial production growth continued to moderate due to intensified supply-side adjustment. While fixed-asset investment growth saw a further slowdown, tailwinds (e.g. loosening of controls on new projects, aggressive implementation of the social housing program, easing in local government financing) have now appeared. We also expect the Chinese authorities to allow a faster appreciation of the RMB against the USD given the rising political pressure and the prospective large trade surplus in 2H10 compared to 1H10. Given the heightened uncertainties, we have launched the China Macro Risk Radar (CMRR) to provide a framework to systematically assess and monitor risk events of low probability but potentially high impact.

Hong Kong: Robust Growth and Capital Inflow

The Hong Kong economy sustained robust growth in 2Q10 with real GDP expanded 6.5% YoY. We now expect GDP to grow 6% and 4% in 2010 and 2011 respectively. The Hong Kong banking system saw a significant increase in RMB deposits in July without hurting the growth of HK\$ or other foreign currency deposits, signaling a genuine expansion in the banking sector balance sheet upon the further development in the offshore RMB business. We also observed capital inflow in July, and fundamentally the stock of excess liquidity in the banking system still remained sizable, offering little upward pressure on interest rates.

Taiwan: 2Q GDP Beat Expectations by Wide Margin

Taiwan's GDP expanded 12.5% YoY in 2Q10, driven mainly by an upside surprise in private consumption growth which should increase the overall economy's resilience in the event that external demand faces any uncertainties. With the economy expanding faster-than-expected, we believe that interest rate normalization will continue for the rest of the year. We expect two more rate hikes in 2H10 (+12.5 bps each) to bring the policy re-discount rate to 1.625% by year-end.

For important disclosures, refer to the Disclosures Section, located at the end of this report.

(3) Hong Kong Mortgage Rate

September 6, 2010 **Greater China Economics**

Greater China: Forecast Summary

| | 2006 | 2007 | 2008 | 2009 | 2010E | 2011E |
|---|----------------------|------|------------|------|-------|--------------------------|
| Real GDP Growth (%) | | | | | | |
| Asia Ex-Japan | 9.4 | 10.2 | 7.3 | 6.1 | 8.7 | 8.1 |
| AXJ (ex-China and India) Asia Pacific* | 5.6 | 5.9 | 2.7 | 0.0 | 5.9 | 4.6 |
| | 9.1 | 9.9 | 7.0 | 5.8 | 8.4 | 7.9 |
| China | 11.6 | 13.0 | 9.6 | 9.1 | 10.0 | 9.5 |
| Hong Kong | 7.0 | 6.4 | 2.1 | -2.8 | 6.0 | 4.0 |
| Taiwan | 5.4 | 6.0 | 0.7 | -1.9 | 4.5 | 3.6 |
| CPI Inflation (%, Period Average | | | | | | |
| Asia Ex-Japan | 3.4 | 4.6 | 6.4 | 2.4 | 4.6 | 3.9 |
| Asia Pacific* | 3.8 | 4.3 | 6.2 | 2.6 | 4.5 | 3.8 |
| China | 1.5 | 4.8 | 5.9 | -0.7 | 2.8 | 3.8 3.0 3.0 |
| Hong Kong/ ¹ | 2.0 | 2.0 | 4.3 | 0.5 | 2.8 | 3.0 |
| Taiwan | 0.6 | 1.8 | 3.5 | -0.9 | 1.0 | 2.0 |
| Current Account (% of GDP) | | | | | | |
| Asia Ex Japan | 6.3 | 7.4 | 6.1 | 5.2 | 3.4 | 2.7 |
| China | 9.5 | 11.0 | 9.4 | 5.8 | 3.8 | 3.0 3.1 |
| Hong Kong | 12.1 | 12.4 | 13.6 | 8.7 | 3.6 | 3.1 |
| Taiwan | 7.0 | 8.4 | 6.2 | 11.1 | 7.4 | 6.4 |
| Interest Rates (Prime Lending R | Rate, %, Period End | | | | | |
| China/ ² | 6.1 | 7.5 | 5.3 | 5.3 | 5.3 | 5.3 |
| Hong Kong/ ³ Taiwan/ ⁵ | 5.3 | 4.1 | 3.5 4.5 | 2.3 | 2.5 | 5.0 |
| Taiwan/⁵ | 4.0 | 4.4 | 4.5 | 2.8 | 3.0 | 4.0 |
| Interest Rates (3-Month Interba | nk Rate, %, Period I | End) | | | | |
| China/7 | 1.8 | 3.3 | 1.7 | 1.7 | 1.7 | 1.7 |
| Hong Kong | 3.9 | 3.5 | 1.0 | 0.1 | 0.5 | 1.3 |
| Taiwan/ ⁹ | 1.8 | 2.6 | 1.8 | 0.8 | 2.0 | 3.5 |
| USD Exchange Rate (Period En | d) | | | | | |
| China | 7.81 | 7.31 | 6.83 | 6.83 | 6.60 | 6.20 |
| Hong Kong | 7.78 | 7.80 | 7.75 | 7.75 | 7.77 | 7.75 |
| Taiwan | 32.6 | 32.4 | 32.9 | 33.0 | 31.5 | 30.0 |

 (1) Composite Consumer Price Index
 (2) 1-Year Working Capital Rate

 (5) Taiwan First Commercial Bank Prime Lending Rate before 2003, Base Lending Rate since 2003

 (7) 3-Month Time Deposit Rate
 (9) 90-Day Money Market Middle Rate

 * GDP and CPI for Asia Pacific include Asia Ex-Japan and Australia.

E = Morgan Stanley Research estimates Source: CEIC, Morgan Stanley Research

September 6, 2010 **Greater China Economics**

Greater China: Monthly Indicators

| Real GDP Growth (YoY %) | 2Q08 | 3Q08 | 4Q08 | 1Q09 | 2Q09 | 3Q09 | 4Q09 | 1Q10 | 2Q10 |
|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| China * | 10.1 | 9.0 | 6.8 | 6.2 | 7.9 | 9.1 | 10.7 | 11.9 | 10.3 |
| Hong Kong | 4.0 | 1.1 | -2.7 | -7.7 | -3.8 | -2.4 | 2.5 | 8.3 | 6.5 |
| Taiwan | 5.4 | -0.8 | -7.1 | -9.1 | -6.9 | -1.0 | 9.1 | 13.3 | 12.5 |
| Inflation (YoY %) | Nov-09 | Dec-09 | Jan-10 | Feb-10 | Mar-10 | Apr-10 | May-10 | Jun-10 | Jul-10 |
| China | 0.6 | 1.9 | 1.5 | 2.7 | 2.4 | 2.8 | 3.1 | 2.9 | 3.3 |
| Hong Kong | 0.6 | 1.3 | 1.0 | 2.8 | 2.0 | 2.4 | 2.5 | 2.8 | 1.4 |
| Taiwan | -1.6 | -0.2 | 0.3 | 2.4 | 1.3 | 1.3 | 0.8 | 1.2 | 1.3 |
| Industrial Production (YoY %) | Nov-09 | Dec-09 | Jan-10 | Feb-10 | Mar-10 | Apr-10 | May-10 | Jun-10 | Jul-10 |
| China | 19.2 | 18.5 | NA | 12.8 | 18.1 | 17.8 | 16.5 | 13.7 | 13.4 |
| Hong Kong | - | -5.0 | - | - | 0.4 | - | - | - | - |
| Taiwan | 32.0 | 47.8 | 70.1 | 35.5 | 39.5 | 32.0 | 31.0 | 24.7 | 20.7 |
| Export Growth (YoY %) | Nov-09 | Dec-09 | Jan-10 | Feb-10 | Mar-10 | Apr-10 | May-10 | Jun-10 | Jul-10 |
| China | -1.2 | 17.7 | 21.0 | 45.7 | 24.3 | 30.5 | 48.6 | 43.9 | 38.1 |
| Hong Kong | 1.3 | 9.2 | 18.4 | 28.6 | 32.1 | 21.7 | 24.4 | 26.7 | 23.3 |
| Taiwan | 19.3 | 46.8 | 75.8 | 32.6 | 50.1 | 47.8 | 57.9 | 34.2 | 38.5 |
| Import Growth (YoY %) | Nov-09 | Dec-09 | Jan-10 | Feb-10 | Mar-10 | Apr-10 | May-10 | Jun-10 | Jul-10 |
| China | 26.7 | 55.9 | 85.7 | 44.7 | 66.1 | 49.7 | 48.3 | 34.1 | 22.7 |
| Hong Kong | 6.5 | 18.7 | 39.5 | 22.4 | 39.8 | 28.8 | 29.7 | 31.0 | 25.0 |
| Taiwan | 18.0 | 55.6 | 115.4 | 45.8 | 80.3 | 52.6 | 71.4 | 40.4 | 42.7 |
| 3M Interest Rate (%, Period end) | Nov-09 | Dec-09 | Jan-10 | Feb-10 | Mar-10 | Apr-10 | May-10 | Jun-10 | Jul-10 |
| China ^{/1} | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 |
| Hong Kong | 0.11 | 0.11 | 0.11 | 0.11 | 0.12 | 0.11 | 0.13 | 0.20 | 0.20 |
| Taiwan ^{/2} | 0.85 | 0.90 | 0.90 | 0.90 | 0.91 | 0.91 | 0.91 | 0.93 | 0.93 |
| Exchange rate (%, Period end) | Nov-09 | Dec-09 | Jan-10 | Feb-09 | Mar-09 | Apr-09 | May-09 | Jun-09 | Jul-09 |
| China | 6.83 | 6.83 | 6.83 | 6.83 | 6.83 | 6.83 | 6.83 | 6.79 | 6.78 |
| Hong Kong | 7.75 | 7.76 | 7.76 | 7.76 | 7.76 | 7.76 | 7.79 | 7.79 | 7.77 |
| Taiwan | 32.2 | 32.0 | 32.0 | 32.1 | 31.8 | 31.4 | 32.23 | 32.28 | 32.05 |

NA=Not Available * Morgan Stanley Research estimates (1) 3-Month Time Deposit Rate (2) 90-Day Money Market Middle Rate Source: CEIC, Bloomberg, Morgan Stanley Research

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September 6, 2010 Greater China Economics

September 3, 2010

AlphaWise Evidence Series China Macro Risk Radar

Morgan Stanley Asia Limited

story.

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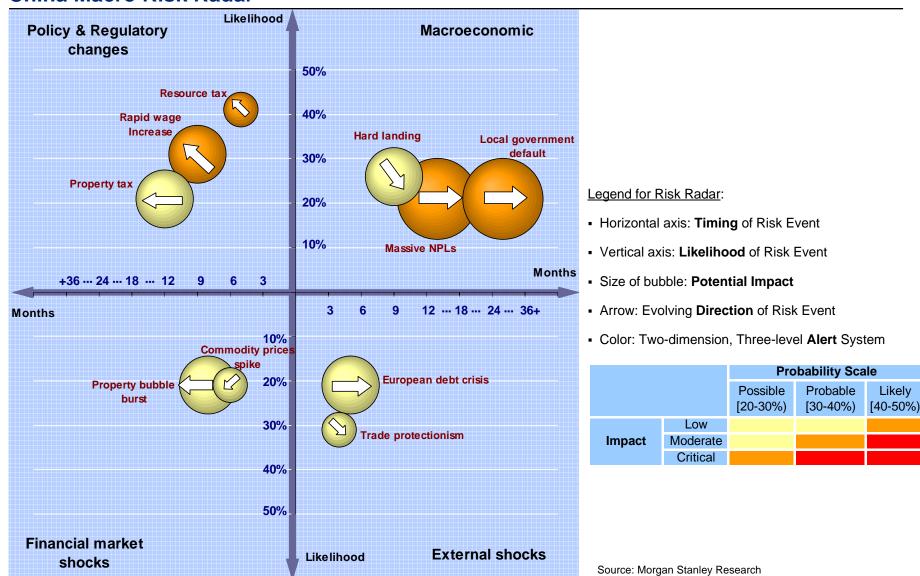
What could go wrong: We, like many other market participants, share a positive secular view of China's economic outlook over the medium and long term. However, faced with the vagaries of the economic and financial market developments over the last two years, we are as humbled by the cruelty of short-run unpredictable events as we are emboldened by our strong conviction in a long-run secular

What we do not do: Making a call on the potential developments of uncertain macroeconomic events is a key part of our job. However, it is not our style to make a call on the potential outcome of an inherently low-probability or high-uncertainty event with false conviction, only hoping to somehow hit the mark.

What we CAN do: We are launching the China Macro Risk Radar (CMRR) as a new research product under China Macro AlphaWise initiative. The key purpose of CMRR is to provide a framework to systematically assess and monitor risk events of low probability but potentially high impact. A risk event will be put on our radar screen if it meets two criteria simultaneously: 1) of material macroeconomic impact if materialized; and 2) of at least 20% probability. A risk event will drop off the radar screen if: 1) its probability drops below 20%; or 2) if its probability rises above 50%. A move to the latter case would warrant us to make a formal call on the risk event.

Ten risk events: In this inaugural report, we assigned 10 risk events to four categories on the CMRR. Each risk event is assessed according to six aspects, including its description, content, potential impact, likelihood, timeframe, and evolving direction. The 10 risk events are: Massive NPLs, Local Government Default, Economic Hard Landing, Introduction of Property Tax, Resource Tax Reform, Sharp Wage Increase, Property Price Bubble Burst, Commodity Price Spike, European Sovereign Debt Crisis Redux, and Intensification of Trade Protectionism.

Likely



China Macro Risk Radar

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Risk Category A: Macroeconomic

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Risk Category B: Policy and Regulatory Changes

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Risk Category C: Financial Market Shocks

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Risk Category D: External Shocks

- Risk Event 9: European Sovereign Debt Crisis Redux
- Risk Event 10: Trade Protectionism

Risk Event Category: Macroeconomic

Risk Event 1: Massive Non-performing Loans: A Repeat of 1993-94?

Description of Risk Event:

- A record Rmb9.6tn (or 28% of GDP) new loans were extended by banks in 2009, resulting in a 32% increase in outstanding bank credit (Exhibit 1). In addition, about one-third of the new loans in 2009 were extended to Local Government Financing Platforms (LGFPs).
- Overly rapid credit growth is widely considered to be the single best leading indicator of major NPL problems for an economy.
- A potential sharp slowdown in overall economic growth in the coming years caused by either draconian policy tightening to tackle inflation or negative external shocks could trigger emergence of massive NPLs.
- Since the large Chinese banks were restructured, recapitalized, and publicly listed a few years ago, their ability to manage the loan quality has yet to be tested in a downturn phase of economic cycle.

Potential Impact:

- We performed a back-of-the-envelop stress test for illustration purpose (Exhibit 2).
- If the NPL ratio were to increases by 2.5ppt in one year, it would put banks' earnings into the red and deplete the value of equity.
- If the NPL ratio were to rise sharply by 5ppt, it would have significant negative impact on the banking system with a deep income loss and deal a major blow to banks' capital base.

Likelihood:

- The probability of an emergence of massive NPLs over the next 12 months is no more than 20%, in our judgment.
- First, we do not envisage a sharp slowdown in China's economic growth over the next 12 months that could seriously undermine the loan quality.
- Second, a considerable portion of bank lending has been made to LGFPs, which carry explicit
 or implicit government guarantees, and China's consolidated fiscal position remains quite
 strong. The risk is still manageable, in our view.
- Third, a large majority of property loans in China are collateralized, and the average loancollateral ratio for the system will likely remain comfortably low, barring serious and prolonged asset price deflation.

Evolving Direction:

• The risk of emergence of massive NPLs will likely be stable over the next 12-24 months.

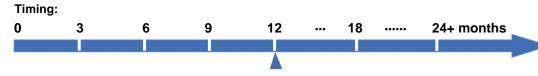


Exhibit 1: Record-high credit growth in 2009 %, yoy RMB bn 2,000 40 New Loans(LHS) Credit Growth (RHS) 1,500 30 20 1.000 500 -500 -10 2010-07 2007-01 2007-04 2007-07 2007-10 2008-10 2009-10 2010-04 2008-04 2010-01 2008-01 2008-07 2009-01 2009-04 2009-07

Exhibit 2: A Stress Test on the Impact of NPL Rise

| | | | Estin | Estimated as % of total loans | | | | |
|----------------|-----------|-----|------------------|-------------------------------|--------|------|--|--|
| Illustrative | NPL Ratio | | After-tax profit | | Equity | | | |
| Scenario | From | То | From | То | From | То | | |
| A: a 2.5% rise | 1.3 | 3.8 | 1.7 | -0.8 | 11.0 | 10.2 | | |
| B: a 5% rise | 1.3 | 6.3 | 1.7 | -3.3 | 11.0 | 7.7 | | |

Source: CEIC, Morgan Stanley Research

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Likelihood

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AlphaWise Evidence Series: China Macro Risk Radar

Risk Event Category: Macroeconomic

Risk Event 2: Local Governments Default: Sub-prime Crisis of Chinese Characteristics

Description of Risk Event:

- The amount of borrowing by Local Government Financing Platforms (LGFPs) has increased sharply in recent years, especially when a record amount of new bank lending was extended in 2009. The total amount of borrowed by LGFPs was about Rmb7.66bn (or 17% of total outstanding loans and 22% of GDP) as of end June 2010. According to a survey by CBRC, loans extended to LGFPs can be categorized into: 1) "low risk" (27% of the total) where cash flows from the projects can fully service the loans; 2) "medium risk" (50% of the total) where the repayment capacity hinges on fiscal revenues, primarily from proceeds of land sales; and 3) "high risk" (23% of the total) where means to service the loans have yet to be identified.
- While the default probability of the "high risk" category is high, that of the "medium risk" category will likely also rise sharply in the event of a cooling-off the property market that could substantially reduce the revenue collected by local governments from land sales.

Potential Impact:

- Banks will get hit first in the event of default by LGFPs. If we follow the five-category classification standard and simply treat the three categories of loans as
 pass, special mention, and sub-standard, the provisions for these loans are estimated to be more than Rmb500bn (Exhibit 3) compared to a total system-wide
 after-tax profit of Rmb668bn in 2009.
- As a result, the confidence in China's banking system could be significantly undermined, triggering a potential bank run and even a capital flight.

Likelihood:

- The probability of LGFP default over the next 24 months is no more than 20%, in our judgment.
- First, we do not envisage a major correction in the property market in China over the next 12 months that could seriously undermine the local fiscal positions.
- Second, many local governments own a large amount of assets that could be privatized to help service debt if such need arises (see <u>China Economics: Concerns about China's 'High'</u> <u>Debt Unwarranted</u>, March 29, 2010)
- Third, under China's fiscal federalism system and in view of the sound fiscal position at the central government level, the central government should be able to bail out local governments unless the default were to be systematic.

Evolving Direction:

- The risk of LGFPs default will likely increase slowly beyond the next 24 months, as it takes time for some projects to prove to be nonperforming.
- The next change of government in China, which is due to take place in early 2013, could also potentially delay recognition of non-performing assets by local governments.

Timing:



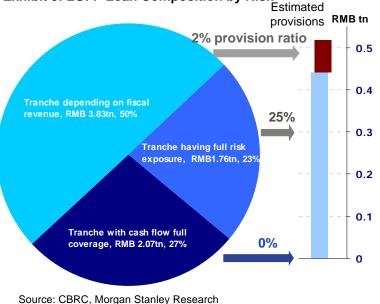


Exhibit 3: LGFP Loan Composition by Risk



Risk Event Category: Macroeconomic

Risk Event 3: Economic Hard Landing

Description of Risk Event:

- Chinese authorities launched a set of austere measures against property speculation in April. Property transactions have since declined sharply. Weak property
 sales will likely lead to a slowdown in construction activity, potentially causing a hard landing in fixed asst investment growth.
- G3 economies have shown renewed signs of weakness in recent months, pointing to rising risk of a double dip in growth rates.
- The double whammy impact of domestic campaign-style austere measures against property speculation and deeper-than-expected downturn in G3 economies could cause a hard landing of Chinese economy, or a repeat of the experiences in late 2008 (Exhibit 4).

Potential Impact:

- A hard landing could cause serious damage to the economy. Besides the obvious negative consequences (e.g., slow growth, weak job market), domestic banking system could soon be paralyzed by mounting non-performing loans, since a record amount of bank lending was made in 2009 amid the Global Recession to primarily fund long-term infrastructure projects.
- Global commodities prices could plunge, as China has contributed the bulk of marginal demand for key commodities.

Likelihood:

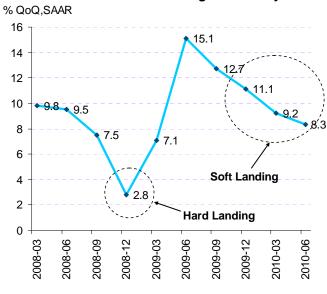
- The probability of a hard landing of the economy over the next 6-12 months is no more than 30%, in our judgment.
- First, it should be noted that the most important factor affecting FAI in general and real estate construction in particular in China is availability of bank credit. The new loan target of Rmb7.5tn for this year implies expansion of about 19% YoY in the outstanding amount of bank credit. As long as this credit target remains unchanged, the probability of a hard landing of FAI growth is low.
- Second, while the austere measures may have a serious impact on market-based, private housing construction, social housing program is gaining considerable momentum in recent months, helping build a cushion to offset the impact of potential slowdown in private housing construction (see <u>China Economics: Can Recent Policy Campaign Against Property Speculation</u> <u>Cause a Hard Landing?</u> May 24, 2010; <u>Can Social Housing Program Help Secure a Soft Landing?</u> June 17, 2010).

Evolving Direction:

• The risk of an economic hard landing will decrease over time, in our judgment.



Exhibit 4: Soft Landing on the Way



Source: Morgan Stanley Research

Likelihood Impact

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Risk Event Category: Policy and Regulatory Changes

Risk Event 4: Rapid Wage Increase

Description of Risk Event:

- Labor shortage reportedly emerged in both coastal and less-developed central and western regions early this year (Exhibit 5). The phenomenon may be a prelude to a widespread and persistent labor shortage, and thus place upward pressure on wages going forward, as it takes place against the backdrop of rather rapid population ageing and a shift in demographic structure.
- Acceleration of urbanization nationwide can release labors from farmlands, with farmers exchanging their land for urban resident status and the attendant coverage of social safety net. However, such urbanization is embedded with a locality feature. For example, under a pilot program undertaken by Chongqing municipal government, rural residents in Chongqing area can only become urban residents in its jurisdiction, which might actually exacerbate the imbalance between labor supply and demand across different regions in the country.
- On the policy front, as more than 23 provinces in China have raised local minimum wages this year, the authorities are reportedly mulling approving a Wage Bill, which features a collective wage negotiation mechanism, with the ambitious objective of increasing labor's remuneration as a percentage of national income.

Potential Impact:

- Chinese enterprises that have long benefitted from ample supply of cheap labor may start to face a new reality of a tight labor market and mounting wage
 pressures sooner rather than later. This would constitute a permanent negative shock to those unprepared. While relocating from eastern/coastal to
 western/inland regions is an option, it would entail early planning and investment.
- Corporate profit margins would come under secular downward pressures, as the balance of bargaining power between labor and capitalists shifts in the former's favor. The equity market, especially for labor-intensive industries, may consequently be de-rated.
- A sustained level of inflation in China will likely be 3-5% over the medium term instead of average 1-3% as has prevailed over the last decade or two. China would cease to become a source of global disinflation/deflation.

Likelihood:

- The probability of rapid wage increase in part catalyzed by the potential introduction of Wage Bill over the next 6-12 months is around 30%, in our judgment.
- First, the authorities appear to have intensified their efforts to pass a Wage Bill, which could be officially introduced as early as before year end.
- Second, labor shortage could resurface toward the end of this year and at the beginning of next year when the holiday seasons start, especially if economic growth were to re-accelerate on QoQ sequential basis in 4Q10 and 1Q11, as we have been predicting (see <u>China Economics: Revising</u> <u>2010-11 Forecasts</u>, July 19, 2010).

Evolving Direction:

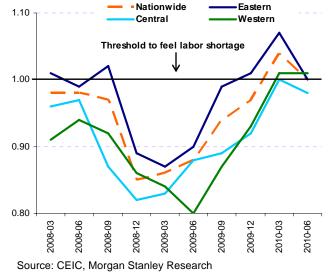
 The risk of rapid wage increase will rise over time from its current levels, as both economic fundamentals (e.g., labor supply, demographics) and policy orientation (e.g. initiatives to safeguard labor's interest, boost household income in percent of GDP) would both work toward strengthening labor's bargaining power in national income allocation.

Timing:



Exhibit 5: Labor Market Tension Eases Temporarily

Demand-supply ratio



Likelihood Impact

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Risk Event Category: Policy and Regulatory Changes

Risk Event 5: Introduction of Property Tax: A Game Changer

Description of Risk Event:

- Introduction of property tax in China has been under discussion for some time. The State Council has approved "gradually implementing property-tax reform" as part of a radical fiscal revision proposed by the National Development and Reform Commission (NDRC).
- A key source of local government revenue are proceeds from land sales. High land prices have been the primary culprit behind high property prices. In
 other words, local governments' infrastructure investment projects have largely been financed by new home buyers. This local fiscal model is not
 sustainable, because: 1) there is increasingly less land available for sale, especially in large cities; 2) new homebuyers have *de facto* shouldered
 disproportionately high local fiscal burden; and 3) since existing homeowners also benefit directly from rising property prices in part due to improved local
 infrastructure financed by local governments, they should also pay for this positive externality through property taxes.
- Property taxes could be introduced under a pilot program in a handful cities well ahead of its official rollout nationwide.

Potential Impact:

- The introduction of a property tax could cause a large one-off decline in local property prices, as future property tax liability is capitalized and discounted in the current property prices.
- Property tax helps discourage property hoarding by raising the carry-cost of owing property and could therefore also cause property prices to decline in cities where speculation is rampant.
- Potential decline in property prices could lead to slower property sales and construction, threatening economic growth outlook at least in the short run.
- If a property tax is levied under Scenario C (Exhibit 6), we estimate the average impact on a household's disposable income at at least 2-3%. The impact will be uneven depending property ownership, with speculative hoarding to be penalized.

Likelihood:

- The probability of the introduction of a property tax on a nationwide basis within the next 12 months is about 20%, in our judgment.
- The probability of a formal launch of property tax on a nationwide basis will likely remain low until early 2013, when the next change of government is due to take place.
- However, it is entirely possible that some variants of property tax could be introduced in a handful cities under a pilot program within the next six months.
- The exact timing of the pilot property tax program also hinges on whether the existing
 austere policies could prove to be effective. This is because the introduction of a
 property tax is being contemplated as a policy option to rein in rapid property price
 increase and curb speculation.

Evolving Direction:

• While the risk of introduction of property tax is low in the short run, it will likely rise meaningfully in two years after the next change of government takes place.

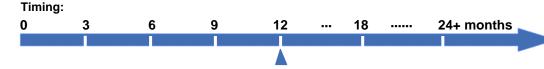


Exhibit 6: Illustrative Scenarios for Property Tax

City Profile

| | Beijing | Shanghai | Guangzhou | Shenzhen |
|---|---------|----------|-----------|----------|
| Per capita living space, m ² | 25 | 29 | 32 | 23 |
| Resident population, mn | 20 | 19 | 10 | 9 |
| Housing price, RMB | 21911 | 24185 | 14181 | 23738 |
| Disposable Income per capita, RMB | 28,165 | 28,838 | 27,610 | 29,245 |
| Fiscal Revenue, RMB mn | 202,680 | 254,030 | 70,258 | 88,082 |

Assumptions

| | Property tax rate | Scope of taxation | Deduction Ratio |
|------------|-------------------|-------------------|------------------------|
| Scenario A | 0.80% | 100% | 20% |
| Scenario B | 0.80% | 30% | 20% |
| Scenario C | 0.50% | 30% | 20% |

Impact of Property Tax

| | Scenario | Beijing | Shanghai | Guangzhou | Shenzhen |
|--------------------|----------|---------|----------|-----------|----------|
| Tax payment as | А | 13% | 16% | 11% | 12% |
| % of disposable | В | 4% | 5% | 3% | 4% |
| income | С | 2% | 3% | 2% | 2% |
| Property tax as | А | 35% | 35% | 43% | 35% |
| % fiscal revenue | В | 10% | 10% | 13% | 11% |
| /0 liscal levellue | С | 6% | 6% | 8% | 7% |

Source: CEIC, Morgan Stanley Research



Risk Event Category: Policy and Regulatory Changes

Risk Event 6: Resource Tax Reform

Description of Risk Event:

- Resource tax reform has been under discussion for some time, and Chinese authorities have been promising to roll out this tax since the beginning of the year.
- Under the new regime, the resource tax will be linked to market price (i.e., *ad valorem* tax) instead of the quantity of output (i.e., specific tax) on crude oil and natural gas. The reform took effect in Xinjiang, the resource-rich northwestern autonomous region, on June 1, 2010. The tariff is set at 5% of the price. Prior to the reform, the resource tax was levied on output volume only. For instance, the oil companies used to pay Rmb8-30 of resource tax for drilling one metric ton of crude oil and Rmb2-15 for producing 1,000 cubic meters of natural gas.
- Following the initiatives in Xinjiang, similar reforms will be introduced in 12 other provinces in China's western region. Besides crude oil and natural gas, coal will be included in the resources on the tax will be levied. The tax rate on coal is still unknown, but is reportedly to be in the 3-5% range.

Potential Impact:

- The immediate macroeconomic impact of the introduction of a resource tax will be manifested in higher prices for these resource products. Given that resource producers tend to be in a monopoly position, the tax burden will likely be fully passed on to end users. Under a nationwide implementation scenario, we estimate that the potential amount of tax burden could be more than triple its current level (Exhibit 7).
- With regard to implications to inflation. We estimate that the a 10% hike in the prices of refined products, fuel, and coal will cause PPI inflation to increase by 0.88%, 0.44%, and 0.23%, respectively, and CPI inflation to increase by 0.35%, 0.52%, and 0.03% (see <u>China Economics: Quantifying the Impact of Energy</u> <u>Price Hikes</u>, September 4, 2008).
- Introduction of resource tax has important long-run benefit to the economy: it makes the prices of resource products better reflect their opportunity costs, helping
 more efficient usage of resource and achieve energy- and resource-conservation targets.

Likelihood:

- The probability of full implementation of a resource tax over the next six months is about 40%, in our judgment.
- First, there has been strong political commitment to this reform.
- Second, the main practical concern seems related to its implications on inflation in the near term. We expect inflationary pressures to recede in the coming months, which would create a window of opportunity for introduction of resource tax.

Evolving Direction:

- The risk of introduction of a resource tax will likely increase over the next three to six months.

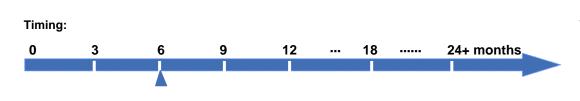
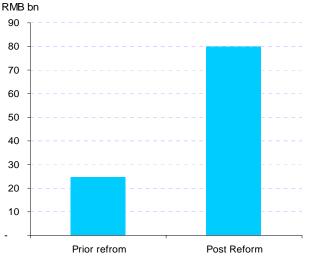


Exhibit 7: Estimated Impact of Nationwide Resource Tax



Estimate assumption: Rmb3,500 per ton for crude oil price, Rmb400 per ton for coal, and Rmb790 per thousand cubic meters for natural gas. Source: CEIC, Morgan Stanley Research

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Likelihood

AlphaWise Evidence Series: China Macro Risk Radar

Impact

Risk Event Category: Financial Markets Shocks

Risk Event 7: Property Price Bubble Burst

Description of Risk Event:

- Property prices in 36 of China's largest cities have registered a rapid increase since mid-2009, rising 30%YoY on average by 2Q10 (Exhibit 8).
- The surge in property prices took place against a backdrop of ultra-accommodative monetary and credit environment in general and preferential home purchase policy in particular. Home mortgage loans increased by 40% YoY by 2Q10, while loan to property developers increased 26% YoY.
- In mid-April, Chinese authorities launched a set of austere measures against property speculation out of concern about rising risk of a property price bubble. Property transaction volumes have since contracted sharply, while property prices have stopped rising rapidly and even started to register modest declines in some cities. However, there does not appear to be any let-up in authorities' determination to curb property prices.
- A large number of property projects have been launched since mid-2009. In addition, the authorities are implementing an ambitious social housing program. In this context, an oversupply of housing could emerge as early as 4Q10, likely putting further downward pressures on property prices. Expectations of a decline in property prices would discourage home purchases, potentially creating a vicious circle and resulting in the burst of an asset price bubble.

Potential Impact:

- The burst of a property price bubble would have a more negative impact on economic growth than financial stability, in our view.
- · We expect the primary impact of the bursting of an asset price bubble to be manifested in the form of a deep downturn in property sales and hence construction activity, as real estate investment accounts for 25-30% of total fixed asset investment.
- Consumption could also be hit, as the sales of several big-ticket items (e.g., auto, construction & decoration materials, home appliances) are closely tied to property sales. The attendant negative wealth effect would also undermine consumer confidence.
- In view of the relatively high average down payment ratio for home mortgages (i.e., over 30%) and low loan-collateral ratio for property developers, the impact on the balance sheets of banks, households, and developers is unlikely to be so negative as to cause systematic financial risks, in our view.

Likelihood:

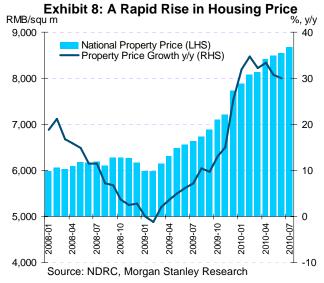
- The probability of a property price bubble bursting within the next 6-9 months is about 20%, in our iudament.
- The austere measures adopted in mid-April have made leveraged property speculation very difficult and much of the bubble element may have been squeezed out of the market for now.
- However, the risk of a property price bubble could reemerge beyond the near term. As long as a large amount of excess liquidity/savings is trapped inside China, due in part to capital account controls, the upward pressure on asset prices will likely persist, threatening to morph into property price bubble, if other conditions are met.

Evolving Direction:

 The risk of property price bubble burst will likely be stable over the next six to nine months, in our judgment.







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Likelihood

AlphaWise Evidence Series: China Macro Risk Radar

Impact

Risk Event Category: Financial Markets Shocks

Risk Event 8: Commodity Price Spike

Description of Risk Event:

- China is a net importer of a range of commodities, including crude oil, iron ore, metals, and soybeans. A spike in international commodity prices would translate directly into higher producer price inflation and hence broad inflationary pressures, as well as causing a notable deterioration in China's terms of trade.
- Taking China's demand as given, an international commodity price spike could be caused by strong global growth, speculation demand underpinned by abundant liquidity and low interests, a weak US dollar, or supply-side disruption (e.g., weather, natural disaster, military conflicts).
- In the face of a commodity price spike, China tends to either experience "imported inflation" or price controls where importers or producers are not allowed to
 pass on higher prices of imported inputs of commodities.

Potential Impact:

- We estimate that every 10% increase in the CRB index tends to cause a roughly 2.5% increase in domestic PPI inflation, which in turn could cause about a 0.5% increase in non-food CPI inflation, assuming no price controls (Exhibit 9).
- To the extent there are price controls or firms do not have pricing power, these firms' profit margins would be squeezed. The experiences of refineries and independent power producers in 2006-08 and steel makers in 2009-10 are cases in point. In the former case, the losses incurred by state-owned oil companies were implicit fiscal subsidies to the economy, and we estimate that the implicit subsidies amounted to Rmb350bn, or 1.1% of GDP in 2008.
- We estimate that in China the income loss due to a sharp deterioration in terms of trade in 2007-09 amounted to Rmb2.2tn or 6.5% of GDP.
- To preempt imported inflation, policy makers would have to implement tight monetary policy through either raising interest rates or allowing the renminbit to
 appreciate. In either case, there would be collateral damage to the overall economy.

Likelihood:

- In view of a weak global economy, the probability of a commodity price spike over the next six months 50 seems low, or no more than 20%, in our judgment.
- China is more exposed to price increases in energy and hard commodities than to soft commodities, because China can maintain production self-sufficiency for main categories of grains except soybeans.

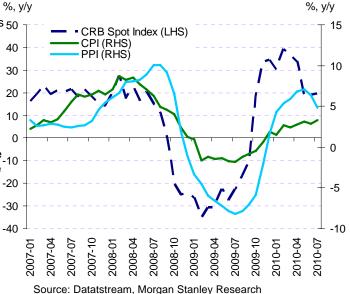
Evolving Direction:

- The probability that the Chinese economy will suffer from the impact of a commodity price spike will likely increase over time, in our judgment.
- Over the medium and long term, as the global economy recovers and the dependency of the Chinese economy on international commodities rises, China will likely become increasingly vulnerable to more frequent shocks stemming from commodity price spike.
- For instance, China became a net importer of coal in 2009 and corns in 1H10.

Timing:



Exhibit 9: Domestic Inflation Lags CRB Index



Likelihood

AlphaWise Evidence Series: China Macro Risk Radar

Impact

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Risk Event Category: External Shocks

Risk Event 9: European Sovereign Debt Crisis Redux

Description of Risk Event:

- The Euro Zone as a market of destination accounts for about 20% of China's total exports. A Eurozone sovereign debt crisis redux would threaten to cause a sharp slowdown in China's export growth.
- In this context, the potential slowdown in China's export growth could be due to: 1) a major disruption of trade finance caused by rapid deleverage by financial institutions, as was the case in the immediate aftermath of Lehman's collapse; or 2) fiscal austere measures that would directly weaken Eurozone demand.

Potential Impact:

- The main channel through which a potential Eurozone sovereign debt crisis would affect China is through trade links. The links through private financial flows between China and the Eurozone are rather limited, given that China maintains tight capital account controls.
- While the Euroland economy constituted the market of destination for about 20% of China's exports in total, about 3% is accounted for by four European countries Portugal, Italy, Greece, and Spain that are experiencing considerable fiscal stress (Exhibit 10).
- The Chinese economy would be more seriously affected if Eurozone sovereign debt crisis were to involve both core and peripheral countries.

Likelihood:

- The risk of a Euro Zone sovereign debt crisis redux is about 20% over the next three to six months, in our judgment.
- According to Huw van Steenis, head of MS European banks research, and Elga Bartsch, MS Chief European Economist, the recent stress test conducted for European banks should help in reducing tail risks, but not would not be such a game changer. The medium-term deleveraging will still be a concern, reinforcing a creditless recovery for some Eurozone countries' growth and require ECB/other policy support (see <u>Bank Stress Tests: Transparency & Spanish stresses help.</u> although lots of missed opportunities, July 25, 2010).
- However, risk of potential slippages in implementation of a fiscal consolidation program by some countries could remain. A setback in this regard could again weaken investor confidence and drive financing cost up.
- In the event of Eurozone sovereign debt crisis redux, Chinese authorities will likely take resolute policy action to offset potential negative effects by boosting domestic demand.

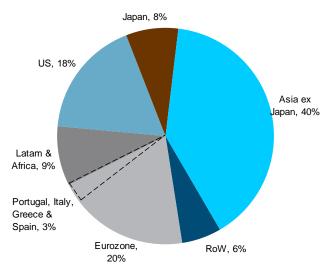
Evolving Direction:

• The probability of a Eurozone sovereign debt crisis redux and the attendant serious negative impact on the Chinese economy will likely be stable over time, in our judgment.

Timing:



Exhibit 10: China's Exposure to Countries Under Fiscal Pressures Is Small



Source: CEIC, Morgan Stanley Research

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Likelihood

AlphaWise Evidence Series: China Macro Risk Radar

Impact

Risk Event Category: External Shocks

Risk Event 10: Intensification of Trade Protectionism

Description of Risk Event:

- The risk of trade protectionism measures adopted by the US against China will likely rise substantially in the coming months. And as China's biggest trading partner country, the US tends to set an example good or bad for the rest of international community.
- If history is a guide, the combination of a high unemployment rate and an approaching major election in the US (i.e., the mid-term elections in early November) tends to be a recipe for trade protectionism measures.
- In June, the US trade deficit worsened significantly, while in July China registered its largest trade surplus since 2009 of US\$29bn. This took place against the backdrop of a US administration that has set its goal to double US exports over the next five years. Moreover, the renminbi exchange rate a key focus of Sino-US economic relationship has been kept remarkably stable against the dollar since early July after the *de facto* hard peg against the USD ended in June (see <u>China Economics: Renminbi on Summer Break</u>, August 16, 2010).

Potential Impact:

- While the direct and immediate impact of any trade protectionist measure are unlikely to be devastating, they could inflict lasting damage on investor confidence if these measures were to be perceived to be the beginning of a move toward threatening Sino-US and even the global trade system.
- According to WTOs statistics, trade disputes filed against China have continued to rise over the last few years, and its accounted for more than on-third of the world total anit-dumping initiations (Exhibit 11). At this juncture, about 37 cases were initiated against China at WTO as of August, which is not that high so far compared to the 77 cases initiated in full-year 2009.

Likelihood:

- We assign a 30% of probability to the risk of intensification of trade protectionism over the next three to six months, unless the global economy suffers a double-dip in growth that would result in a major backlash in global trade protectionism.
- We do not believe, however, that trade tensions between the two countries will spin out of control, because a trade war is not in the strategic interest of either the US or China.
- Moreover, the fact that the two governments have been having a close dialogue and communication (e.g., US-China Strategic & Economic Dialogue) should also contribute to lowering the risk of any major unpleasant surprise.
- By allowing the renminbi to exit its *de facto* hard peg against the US dollar one week before the G20 summit in late June, Chinese authorities have demonstrated their flexibility.

Evolving Direction:

• The probability of intensification of trade protectionism measures against China would likely be increasing over the next three to six months, in our judgment.

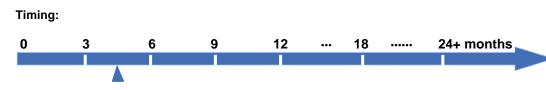
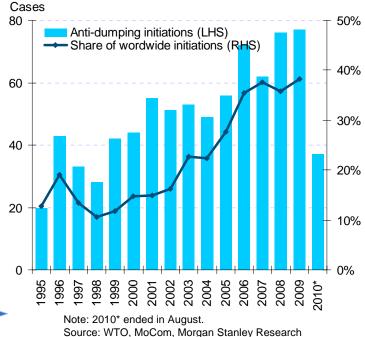


Exhibit 11: Anti-dumping Cases against China at WTO



AlphaWise Evidence Series: China Macro Risk Radar

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September 6, 2010 Greater China Economics

August 16, 2010

China Economics Renminbi on Summer Break

Morgan Stanley Asia Limited

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While the renminbi (RMB) exchange rate now appears to be on a summer break... Since it exited from its peg against the USD on June 20, the RMB has appreciated against the USD rather fast, by about 0.8% in the first 10 trading days through July 2. However, the exchange rate has since been broadly stable at around 6.77, while most other EM currencies have registered meaningful appreciation against the USD.

...the Chinese authorities recently launched an educational campaign articulating the virtues of and their strong commitment to a flexible exchange rate

arrangement in the form of five consecutive articles published under the name of PBoC Deputy Governor Hu Xiaolian. This is the first time the Chinese authorities have systematically addressed several important issues pertinent to China's exchange rate policy featuring three key elements: a) to be determined based on market demand and supply; b) with reference to a currency basket; and c) under a managed float regime.

Now that it is getting close to back-to-school time... We expect: a) China to experience even larger trade surpluses in 2H10 than in 1H10; b) political pressures from major members of the international community on China to allow a stronger RMB to intensify greatly in 2H10.

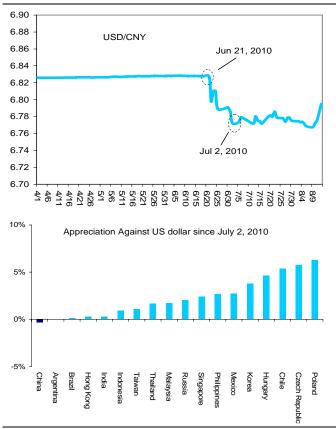
... the Chinese authorities will likely be more proactive in implementing their strategy for a flexible exchange rate arrangement by: a) allowing faster appreciation of the renminbi against the US dollar in part to ease political tensions (especially vis-à-vis the US); b) such that the RMB would appreciate on a trade-weighted basis meaningfully as long as large trade surpluses (i.e., over 2.0% of GDP) persist; and c) imparting more transparency to the operation of a currency basket by officially publishing the nominal effective exchange rate index for the RMB.

Implications: We maintain our forecast that the USD/RMB rate will reach 6.60 by the end of 2010 and 6.20 by the end of 2011.

Since it exited from its peg against the USD on June 20, the RMB has appreciated against the USD rather fast, by about

0.8% in the first 10 trading days through July 2 (see *China Economics: Renminbi Exits from USD Peg and Returns to Pre-Crisis Arrangement*, June 20). However, the exchange rate has since been broadly stable at around 6.77, while most other EM currencies have registered more meaningful appreciation against the USD (Exhibit 1).

Exhibit 1 Renminbi on Summer Break



Source: CEIC, Morgan Stanley Research.

Authorities' Educational Campaign

Chinese authorities recently launched an education campaign articulating the virtues of, and their commitment to, a flexible exchange rate arrangement in the form of five consecutive articles published under the name of PBoC Deputy Governor Hu Xiaolian (see Appendix for the five articles).

In these articles, Deputy Governor Hu conveys the following key messages.

 Chinese authorities have long made a strong commitment to a managed floating exchange rate regime, dated as far back as in 1994.

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- The floating of the exchange rate is based on market supply and demand, so that the exchange rate plays a role as a price signal. The range of floating adjustment is based on trade and current account balances to reflect the "managed floating" nature. The exchange rate is determined with reference to a basket of currencies, rather than the bilateral exchange rate between the RMB and any single currency.
- A flexible exchange rate regime helps improve the effectiveness of monetary policy.
- Reform of the exchange rate regime and adjustment of production factor prices substitute and complement each other to help optimize resource allocation, incentivize enterprises to improve management and speed up technological innovation, reduce consumption of resources and energy, and promote the restructuring and sustainable development of the economy.
- A floating RMB exchange rate shows that China is dedicated to promoting global economic balance and that China is a responsible member of the international community. This has helped ease tensions in China's trade relations with foreign countries and lessen trade protectionism attempts targeting China.
- China's experience in pushing through reform of the RMB exchange rate regime has so far proven successful.

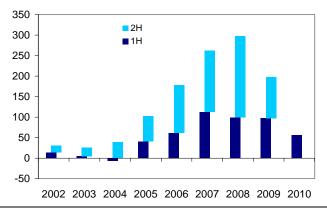
Besides these general arguments, we have several takeaways based on our reading and interpretation of Deputy Governor Hu's articles, which potentially carry important operational implications in practice.

- Trade surplus based on custom data which are available on a monthly basis – will be used as an important gauge of the underlying market demand and supply, when it comes to determining whether the RMB exchange rate should appreciate or not.
- For all practical purposes, the RMB exchange rate in this context refers to the nominal effective exchange rate (NEER), or trade-weighted exchange rate index, rather than either the real effective exchange rate index (REER) or the bilateral rate vis-à-vis USD. However, shifting from targeting the USD to NEER would take time, according to the PBoC.
- In addition to helping balance external trade, the PBoC assigns importance to the role of RMB appreciation in helping contain 'imported inflation' stemming from high international commodity prices.

Getting Close to Back-to-School Time

Summer time is nearly over and it is getting close to back-to-school time. Looking ahead, potential economic and international political developments suggest that the pressures on the RMB exchange rate to appreciate will intensify greatly in 2H10, in our view.





Source: CEIC, Morgan Stanley Research

On the economic front, we forecast that China will experience substantially larger trade surpluses in 2H10 than in 1H10.

- First, that China tends to register wider trade surpluses in 2H than 1H has been a seasonal pattern, as, on average, two-thirds of trade surpluses of the year have materialized in 2H since 2002 (Exhibit 2).
- Second, the domestic economic cyclical conditions in 2H would work toward further widening trade surpluses. And the large trade surplus in July is a case in point. Specifically, on the one hand, moderation in domestic demand growth as policy stimulus exits, together with stable international commodity prices, would result in a significant decline in the growth rate of China's imports in 2H10. On the other hand, the deceleration in China's export growth is unlikely to be drastic, based on the growth outlook envisaged by our global economics team for G3 and other major EM economies (see *Global Forecast Snapshots, Global Outlook: Just to Say No to the Double-dip*, June 10). Incidentally, China's share of the global market has been edging up, suggesting no deterioration in its external competitiveness.

On the political front, pressures from major members of international community on China to allow a stronger RMB will intensify greatly in 2H, in our view.

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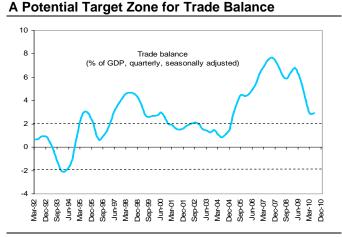
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- First, in its latest review of the Chinese economy, the IMF assessed that "the RMB remains substantially below the level that is consistent with medium-term fundamentals" and suggested that "an appreciation of the real exchange rate needs to be a key component of the government's medium-term strategy to rebalance toward higher private consumption"1. And China "will need to avoid having movements in the real effective exchange rate determined by the relative strength or weakness of the US dollar..."
- Second, in its semi-annual report on currency manipulation issued on July 8, the US Treasury Department considered that the RMB is undervalued and, going forward, "what matters is how far and how fast the renminbi appreciates." The next semi-annual report on currency manipulation is due by October 15.
- Third, the next G20 summit is due to take place in November, and leaders are expected to "develop more specific policy recommendations with a view to achieving balanced and sustained global growth". Incidentally, China decided to allow RMB to exit from its de facto peg one week before the previous G20 summit took place in late June. This was the key reason for G20 to be silent on the RMB exchange rate issue in its communiqué issued at the conclusion of the Summit, in our view.
- Last, but not least, US mid-term elections will kick off in earnest soon. In view of still persistently high unemployment in the US, we believe calls from US politicians for trade sanctions against China in the absence of meaningful RMB appreciation will almost certainly increase as they return to Washington after the summer recess and in the run-up to Election Day in early November. In this context, the risk of real and permanent damage to China's external trade environment would surely rise, in our view.

From "Talk the Talk" to "Walk the Walk"

Deputy Governor Hu's articles represent the first major effort undertaken by the Chinese authorities to systematically address all the important issues pertinent to China's exchange rate policy. Indeed, it seems to us that these articles have pushed all the right buttons in addressing this subject. The key question now is when the Chinese authorities are likely shift from "Talk the Talk" to "Walk the Walk". We expect the Chinese authorities to be more proactive in implementing their strategy for a flexible exchange rate after the summer break. The potential action plan will likely feature the following key components, in our view:

- Allowing faster appreciation of the RMB against the USD to help ease international political pressures in general and reduce potential bilateral tension vis-à-vis the US in particular. This could be accompanied with larger two-way volatility.
- In so doing, the RMB would appreciate on a trade-weighted basis meaningfully as long as large trade surpluses persisted. Specifically, we believe a run-rate for the trade surplus of 2% of GDP will likely be the threshold: greater than 2% of GDP would warrant appreciation of the RMB on a trade-weighted basis; if the trade surplus were to fall below 2% of GDP, the RMB will be kept broadly stable on a tradeweighted basis (Exhibit 3).
- More transparency will likely be imparted to operation of the currency basket, in that PBoC will likely start to publish the RMB nominal effective exchange rate index. However, it is highly unlikely that the PBoC will disclose the weight structure of the 11-currency basket, in our view².



Source: CEIC, Morgan Stanley Research.

Exhibit 3

² In a speech delivered in August 2005, PBoC Governor Zhou Xiaochuan disclosed for the first time the currency composition of the basket: 4 major currencies including USD, EUR, JPY, and KRW; and 7 other currencies including MYR, SGP, RUB, CAD, Sterling, AUD, and THB.

¹ IMF Country Report No. 10/238, July 2010

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Our RMB Call

We believe that the RMB is substantially undervalued and that its appreciation will likely be a multi-year phenomenon unless resolute structural reform efforts can rapidly bring about an economic rebalancing and thus a sharp reduction in FX reserve accumulation. However, given the constant structural shocks faced by the Chinese economy, as well as technical difficulties, we admit that we are not able to estimate the fair value for the RMB exchange in a rigorous analytical framework and thus determine with high conviction exactly how much the current exchange rate is undervalued. That said, we do believe the RMB exchange rate is at least 15% undervalued.

Moreover, the cyclical conditions of the Chinese economy and international politics also point to increasing pressures on RMB appreciation, especially over the coming months through to year end, in our view. Therefore, we maintain our forecast that the USD/RMB rate will reach 6.60 by the end of 2010 and 6.20 by the end of 2011.

Where We Could Be Wrong

The key risk to our call is that China's trade surplus in 2H10 could narrow instead of widening substantially. This would be possible if a very strong acceleration of domestic investment demand were to boost imports sharply, or a rapid deterioration in external demand were to cause a collapse in China's exports. Under these circumstances, the run-rate of trade surplus in 2H could decline to well below 2% of GDP, and the Chinese authorities might halt the RMB's appreciation and even effect a depreciation, albeit temporarily.

Appendix: Five Articles Authored by Hu Xiaolian, Deputy Governor of the PBoC

(The articles below appear on the website of the PBoC.)

Article I: A Managed Floating Exchange Rate Regime is an Established Policy

China's has moved into a managed floating exchange rate regime based on market demand and supply with reference to a basket of currencies. As an important component of the socialist market system, this is a right choice based on China's specific circumstances and development strategy and is also an established policy.

I. A managed floating exchange rate regime has been in place since 1994.

1. The unification of dual exchange rates in 1994 marked the official beginning of the managed floating

exchange rate regime. Establishing a managed floating exchange rate regime based on market supply and demand and a unified and well-functioning foreign exchange market is stipulated in The Decision of the CPC Central Committee on Several Matters Concerning the Establishment of a Socialist Market Economic System adopted at the 3rd Plenary Session of 14th CPC Central Committee in November 1993. On the first day of 1994, with the unification of RMB's official exchange rate and swap market exchange rate, the single, managed floating exchange rate based on market supply and demand was officially adopted. The unification of dual exchange rates into a single exchange rate regime is worth mentioning because it put an end to the coexistence of official exchange rate and the swap market exchange rate which traded foreign exchange in the retention system.

In 1994, the exchange rate reform marked the launch of the foreign exchange surrender system where enterprises are required to sell to the banks their foreign exchange receipts and buy foreign exchange from the banks when necessary, ended the practice of foreign exchange retention and submission, and simplified the procedures for banks and enterprises to use foreign exchange, thus giving exporting enterprises a lot of incentives to export and earn foreign exchange. Meanwhile, with a unified inter-bank foreign exchange market being established, China began a new stage where the RMB exchange rate was based on market supply and demand. The RMB, as an important price tool, started to play a fundamental role in the allocation of foreign exchange resources. In 1994, when the dual exchange rates were unified, the RMB to dollar exchange rate adopted the swap market exchange rate of 8.7 yuan to one dollar. This reflected market fundamentals and the need of supporting exports to mitigate the shortage of foreign exchange reserve. The nominal RMB to dollar exchange rate appreciated to 8.3 yuan per dollar, or by about 5 percent between the beginning of 1994 and 1997 when the financial crisis was at its worst in Asia. This proves that RMB exchange rate was fluctuating and floating, reflecting the characteristics of a managed floating exchange rate regime.

2. The Asian financial crisis in 1997 caused a slow down in the improvement of managed floating exchange rate regime. After June 1997, as the crisis deepened, some Asian currencies depreciated by a large margins. With Chinese export seriously affected, there were strong domestic opinions calling for RMB's depreciation. If it took place, it would be understood by various parties. Yet, almost all countries and international organizations worried that a weaker RMB would be followed by a new round of competitive depreciation. In order to prevent the further contagion of the crisis, and preserve economic and financial stability in Asia, China made

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the announcement that the RMB would be not be depreciated, its floating range would be narrowed, and its exchange rate would be kept stable around 8.28 yuan to one dollar.

3. As the Asian Financial Crisis tided over, China has been more active on resuming and improving the managed floating exchange rate regime at an opportune time. Facing new situations after China's accession into the WTO and sluggish global economic growth after the 911 attack, the range for RMB exchange rate narrowed for a fairly long time to reduce uncertainties and maintain the continuity of RMB exchange rate policy. This measure, however, is ad hoc rather than a long-term institutional arrangement.

4. The exchange rate regime reform in 2005 was the continuation of the reform in 1994. The essential role of a stable and healthy financial system in preventing and addressing crisis was fully recognized in the wake of the Asian financial crisis. Around 2003, when financial reform in China was at a critical juncture, the country was faced with the urgent task of launching joint-stock reform in large state-owned banks, including the Industrial and Commercial Bank of China (ICBC) [...] Bank of China and China Construction Bank (CCB). The reform would improve their ability to adapt to the floating exchange rate regime and to provide companies with better risk management services, but it was an onerous work. In this context, the reform was first started in large state-owned banks in the summer of 2003. The Bank of Communications, Bank of China and Construction Bank of China completing the joint-stock reform and went public. Following that, in April 2005, the reform in the ICBC was started, and reform in the [...] China Development Bank was put on agenda. Reform in this front went ahead in parallel with the pilot reform program of non-tradable shares in listed companies, the introduction of short-term corporate financing bills and asset securitization products in the money market, and the progress in the reform of rural credit cooperatives. As a result, the deployment of reform in large financial institutions, which is the foundation for exchange rate regime reform, was completed by July 2005.

Meanwhile, the domestic pricing mechanism of resources was gradually reformed; reform in enterprises, particularly in state-owned enterprises (SOEs) proceeded smoothly; a group of large enterprises were listed in domestic and overseas markets; restructuring efforts aiming at better resources allocation was strengthened; and corporate governance and finance management were enhanced. Progresses in these areas reinforced the foundation for exchange rate regime reform on the micro level. Because of all these developments, it was believed that it was the right time to further reform the exchange rate regime. On July 21, 2005, China improved the managed floating exchange rate regime by moving into a managed floating exchange rate regime based on market supply and demand with reference to a basket of currencies.

II. The framework of the managed floating regime was enhanced and its content enriched

1. The mechanism that moves the exchange rate towards the adaptive and equilibrium level has been gradually established. The RMB exchange rate first dropped and then climbed up in general over the past three decades. Since 1978, the yuan depreciated from the initial 2.8 yuan per dollar, then moved downward to 8.7 yuan per dollar in early 1994, after which it edged up to 8.11 yuan per dollar in July 2005, and further rose to 6.85 yuan per dollar in late 2009. The exchange rate has been allowed to move within a wider band, i.e., from a daily band of 0.3 percent against the US dollar at the start of the reform in 2005 to 0.5 percent in 2007. As a result, market participants began to search for the adaptive and equilibrium exchange rate level by looking at balance of payments positions and foreign currency supply and demand.

2. Market supply and demand has an increasingly important role in determining the exchange rate. Following the liberalization of the RMB current account in late 1996, and with increasing channels for capital flows such as direct investment, portfolio investment and cross-border financing since 2001, foreign exchange supply and demand has improved, facilitating trade and investment, and making the holding and use of foreign currency more convenient. The role of supply and demand is becoming increasingly important in the foreign exchange market.

3. The foreign exchange market mechanism has improved. Before 1994, the RMB exchange rate was determined both by the authority and the swap market. Now it is determined in the interbank foreign exchange market through OTC transactions and supported by market makers. As the foreign exchange market grows rapidly, the role of market participants in determining the exchange rate central parity has been increasing. In response to the diversified trade and investment structure, the exchange rate regime is with reference to a basket of currencies, rather than pegging to the US dollar.

III. A managed floating exchange rate regime is in China's long-term and fundamental interests and we will continue to implement the regime.

Adopting a managed floating exchange rate regime is an inevitable choice for China to deepen reform and opening-up, and adapt to the new pattern of development and opening-up

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after China's accession into the WTO. In line with the scientific approach to development, this is a choice consistent with China's economic development level, improvement in market-based institutional arrangements and financial regulation and enhanced resilience of the corporate sector. Continued efforts will be made to implement the regime.

1. The regime is essential for economic restructuring and the optimization of resource allocation. Exchange rate represents the price relations between tradable and non-tradable goods and services. A fixed exchange rate may make accounting and risk management easier for market participants for some time, but if misaligned with the fundamentals of supply and demand for too long a time, such a regime will distort relative prices on domestic and foreign markets, undermine the efficiency of resource allocation and accumulate domestic and foreign economic imbalances. A managed floating exchange rate regime will enhance the efficiency of resource allocation, adjust the relation between domestic and foreign prices in a flexible manner, channel resources to the sectors that are driven by domestic demand such as the services sector, promote industrial upgrading, transform the pattern of economic development, reduce trade imbalances and over-reliance on export, enable domestic demand to play a more important role in economic development and thus promote sustainable and balanced economic growth.

2. We need such a regime to strengthen and improve macroeconomic policy-making. Since the beginning of the reform and opening-up and especially since the entry into the WTO, China has seized the historical opportunity of international industrial relocation and improved productivity and economic strengths. Nevertheless, the economy has problems such as large BOP surplus, rapid growth of foreign reserves, oversupply of liquidity, inflation and heightened pressures from asset bubbles. Meanwhile, growing magnitude of capital flows has posed challenges to the independence and flexibility of monetary policies. Given the impossible trinity of achieving monetary policy independence, fixed exchange rate and free capital flow in an open economy, a managed floating exchange rate regime will help enhance the proactiveness and capability of macroeconomic management and the effectiveness of monetary policy, curb inflation and asset bubbles and contain the macroeconomic risks.

3. A rigid exchange rate regime is not responsive to crisis and may even trigger monetary and financial crises. According to international experiences, prolonged BOP imbalances and peg to a single currency by a medium- or large-sized economy can hardly sustain, and may increase its

vulnerabilities to crises. A rigid exchange rate has been an important contributing factor to the Mexican financial crisis in 1994, Asian financial crisis in 1997, Brazilian financial crisis in 1999 and Argentine financial crisis in 2001. Not much harm will be done to a small country if it links its currency with that of a large one, but this is hardly the case for large countries as they have larger interaction with global economy. In addition, a fixed exchange rate is an easy excuse for trade friction and protectionism. Thus, it is necessary for large countries to have flexible exchange rate policy. China has adopted and will continue to improve the managed floating exchange rate regime. While furthering the exchange rate regime reform provides a great deal of potential for future benefits, efforts would also be needed to minimize possible negative impacts. These measures help maintain a facilitating environment for free trade, achieve long-term cooperation and common development, facilitate China's economic development at the juncture of strategic importance and foster a favorable international economic and trade environment.

On June 19, 2010, the PBC announced to further reform the RMB exchange rate regime based on measures taken in 2005. According to the announcement, continued emphasis will be placed to reflecting market supply and demand with reference to a basket of currencies and the exchange rate floating bands will remain the same as previously announced in the inter-bank foreign exchange market. This is an important move in reforming the managed floating exchange rate regime and will help maintain RMB exchange rate basically stable at an adaptive and equilibrium level, promote a balanced BOP account and financial market stability and realize quality and rapid growth of the economy.

Article II: Three Characteristics of the Managed Floating Exchange Rate Regime

The content of the managed floating exchange rate regime includes three aspects. First, the floating of exchange rate is based on market supply and demand so that the exchange rate plays a role as a price signal. Second, the range of floating adjustment is based on trade and current account balances to reflect the "managed floating" nature. Third, the exchange rate is determined with reference to a basket of currencies, rather than the bilateral exchange rate between RMB and any single currency.

I. A managed floating exchange rate regime based on market supply and demand is to achieve the general balance of the balance of payments account.

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In theory and practice, resource allocation is efficient when the supply and demand is broadly in balance. When the supply and demand is not in balance, optimization of resource allocation is not possible. When total exports are persistently smaller than total imports, resources are not adequately channeled to the export sector, and it would result in shortage of foreign exchange and consequently import demand for consumer and capital goods cannot be met; when total imports are persistently smaller than total exports, resources are overly concentrated in the export sector and subsequently the foreign exchange earned through export cannot be absorbed by import and can only be invested overseas. If investment is concentrated in low-yield sectors overseas, the resource is not allocated efficiently. Since the establishment of a socialist market economy was identified as an objective in the 14th CPC National Congress, efficient resource allocation based on market supply and demand has become the focus of reform.

To evaluate the efficiency of resource allocation from a BOP perspective, we mainly look at whether the current account is in balance. The capital and financial account, the component of the BOP account other than the current account, records, among others, inter-temporal investment and would inevitably include speculative activities. International experiences have shown that the capital and financial account does not offer a perspective as good as the current account in measuring the impact of the exchange rate on efficiency of resource allocation. Foreign exchange reserve is an important item in the BOP account. A country's need for foreign exchange reserve may vary in different development stages. The build-up of foreign exchange reserves may also be inter-temporal. Inadequacy of foreign exchange reserve can be made up by appropriatesurplus, but in the medium and long run a balanced current account is best for resource allocation and social welfare.

The BOP balance, and current account balance in particular, is the basis for equilibrium exchange rate analysis. An internationally accepted indicator is the current account balance to GDP ratio. For example, the current account norm is the core concept in the macroeconomic balance (MB) approach, which is used by the IMF to assess member country's exchange rate. If a country's current account balance exceeds the norm in the medium term, its exchange rate is believed to be undervalued, and otherwise the exchange rate is overvalued. The size of the gap between current account balance and the current account norm indicates the degree of undervaluation or overvaluation.

In the medium and long term, the correlation between exchange rate and current account balance may not be this simple because resource endowment, industrial division of labor and consumption behaviors are more significant factors in international trade and economic activities. Nevertheless, good policy-making on exchange rate needs to be supported by forward-looking judgment on the supply and demand on the foreign exchange market and such judgment is based on analysis of current account balance. The supply and demand on the foreign exchange market is of course related to the overall BOP situation, not only the current account. Generally speaking, however, the current account reflects activities of the real economy, and the current account balance accounts for the major part of BOP. Since 2007, the share of current account surplus in China's BOP surplus has been over 75 percent. Moreover, with a full convertibility, China's current account is responsive to market supply and demand. Therefore, the analysis of the foreign exchange market based on the current account will not lead to systematic errors.

Since return on investment as a current account item is related to the capital account, as a practical consideration, it is not included in current account balance analysis. Instead, the analysis looks at trade balance, which is represented by trade statistics from the Customs because it is regularly updated and readily available.

II. The Exchange rate floating is based on the current account, mainly the trade account balances

Managed floating exchange rate serves three purposes. It is needed to deal with any unexpected movements in domestic and international markets to avoid dramatic currency fluctuations and curb financial speculation; to bring the exchange rate to an appropriate level that helps improve resources allocation and promote a balanced BOP account; and to make sure that any improvement in resources allocation could be absorbed by most companies and would not lead to massive closures and job cuts.

The equilibrium exchange rate determination theory treats exchange rate as a function of current account balance or trade balance. If the function has a linear relationship with current account balance, it could be adjusted accordingly. However, the relationship is much likely to be non-linear, which means exchange rate floating needs to be progressed in a gradual and proper manner and should be managed in line with the state of the economy and BOP position.

Exchange rate adjustment poses pressures on the corporate sector's structural adjustment. A large or rapidly growing trade surplus means companies are generally adaptive to such pressures, while a shrinking surplus suggests companies need to enhance their ability to deal with exchange rate adjustment.

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The adjustment process needs to be properly paced to take full advantage of favorable factors and contain the impact of disadvantages. It should also take into account global economic development and international cooperation to help secure the current period of strategic opportunities.

Exchange rate adjustment helps improve the relative position of domestic and external prices, and optimize resources allocation between domestic-oriented sectors and the external sector. It supports domestic consumption growth, industrial restructuring and innovations. This progress will in turn facilitate market-based adjustment of current account position and ultimately contribute to balanced and sustainable growth.

Exchange rate adjustment also affects capital account. Therefore, it is necessary to closely monitor capital flows, stand ready to conduct sterilization operations, and impose limits on external debts. It is important to put restrictions on converting the external debts of foreign currencies into RMB, and step up efforts to address irregularities in foreign exchange flows, as experiences from Thailand and other countries show, borrowing external debt and converting it into domestic currencies by the private sector, corporate sector or other sectors is a major channel for capital inflows. Temporary control on capital inflow and outflow may also be introduced if circumstances warrant, as what has been done recently by a number of emerging market economies.

III. Measure the Exchange Rate with Reference to a Basket of Currencies

A floating exchange rate has impact on total imports and exports of an economy. Therefore, the floating cannot be aimed to adjust bilateral trade balance and it is not advisable to just look at the RMB/USD exchange rate. Theoretically, the best indicator to measure the international relative price of tradables is real effective exchange rate, i.e. the exchange rate measured by a basket of currencies of major trading partners. Real effective exchange rate reflects the movement of dollar exchange rate to other major currencies and has been adjusted against the cross country inflation differentials. There are various opinions on the currencies in the basket. Though it is necessary to take into account trade, capital flow and other factors, weighted trade is usually the major factor to consider because capital flow fluctuates. Specifically, the effective exchange rate basket should have a variety of currencies to reflect diversification of trade and investment. The weight is to be determined based on the current account situation and the currency structure of capital and financial account and of cross-border receipt and payment.

The reference of a basket of currencies is reasonable in theory. In practice, however, the nominal effective exchange rate, which is not inflation-adjusted, is more frequently used, for the following reasons: First, it is hard to settle on a universally accepted and comparable price index. Though commonly used, the CPI may not be appropriate according to academicians as it includes prices of many non-tradables. Other options, such as PPI, GDP deflator and the index of per unit labor cost, are not widely accepted. Second, the calculation of real effective exchange rate has to deal with the time lag and availability of data, and price indices such as the CPI are subject to time lags and comparability. There are easily accessible and real time data for nominal exchange rate while it takes one month to get CPI and PPI readings, at least one guarter to get GDP deflator and even longer for the index of per unit labor cost. Moreover, statistical coverage of countries varies greatly and some countries hardly have comparable data.

Compared with pegging to a single currency, the exchange rate regime with reference to a basket of currencies will help adjust exports and imports, current account, and balance of payment in a more effective manner. It has two-way movements of exchange rate. The RMB exchange rate has been basically stable at an adaptive and balanced level though it may fluctuate in both ways against any particular single currency.

Since the RMB exchange rate regime reform that started in 2005, the focus of public communications has been the RMB exchange rate regime with reference to a basket of currencies. But the mindset of focusing too much attention on RMB/USD exchange rate cannot be changed overnight due to behavioral habits and the dominant use of US dollar in accounting and statistics. This underpins the necessity for China to make more efforts to improve the exchange rate regime based on market supply and demand (mainly through the current account and especially the trade account balances) with reference to a basket of currencies. In the future, consideration can be given to disclosure of the nominal effective exchange rate information on a regular basis and to gradually shift the public's attention on RMB/USD exchange rate to the effective exchange rate of RMB, which is the true reference for its movement.

Article III: Exchange Rate Regime Reform and Monetary Policy Effectiveness

The Chinese economy is growing rapidly, and is becoming increasingly market-based and more open. As a result, China needs to deal with a much more complicated economic situation. In this context, the ability to conduct macroeconomic

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management is critical for ensuring sound, rapid and sustainable growth, and the effectiveness of monetary policy has also taken on greater importance. At the current stage of development, China needs to employ monetary policy to accommodate four broad objectives, i.e., price stability, growth, full employment and balanced BOP account. Exchange rate policy has played a role in achieving these macroeconomic objectives. It also has an impact on China's competitiveness, trade relations and resources allocation. Therefore, improving the managed floating exchange rate regime and gradually enhancing exchange rate flexibility will help make monetary policy more flexible and effective, and strengthen the ability to conduct macroeconomic management.

I. Monetary policy is an important means of macroeconomic management in China

Monetary policy is one of the important means through which China manages the economy. Its effect is transmitted through the financial system, the core of a modern economy. The effect of monetary policy is not limited to one sector or one area. More broadly, it is felt in every part of the economy and affects individual economic behaviors at the micro-level. In this sense, monetary policy carries more system-wide implications and is more systemically important than exchange rate target. Monetary policy flexibility and effectiveness are particularly important under China's unique circumstances. As a big developing country undergoing reform and transition, China has to deal with complicated and rapidly changing economic situation, and its macroeconomic policies are therefore designed to meet multiple objectives, such as reform and development. More specifically, monetary policy also has various objectives, including managing inflation, supporting growth, promoting a balanced BOP account, boosting employment and facilitating financial reform. This fact highlights the importance of making flexible and effective monetary policies.

The Chinese economy was put under critical test since the global financial crisis began to unfold in the second half of 2008. To deal with the extremely complicated situation both at home and abroad, the Chinese government implemented a proactive fiscal policy and relatively easy monetary policy, and adopted a comprehensive policy package. The economy was among the first to recover in the world. In response to the rapidly changing situation, the Chinese government decided to focus on making substantial progress in shifting the development pattern, and make sure that progress in this front is in line with the objective of supporting sound and rapid economic development, so that the two facilitate and reinforce each other. Recently, in parallel with rapid recovery, China observed a rapid increase in foreign

exchange inflows and a substantial rise in liquidity, which remains abundant despite of vigorous sterilization efforts. This leads to potential risks of heightening inflation expectation and asset speculation. In this context, economic policy makers need to carefully balance the relations between supporting sound and rapid growth, restructuring the economy, and managing inflationary expectation.

Historical experiences from many countries show that inflation and inflation management is not only an important topic in the study of economics, but also a key issue that affects social and political stability. Inflation, as put by Milton Friedman, the Nobel laureate in economics, is a dangerous disease that can be fatal and destroy the whole society if unchecked. In China, it is the low-income groups, especially over 40 million urban low-income groups and nearly 100 million migrant workers that will be hit the hardest by inflation. Any mismanagement in this issue would undermine social justice and stability. For the central bank, this means it should take preserving the value of domestic currency as the primary responsibility and prevent risks of high inflation. As monetary policy proves to be the most important and effective tool in managing inflation, the central bank should enhance the effectiveness of monetary policy to ensure price stability and, by doing so, promote economic growth.

II. Monetary policy effectiveness has faced challenges in recent years

The independence and effectiveness of China's monetary policy has met with serious challenges from rapid expansion of RMB supply as a result of foreign exchange purchase. Prior to 1993, China ran current account surplus and capital and financial account surplus on an alternate basis. The situation changed in 1994 when China began to have twin surplus and intensified following China's accession to the WTO in 2001, as current account surplus widened markedly and became the major contributor to BOP surplus. In the context of relatively stable exchange rate, the expansion of BOP surplus and inflow of foreign exchange forced the PBC to passively inject base money via foreign exchange purchase.

In recent years, the PBC has strengthened the capability of macroeconomic management according to the overall arrangements of the central government in line with the country's development strategy. In response to changes in economic and financial circumstances and foreign exchange flows both at home and abroad, management of the banking sector liquidity has become an important part in the PBC's monetary policy conduct. Instruments such as open market operations and reserve requirement ratio have been adopted

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to sterilize the growth of RMB supply as a result of foreign exchange purchase, and to absorb excessive liquidity in the banking system. Nevertheless, the root cause of the liquidity problem has not been solved. The RMB equivalent to foreign exchange purchase has become the major source of base money supply while central bank lending to financial institutions accounts for a smaller share. This undermines the independence of monetary policy and makes money supply a more endogenous factor. In recent years, though CPI has remained basically stable at a fairly low level, broad price levels such as PPI and asset prices such as housing prices have increased significantly. Moreover, the issuance of central bank bills and the frequent adjustments of reserve requirement ratio in the banking system have also affected the operational behavior of commercial banks and even the efficiency of the financial system. The sterilization cost for the central bank has also been on a rise.

III. A more flexible exchange regime helps enhance the effectiveness of monetary policy

According to the argument of Impossible Trinity, capital and financial account convertibility, independent monetary policy and exchange rate stability cannot be achieved at the same time. It is feasible for a small and open economy to pursue exchange rate objectives at the expense of monetary policy independence. The Hong Kong SAR is such an example by adopting a currency board system, where the Hong Kong dollar is strictly pegged to the U.S. dollar and the Hong Kong Monetary Authority follows the Federal Reserve in its adjustment of Hong Kong dollar interest rates. As for Singapore, exchange rate instruments, rather than interest rates, are used more frequently in macroeconomic management, as exchange rate is taken as the intermediate monetary policy target. China is not a small economy. With a population of 1.3 billion, China cannot afford to lose monetary policy independence and subject itself to economic policies of other countries. Adopting a more flexible exchange rate regime serves China's long-term interests as the benefits of long-term price stability and economic restructuring far exceed the cost in reorganizing certain industries and removing outdated capacities.

At present, a more flexible exchange rate regime will help curb inflation and asset bubbles. When domestic inflationary pressures are heightened, a stronger domestic currency will help bring down the price of imports. The role played by exchange rate in easing imported inflationary pressures is particularly important for a country like China that has a robust demand to import primary products due to unfavorable resource endowment. Economic restructuring and growth pattern upgrade, as urgent tasks of strategic importance, cannot be accomplished without persevering efforts. When doing so, it is desirable for China to seek more balanced trade development. Price tools such as exchange rate can be adopted to adjust trade and BOP imbalances. This will help ease pressure of inflows of foreign exchange and rapid build-up of reserves, promote sound and sustainable development, and realize stable and orderly growth of money supply.

According to international experiences, a flexible exchange rate regime helps mitigate impacts of external shocks and enhance macroeconomic resilience. Financial crises in the 1990s have shown that a rigid exchange rate regime is vulnerable to speculation and may even trigger self-fulfilling currency crisis.

Stronger exchange rate flexibility also helps improve the transmission mechanism of monetary policy. Since 2005, the RMB exchange rate regime reform that has progressed in a self-initiated, gradual and controllable manner has enhanced market players' awareness to adapt to exchange rate movements and made them more responsive to market changes. The money market and foreign exchange market have developed both in breadth and in depth. Adapting to more flexible exchange rate, financial institutions have strengthened risk management, improved financial services and come up with more product innovation. These have helped improve the transmission of monetary policy at the micro and market levels and played a positive role in enhancing the effectiveness of monetary policy.

Article IV: The Cooperative Relation between Adjustment of Production Factor Price and Reform of the Exchange Rate Regime

China faces a major challenge and the task of restructuring the economy and achieving sustainable and balanced growth. To realize these goals and to transform the growth pattern, the Chinese government has taken a series of decisive measures, especially in the field of the price reform of production factors, energy saving and emission reduction, e.g. promoting the resource tax and fee reform, increasing the cost of polluting the environment, raising the minimum wage of enterprise employees, and etc. The price of labor, resource and energy and environment cost are generally on the rise. In this context, further reform of the RMB exchange rate regime requires in-depth analysis on the relation between factor price adjustment and the reform of RMB exchange rate regime.

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1. It is necessary to adjust production factor prices as the economy develops. The benefits brought by economic development should be shared by the whole society and lead to higher wages. Significant demographic change is underway in China. In the first decade of the 21st century, the growth of working-age population moderated compared with the last two decades of the 20th century. Total working-age population may even decline in the next 5 to 10 years. With such a demographic change and continued and massive migration of surplus rural labor into the urban area, the Chinese economy is approaching the Lewis Turning Point, where labor surplus is expected to drain off and pressures for pay rise will mount. For years, wages for unskilled workers of export-oriented processing enterprises rose quite slowly, but migrant worker shortage frequently seen in recent years points to the fact that the wage for workers, especially that of the migrant workers, can no longer remain as low as previously was. Moreover, the Foxconn incident has drawn increased attention to the issue of low-income workers, pressing for substantial rise of minimum wages in many areas.

In the meantime, as the economy grows in size and consumes more energy and resources, bottlenecks will become more acute. With urbanization and industrialization rapidly progressing, the fast growing Chinese economy consumes massive amount of energy and resources and faces mounting pressures to protect the environment and address climate change. It is a general global trend that prices for non-renewable energy and resources and environment cost will be on a rise. From 2003 to 2009, the purchasing price index of raw materials, fuel and power rose by a total of 35.6 percent, partly due to price hike on the international market and partly as a result of manufacturing and export expansion domestically. As China's economic development enters a new stage, growing public awareness of resource scarcity and environment protection adds to the pressure of energy and resource price adjustment. In short, production factor price will have to be adjusted regardless of the Balance of Payments (BOP) status.

2. The adjustment of production factor prices in a broad sense is an important component of China's economic system reform. The Chinese government has emphasized the need and made continued efforts to adjust the structure of income distribution, including raising the share of household income, promoting price reform of energy products such as petroleum, gas, water and electricity to have in place a more reasonable price system for basic products, raising pollution charge and fee standards for sewage and garbage treatment to deepen the reform of environment protection charges. In addition to direct price adjustments, measures have been adopted to reinforce law enforcement examination on environmental protection, keep market in order, forbid defaulting on wage payment to migrant workers, set a ceiling for maximum working hours and etc. All these measures will lead to a rise in the production factor price in general. When adjusting factor prices, usually consideration will be given to how to handle the relations between reform and inflation on the one hand and between reform and primary income distribution and redistribution on the other hand, and whether to compensate those affected negatively by such adjustments. Therefore, the adjustment of production factor prices needs to be planned and designed as an integral part of the whole reform package.

3. Adjustment of production factor prices and exchange rate movements can substitute and complement each other. The Central Economic Work Conference outlined the goal of expanding domestic demand and lessening the reliance on net export in the pursuit of national economic development, restructuring and growth pattern upgrade. Further reform of the exchange rate regime and adjustment of production factor prices in a broad sense both contribute to the goals above. Rapid adjustment of production factor price help ease appreciation pressures and a floating RMB exchange rate regime alleviate upward pressures on production factor prices. The two substitute each other to a certain extent. A proper mix of the adjustment of production factor prices and exchange rate changes based on the economic circumstances will be more effective to serve policy goals than adopting merely one of both. For example, compared with a substantial pay rise without enhancing the flexibility of exchange rate regime, a two-pronged approach will be more effective to promote stability and help ensure that the improvement of productivity and efficiency of enterprises is kept abreast with the rise of wage level. This is particularly true under upward price pressures. If the wage and price levels are allowed to rise unchecked while exchange rate is fixed, inflationary expectations will be reinforced, heightening uncertainties in consumption and investment and exposing the working population to higher inflationary risks. Therefore, adjustment of production factor price and the floating of exchange rate complement each other.

4. Adjustment of production factor price and greater exchange rate flexibility are different in frequency, flexibility, working mechanism and scope of influence. First, factor price adjustment measures aimed to establish a market-based pricing mechanism will intensify inflationary pressures and have distributional effect, and need to be supported by other policies. Thus frequent price adjustment is neither practical nor plausible. Under a managed floating exchange rate regime, the

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RMB exchange rate moves in both directions to reflect changes in economic circumstances and BOP.

Second, the two differ in terms of flexibility. In a managed floating exchange rate regime, the exchange rate is more flexible and moves in two directions, whereas the price of production factors is somewhat rigid. As resources and energy are becoming increasingly scarce, prices will go up in general; once introduced, environmental protection fee will always be levied and have little chance of being revoked; the efforts of reducing emission of carbon dioxide and other greenhouse gas will be strengthened; Labor compensation is also rigid as its long term adjustment tends to be one way except the occasional downward movement caused by crisis and major technological breakthrough. Exchange rate, on the other hand, will move in both directions to respond to market supply and demand when the current account is in surplus or deficit.

Third, the two reforms impact resource allocation in different ways. Exchange rate floating affect prices of imported goods and the general price level fairly quickly and alter the relative price between tradables and non-tradables. Exchange rate appreciation will move resources from tradable sectors to non-tradable sectors, and promote the development of services and other tertiary sectors and economic restructuring. Production factor price adjustment affects relative price of various categories of prices and is usually designed to enable prices to play a fundamental role in resource allocation.

Fourth, the two reforms affect different enterprises. In the case of exchange rate reform, a stronger yuan is likely to affect the price competitiveness of exporters, but is a favorable change to enterprises that import large quantity of raw materials and semi-finished goods to meet domestic demand. In the case of production factor price adjustment, higher labour and resources price and environmental protection cost will affect the corporate sector as a whole. Although enterprises are able to reduce the burden through technical innovation and higher resource utilization efficiency, the overall impact of such adjustment will be extensive and transmitted through a longer chain.

Fifth, the two reforms have different impacts on inflation. Production factor price adjustment will directly increase inflation pressure. If the RMB exchange rate appreciates in response to market demand and supply, that will directly reduce the domestic currency denominated price of imported goods, and reduce inflation pressure through changes towards a more balanced BOP account and the subsequent reduction of passive base money supply.

5. The production factor price adjustment and exchange rate regime reform can work together to achieve the intended outcome. On the one hand, a more flexible RMB exchange rate will create a low-inflation environment for the reform of production factor price, and will not stand in the way of such reform. Past experience has shown that the major consideration of production factor price adjustment is the concern for its impact on inflation and income distribution. For example, gasoline surcharge to tax reform has been in deliberation for more than a decade, and much debate is on the necessary conditions, timing, and distribution effect of such reform. The major concern is whether the price reform of production factor will cause inflation and have a big impact on income distribution. Exchange rate reform can mitigate the impact and promote production factor price reform. Moreover, when formulating the inflation range for monetary operations, consideration has been given to such reform.

On the other hand, the adjustment of production factor prices helps alter the cost-ineffective pattern of economic and trade growth both directly and indirectly. Such adjustment promotes the upgrade of export-oriented industries and makes enterprises more adaptive and resilient to volatility of market prices. It also helps ease the expectation of RMB appreciation, reduce short-term capital inflows, lessen pressures from the international community and thus provides a facilitating environment for further reform of RMB exchange rate regime. Therefore, the reform of exchange rate regime and adjustment of production factor prices complement rather than working against each other. Effective coordination of the two policy tools is essential to stable macroeconomic development.

To sum up, adjustment of production factor prices and further reform of exchange rate regime both contribute to realize the goals for macroeconomic management, as they help optimize resource allocation, incentivize enterprises to improve management and speed up technological innovation, reduce consumption of resources and energy, and promote the restructuring and sustainable development of the economy. Reform of the exchange rate regime and adjustment of production factor prices substitute and complement each other. They can be implemented in parallel. Unwavering efforts should be made to further reform the exchange rate regime and the pricing mechanism of production factors to consolidate the foundation for a balanced and sustainable economic development.

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Article V: Successful Experiences of Further Reforming the RMB Exchange Rate Regime

China moved into a managed floating exchange rate regime based on market demand and supply with reference to a basket of currencies on July 21st, 2005. Positive results produced thereafter showed that the reform was launched at the right time in the right direction.

I. The reform of exchange rate regime has been furthered at an appropriate time

It is at the 3rd Plenary Session of 14th CPC Central Committee that the goal of establishing a managed floating exchange rate regime based on market supply and demand was outlined. In January 1994, with the unification of RMB's official exchange rate and swap rate, the single, managed floating exchange rate based on market supply and demand was officially adopted. The RMB exchange rate gradually approached an adaptive level, which helped enhance the competitiveness of export-oriented enterprises and facilitated the shift from trade deficit to surplus.

During the Asian financial crisis in 1997, the RMB exchange rate was kept stable around 8.3 yuan to one dollar in order to brake competitive devaluation of Asian currencies. Though the impacts of Asian financial crisis subsided in 2001, the RMB was kept at a stable level against the US dollar as unfavorable factors, such as deflation, arose domestically. Reflecting on the crisis, China stepped up the financial reform and infrastructure building. Researches and preparation on resuming exchange rate floating were also well underway. As financial institutions had not completed reform and were not yet prepared to handle exchange rate movements or provide enterprises with relevant services, the reform of large-sized state-owned commercial banks was conducted before exchange rate reform.

The reform of large financial institutions, which is the basis for exchange rate regime reform, was completed by July 2005. The Bank of Communications, China Construction Bank and the Bank of China finished financial restructuring and became listed companies. The financial restructuring of Industrial and Commercial Bank of China was put on agenda and the preparation for the reform of China Development Bank [...] was underway. In addition, China's accession into the WTO had significantly enhanced the competitiveness of export-oriented enterprises. With continued expansion of trade surplus, Chinese enterprises and financial institutions were better prepared for the reform of the RMB exchange rate regime. With these conditions in place, the reform of exchange rate regime was launched decisively.

Around end July 2008, in order to address the deepening international financial crisis, China narrowed the floating range of RMB exchange rate and did not devalue the currency as many other countries did. This contributed much to stabilizing external demand, helped mitigate the impacts of the international financial crisis, and promote Asian and global economic recovery. Global economy is now recovering and China's economic recovery and upturn is more entrenched. In this context, as approved by the State Council, the PBC decided to further the reform of exchange rate regime and enhance the flexibility of RMB exchange rate on June 19, 2010. New challenges may arise as international economic and financial situations evolve, but the reform of RMB exchange rate regime will continue in line with our established policy.

II. The exchange rate regime is consistent with the market-based economic reform in China and an integral part of the restructuring package

China has moved into a managed floating exchange rate regime based on market demand and supply with reference to a basket of currencies. This is a right choice based on China's specific circumstances and development strategy. As an important component of the socialist market system and in line with the scientific approach to development, the exchange rate regime is needed in the country's endeavor to deepen reform and opening-up, and adapt to the new situation after China's accession into the WTO. In line with China's long-term and fundamental interests, a managed floating exchange rate regime is an inevitable choice that will facilitate economic restructuring and comprehensive, balanced and sustainable development, help strengthen macroeconomic management and facilitate China's economic development at the juncture of strategic importance.

The goal of China's economic policies is economic growth, full employment, price stability and a balanced BOP account. A package of restructuring measures is needed to address structural problems of high savings rate and inadequate domestic demand. In this package, exchange rate policy plays a role no less important than general industrial policies as it has an impact on domestic and foreign relative price in an aggregate sense. A misaligned domestic and foreign relative price leads to the distortion of domestic prices and undermines the stable, balanced and sustainable development of the economy. A proper mix of other structural policies and exchange rate policy can be more efficient in facilitating a well-functioning pricing mechanism. What has been achieved showed that, since the launch of the reform in 2005, the restructuring package has created a basis for exchange rate policy to play a fundamental role in domestic and external

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sector resource allocation, and the successful launch of the exchange rate regime has created a more facilitating environment for other reforms, such as the reform of resource prices. Moreover, exchange rate policy, together with lifting import control, easing foreign exchange control and accelerating the "going global" initiative, has played an important part in halting further accumulation of BOP imbalance. Improved flexibility of exchange rate also helps make macroeconomic management more proactive and efficient.

III. The positive results since the exchange rate regime reform in 2005

Core competitiveness of the corporate sector has been strengthened as a result of heightened efforts to upgrade and innovate products. This facilitated the optimization of export structure and the shift of trade and growth pattern. From 2006 to 2008, the structure of China's exports further improved. The share of machinery, electronic products and high-tech products continued to rise while the export by high-pollution, high-energy consumption and resource-intensive industries had been restricted. The share of export to developing countries and emerging markets went up while that to the developed countries declined. Meanwhile, the process of "Attracting Foreign Investment, Technology and Management Expertise" and "Going Global" gained momentum, enabling China to play a bigger part in global industrial chain and the international market. Being more responsive to exchange rate movements, large amount of export-oriented enterprises conducted proactive financial management and raised selling prices to cover exchange rate losses. Improved in quality, China's foreign trade registered further development.

Domestic demand supported by import expansion and lower import cost helped ease inflationary pressures. From June 2005 to June 2008, China's import volume totaled US\$2. 729 trillion. A total of 1.6497 trillion yuan of import cost was saved as a result of RMB appreciation against the dollar. Massive technology and equipment imports facilitated rapid improvement of China's capacity and productivity. Moreover, yuan appreciation against the US dollar in this period lowered the RMB-denominated price of import products and cushioned the impacts brought by the rise of international raw material price on domestic price level, which directly eased domestic inflationary pressures.

Resource allocation was optimized, promoting economic restructuring and more balanced development. As a result of macroeconomic policies including exchange rate policy, the industrial structure became more balanced with the service

industry contributing 42.9 percent to GDP growth in 2008, a growth of 2.6 percentage points from 2005. The geographical distribution of industries improved as the labor-intensive industry accelerated its reallocation to the central and western part of China, facilitating the implementation of national development strategy. In 2008, share of central and western region in China's GDP was 37.1 percent, up 1.3 percentage points from 2005. As more resources have been channeled to economic sectors driven by domestic demand, domestic demand contributed 90.8 percent to economic growth in 2008, up 14.9 percentage points from 2005. The concentration of labor force in the export sector as a result of an undervalued exchange rate has been partly corrected as more jobs have been diverted to the services industry, which is largely non-tradable. According to the National Bureau of Statistics (NBS), the number of people employed in the services industry as a percentage of total employment increased by 1.8 percentage points between 2005 and 2008. In the long run, the manufacturing industry will evolve from a labor-intensive industry to a capital-intensive one, providing fewer jobs. The services industry, in comparison, is by nature a labor-intensive industry and can create more jobs in a sustainable manner.

The reform of exchange rate regime has demonstrated to the international community China's commitment to promote global economic balance, providing a more facilitating international environment. A floating RMB exchange rate shows that China is dedicated to promote global economic balance and that China is a responsible member in the international community. This helped ease the tension in China's trade relations with foreign countries and lessen trade protectionism attempts targeting China. Between 2005 and 2008, trade remedy investigations against China were mostly cases limited in size and scope and did not harm the free and open trade environment in China. In this context, China maintained high growth and low inflation for a fairly long time.

IV. A dynamic approach is needed to assess the impact of exchange rate reform on the corporate sector

The potential adverse impact of the RMB exchange rate reform in 2005 was effectively managed thanks to the principle of making the reform a self-initiated, controllable and gradual process. The corporate sector became increasingly resilient to the reform, which was reflected in improving import and export indicators amid a host of shocks, including a stronger RMB, lower export rebate rate and rising labor cost. Export was not substantially affected. From 2006 to 2008, the golden period for China's foreign trade, export grew by 23.4 percent annually, and import by 19.7 percent. Exchange rate floating helped upgrade the export model from simple processing to deep and

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intensive processing, extended the production chain, and improved division of labor, ultimately contributing to higher employment. According to the NBS, total employment increased by 16.55 million during the period from 2006 to 2008.

Before the exchange rate reform was launched, there were concerns that companies could not adapt to the reform, and a floating exchange rate would thus lead to widespread shutdown and sharp decline in export and employment. There were also people who believed a 3 percent appreciation would result in mass closures and bankruptcy in textile and light industries. Looking back, these concerns reflected an overestimation of the side effects of the reform and an underestimation of companies' resilience. They are a result of the then popular static approach to studying policy implications, which assumes a constant cost, pricing and profitability and then observes the direct impact of exchange rate reform on selected economic indicators. In fact, most Chinese companies have developed the ability and mechanism to adjust to changes in the market after nearly three decades of market-oriented reform, which warrants the application of dynamic analysis.

Static approaches, including assessing exchange costs of exports and sales profits, did not fully capture the flexibility and adaptability of the corporate sector. In addition to expanding profits through technological upgrading and product innovation, exporters could transfer the cost of a stronger domestic currency by raising price. Moreover, exporters with import businesses would benefit from lower import costs, and exporters who also sell to the domestic market could offset exchange cost by selling more to domestic consumers. In addition, companies can employ a wide range of flexible finance management means to deal with exchange rate movements.

In an ever-changing market environment, the corporate sector manages market and other risks including exchange rate risks in a dynamic manner. Operating in a market economy, an enterprise has to face many changing parameters, including raw material prices, wage, export tax rebate, market demand, distribution channel, product mix and cycle, public utility price, and etc. The annual movement of any of these factors is often more than then 10 percent. As one of these variables, the exchange rate usually does not experience large swings. In a market economy, it is no longer feasible to adopt the planned economy measures to fix the external factors for enterprises. In a globalized environment, enterprises have fewer and fewer risk free long-terms orders and have to accept orders with shorter maturities. Enterprises around the world are adapting to the changing market conditions, including the changes in demand, distribution channel and price of input and output, exchange rate, hedge price, insurance price, and etc, and are managing the risks through information technology (such as low or zero inventory, shorter production cycle and outsourcing) and financial instruments.

It is important to look at the situation in most industries and companies to assess the impact of exchange rate movements. While some of the industries and companies manage to grow through innovation, others lag behind and are eliminated. Vulnerable companies are the first to feel the pressure to adjust, and they should be supported by policies to improve the social safety net and enhance training programs to improve labor force quality and adaptability. The competitiveness of the manufacturing sector as a whole, rather than that of individual companies, should be the focus in measuring the impact of exchange rate movements. Similarly, the assessment of the exchange rate regime reform should mainly look at the overall trade situation and the improvement of development quality.

Information and voice that are prone to systemic deviation need to be assessed properly. Exchange rate movements bring gains and losses to different companies. To win policy support, companies tend to highlight the losses in export, profits and employment while play down merits of the reform, such as reduced import costs. This helps generate a negative picture of companies' ability to deal with exchange rate movements. Therefore, a careful and comprehensive analysis is needed in order to produce a subjective assessment.

In summary, the RMB exchange rate regime reform has been advanced smoothly in a self-initiated, gradual and controllable process since 2005. The reform plays a positive role in supporting the real economy, and creates favorable conditions for meeting macroeconomic management objectives. It helps promote a balanced BOP account, expand domestic demand and restructure the economy, and has been important in China's efforts to address various domestic and global developments.

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China Economics Social Housing: Lackluster Growth or Quantum Jump?

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What's the Issue: The social housing program has attracted a lot of attention from market observers of late. Many market observers had doubts about the progress being made so far and the prospect of fulfilling the social housing construction plan by the end of this year. At the same time, a dearth of timely and reliable data on this front makes it very difficult to evaluate and track the progress along the way.

Our view: We revisit and reaffirm our calls that: 1) the austere measures regarding property speculation will not cause a hard landing in fixed-asset investment growth in general and real estate investment growth in particular; and 2) the social housing program is on track and will constitute an important cushion for any potential slowdown in private market-based residential property construction and thus help ensure a soft landing in fixed- asset investment growth. Moreover, we highlight a scenario featuring a potential "quantum jump" in construction of social housing in the latter part of the year that could tilt the balance of risks to the upside for fixed-asset investment growth. In this context, a potentially strong performance from a social housing program in 2010 would make the authorities' pledge to "solve the housing problem for 15.4 million of low-income households by end of 2012" a lot more credible.

Where we differ: We take a hard look at the structure of real estate construction activity in China. By presenting our analysis in a flow chart format, we help clarify the relative importance of market-based private residential property construction vs. non-market-based residential property construction and, in that context, highlight the critical role of the social housing program in shaping the potential outlook for investment growth. We also compile a comprehensive set of data to help bridge an important information gap for monitoring the progress of the social housing program.

A Roller-Coaster Ride

It had been quite a rough ride for the Chinese property market so far this year³. Discussions of an overheating property market seemed never-ending, while on the contrary the almost unanimous expectations of ever-rising property prices in the local market baffled many investors. The tide finally turned against the exuberance after the State Council announced a series of austerity measures early April, aimed at reining in speculation in the property markets in cities where housing prices were deemed to be too high and rising too fast. Transaction volume has since plummeted, with prices expected to follow suit. Fear of an economic hard landing was brewing, and bearish sentiment was wide spread.

Going Against the Crowd

We disagreed with this popular notion, and argued that the anti-speculation measures would not lead to an economic hard landing (see China Economics: Can Recent Policy Campaign Against Property Speculation Cause a Hard Landing?, May 24, 2010). Soon after, the optimism toward the ambitious social housing program faced the same fate, as many market observers dismissed the feasibility of a project of such unprecedented scale. At the height of the uncertainty, we again argued otherwise, noting that "this time is different", i.e., the social housing program would help secure a soft landing based on our assessments of still-supportive bank lending conditions, extraordinarily strong political will from both the central and local governments and the serious financial commitment from the government (see China Economics: Can Social Housing Program Help Secure a Soft Landing?, June 17, 2010). Our view, which seemed based solely on faith just two months ago, is quickly gaining tractions in the market of late.

Revisiting Our "No Hard Landing" Thesis

Recall that in our first report on this subject (see <u>China</u> <u>Economics: Can Recent Policy Campaign Against Property</u> <u>Speculation Cause a Hard Landing?</u>, May 24, 2010), we proposed a framework to analyze the real estate market, in which we contended that the residential floor space construction could be categorized into "commodity housing", which had received almost all the attention of market observers, and the "non-commodity housing" space, which includes all the subsidized housing provided by government agencies, state-owned companies and large private companies to their employees, as well as social housing. The role of the latter in overall construction activities has been largely ignored until recently as social housing was again back in the spotlight.

³ We would like to acknowledge and express our gratitude to the very useful research assistance provide by Ms. Yang Xiaye, our summer intern, for this report.

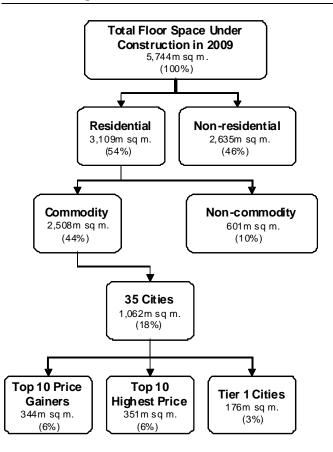
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In our early study, we found that, in terms of *floor space completed*, the residential commodity housing market accounted for 37% of total floor space construction nationwide, within which 15% was in the 35 largest cities, where the anti-speculation policy measures are particular relevant. Similar results can be deduced for *floor space under construction*, which is arguably more pertinent to gauging the current state of economic activities (Exhibit 1).

Exhibit 1

How Important Are Market-based Residential Real Estate in Large Cities?



Source: CEIC, Morgan Stanley Research

Specifically, the 35 largest cities accounted for 18% of the grand total, with about 6% concentrated in the top 10 cities, where property prices are deemed to be too high or have risen too rapidly. The four tier-1 cities, including Beijing, Shanghai, Guangzhou and Shenzhen, where both the primary and secondary residential property markets are believed to be liquid and most prone to speculation, only added up to about 3% of total floor space under construction nationwide. Therefore, the tail risk of a potential economic hard landing as a

result of the Chinese government's austerity measures is in fact not as significant as many expected even in the extreme scenario where residential commodity building construction were to experience a deep downturn.

Revisiting Our "Soft Landing" Thesis

We then went the extra mile in our second report with the objective of shedding some light on the "non-commodity" part of the residential property market, arguing that an expected substantial expansion in the social housing program would not only help offset a potential slowdown in market-based residential property construction, but also contribute to a soft landing in overall fixed asset investment (FAI) growth (see <u>China Economics: Can Social Housing Program Help Secure a</u> <u>Soft Landing?</u>, June 17, 2010).

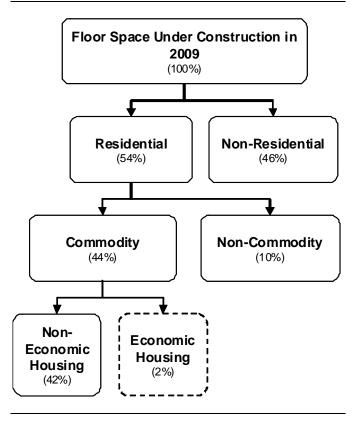
Given the lingering uncertainty and the significant implications on various sectors and the macro-economy in general, we think it is imperative that we derive an analytical framework that is, on the one hand, rigorous enough to have reasonable assurance of its relevance, while on the other flexible enough to incorporate possible scenarios given the current conditions.

First of all, based on client feedback, we understand that many market observers would simply associate social housing with "residential commodity economic housing" (Exhibit 2). While this is definitely one of the pillars of the social housing program, there is certainly more to it. Its apparently insignificant share in the total floor space under construction also leads many to downplay its relevance to overall construction activities. If we agree that "residential commodity economic housing" is only part of the social housing program, the rest of it must fit in somewhere in our "flowchart". Considering the fact that the majority of social housing is in the form of low-rent housing and public rentals that are not sold in the commodity housing market and are not entirely market-based, the only rational place it could go would be under "residential non-commodity housing".

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Exhibit 2 The Myth: Where Is Social Housing?



Source: CEIC, Morgan Stanley Research

The next question is: how much of social housing is classified as "commodity housing" and how much as "non-commodity housing"? Making reference to the social housing construction plan for 2010 announced by Premier Wen in his Government Work Report for 2010 (Exhibit 3), it is reasonable to assume that a majority of it should be in the "non-commodity" category.

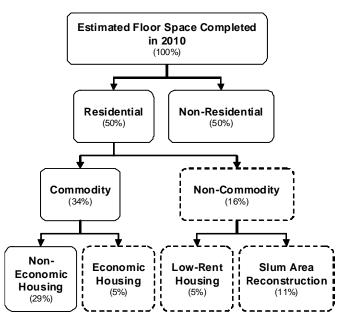
Exhibit 3 Social Housing Construction Plan for 2010

| | # of units (mn) | avg. sqm | Floor Space (sqm, mn) |
|------------------------------|-----------------|----------|--------------------------|
| Non-Commodity | 4.6 | | 286 |
| Slum Area Reconstruction | 2.8 | 70 | 196 |
| Low-Rent Housing | 1.8 | 50 | 90 |
| Commodity - Economic Housing | 1.2 | 70 | 84 |
| TOTAL | 5.8 | | 370 |

Source: MOHURD, Morgan Stanley Research

If indeed a majority of social housing construction happened / will happen in the "non-commodity" part of the residential market, it is again reasonable to expect that some of the residential "non-commodity" floor space under construction originally not for the purpose of social housing will now be "reclassified" under it, an easy route to fulfilling the 2010 target. In this case, at least some of the residential "non-commodity" floor space under construction for previous years will become social housing floor space completed under the "non-commodity" category.

Exhibit 4 A Conservative Scenario



Social Housing

Source: CEIC, Morgan Stanley Research

It follows that an outright bearish scenario would point to a "total reclassification", making the relevant floor space completed in the residential "non-commodity" space for 2010 solely comprised of social housing construction "reclassified" from "non-commodity" housing construction in 2009 and 2010 intended for entirely different purposes.

This quite conservative scenario is actually what we had implicitly assumed in our stress tests done in our previous report (see <u>China Economics: Can Social Housing Program Help</u> <u>Secure a Soft Landing?</u>, June 17, 2010), in which we concluded that the substantial "expansion" of social housing program this year, along with the supportive bank lending conditions, will help secure a soft landing in FAI growth (Exhibit 4).

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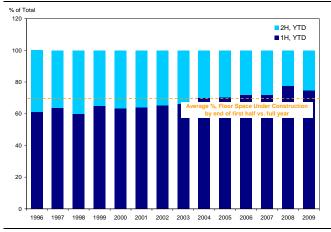
A Potential Quantum Jump

Based on our analysis on the average historical run-rate of floor space under construction and understanding of the social housing program, we came up with a proposition that would potentially result in a "quantum jump" in construction activities.

By looking into the latest data available, as of end of June 2010, the tota*l floor space under construction* is 5,003 million sqm compared to 4,036 million sqm for the same period a year ago, representing 24% YoY growth. The total *residential floor space under construction* demonstrated a similar trend, coming in at 2,789 million sqm vs. 2,266 million sqm in 1H09, or 23% YoY growth. The *residential commodity floor space under construction* also recorded strong growth, gaining 28% YoY from 1,874 million sqm to 2,390 million sqm by end of 1H10.

Historically, the run-rate of total *floor space under construction* by mid-year was about 70% on average. Residential commodity floor space under construction showed a similar trend (Exhibit 5). If we assume the same run-rate for this year, the total floor space under construction will add up to 7,147 million sqm, a 24.5% YoY growth rate compared to 2009, not quite a slowdown at all compared to last year.

Exhibit 5 Residential Commodity FSUC: Semi-Annual Review



Source: CEIC, Morgan Stanley Research

Furthermore, if one is still not entirely convinced that construction activities in terms of floor space under construction may have indeed registered some healthy growth instead of experiencing a drastic slowdown during the first half of the year, consider the following proposition: what if subsidized housing (i.e., housing provided by government agencies, stated-owned companies and large private companies to their employees, which is in itself "social" in nature) was not included in any of the social housing plan? To put it differently, what if subsidized housing represents an additional section of the residential housing market that is not counted as part of the social housing construction target of 5.8 million units in 2010? It is possible, in our view, given that social housing, as defined by the MLR, includes low-rent housing, economic housing, and part of slum area reconstruction – i.e. no mention whatsoever of subsidized housing, which had long been a solid contributor to the total floor space construction nationwide as it is arguably more immune to market sentiment swing and less policy-driven than social housing or residential commodity housing – accommodations would be provided by companies, public or private, as the need arises, regardless of then-market sentiment or policy stance.

In the most bullish scenario, assuming that all the 370 million sqm of floor space were all completed by the end of the year as planned, the social housing floor space completed would surge from about 34 million sqm in 2009 to 370 million sqm, effectively a "quantum jump" of more than 10x. At the same time, it is almost certain that, by definition, the construction of subsidized housing would still go on as planned, while the latest data are telling us that an outright slump in residential commodity housing construction did not happen. All in all, real estate construction activities are "unimpaired", to say the least (Exhibit 6).

The Likely Outcome: No Lackluster Growth; Quantum Jump Not Impossible

Based on the above analyses, we feel quite comfortable in predicting that the growth of social housing construction will be anything but lackluster. At the same time, we are not able to rule out an alternative scenario where social housing construction would enjoy a quantum jump. The bottom line is that there will be absolutely no shortage of underlying demand for real estate construction this year, in our view.

In this context, we reiterate our prediction that the most important factor affecting FAI in general, and real estate construction in particular, in China is the availability of funding for investment, or bank credit in particular. The new loan target of Rmb7.5 trillion for this year implies an expansion of about 19% YoY in the outstanding amount of bank credit. As long as this credit target is fulfilled, the probability of a hard landing of real estate investment growth is very low, in our view.

As a matter fact, we have already detected a visible softening in policy tone in 3Q in view of the recent comments made by top leaders. Specifically, President Hu, while attending a high-level meeting on the economy and policy in late July, called, for the first time ever, for "strengthening economic

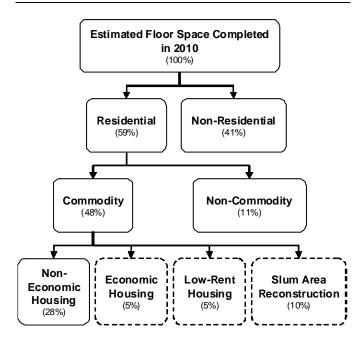
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monitoring and forecasts", leading us to believe that the authorities have come to realize the "overheating" call after the 1Q10 data release was perhaps premature, and the policy measures initiated in April were probably overly aggressive. Separately, Premier Wen gave a new characterization of the current state of the Chinese economy and warned that "China's economy is facing increasing dilemmas given higher-than-expected severity of global financial crisis".

Exhibit 6

A Potential "Quantum Jump"



Social Housing

Source: CEIC, Morgan Stanley Research and Estimates

The overall macro-economic condition will become even more conducive to a meaningful policy shift by early 4Q, when the 3Q10 macro data are released, which will likely indicate further slowdown in YoY growth rates on all fronts including FAI, exports, industrial production, as well as CPI and PPI inflation, making it easy to reach a consensus for a policy shift in the form of easing credit controls and investment project approval controls.

Moreover, in light of moderating economic growth, controls on local government financing appear to have started to ease, as signaled by the modest rebound in the budgeted investments of newly started projects in July (see <u>China Economics:</u> <u>Moderation Continues with Intensified Supply-side Adjustment</u>, August 11, 2010). In addition, ample ammunition has been

saved for 2H10 as the issuance scale of local government bonds would quadruple to Rmb165.9 billion. Meanwhile, the issuance of city development bond has resumed after a brief suspension. Given all these, a further substantial slowdown in FAI in 2H10 is unlikely, in our view.

Bridging the Information Gap

We recognize and understand the lack of conviction for the social housing program among many China observers, given its poor track record in recent years and the apparent inadequate incentives for local government to actively participate in the program. The dearth of timely and reliable data was also doing a disservice to informed analyses, making it very difficult to track and evaluate the progress along the way. It is, however, extremely important information for the forecast of expected growth in fixed asset investments, not to mention its significant implications to related industries such as the demand for basic materials and construction activities.

This is what we are attempting to achieve through the analysis below – to fill in the information gap as much as possible, and to assist investors in making informed decisions with regard to the social housing program.

Land Supply - the Mother of All Debate

According to the latest data released by the Ministry of Land and Resources (MLR), the land supply for social housing actually realized by the end 1H10 amounted to 95 million sqm, 133% YoY growth compared to 1H09, with Ningxia, Hainan, Qinghai, Guizhou, and Heilongjiang recording the strongest YoY growth among all provinces / regions (Exhibit 7). However, the land supply realized so far represents about 39% of planned land supply for 2010 as a whole, making one wonder whether the whole year target can actually be delivered.

If History Is Any Guide (which we believe it is)...

While there is very little historical data specifically for the land supply of social housing, we can use the data for residential land supply as a rough reference to the mid-year progress normally reached historically.

We observe that, in 2008 and 2009, the pace of residential land supply accelerated considerably in 3Q and 4Q compared to first half of the year (Exhibit 8). While historical data for land supply are not available before 2008, similar trend can be seen for land area purchased and developed (Exhibit 9). On average, 38% of land supply, and 38% and 36% of land area purchased and developed, respectively, was realized in the first six months of the year, followed by significant pickup in activities in the second half of the year.

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Exhibit 8

| Exhibit 7 Social Housing Land Supply – Planned vs. Actual | | | | | | | |
|--|-----------------------------|-------------------------|----------------------------|--|--|--|--|
| Province / Region | 2010 Planned (sqm th) | 1H10 Actual (sqm th) | Actual / Planned (%) | | | | |
| National | 244,536 | 94,722 | 39 | | | | |
| Beijing | 2,100 | 990 | 47 | | | | |
| Tianjin | 2,280 | 1,920 | 84 | | | | |
| Hebei | 7,197 | 3,286 | 46 | | | | |
| Shanxi | 10,320 | 1,149 | 11 | | | | |
| Inner Mongolia | 12,974 | 4,834 | 37 | | | | |
| Liaoning | 10,809 | 1,259 | 12 | | | | |
| Jilin | 4,041 | 2,379 | 59 | | | | |
| Heilongjiang | 8,990 | 5,236 | 58 | | | | |
| Shanghai | 2,500 | 2,352 | 94 | | | | |
| Jiangsu | 20,460 | 13,036 | 64 | | | | |
| Zhejiang | 5,754 | 5,465 | 95 | | | | |
| Anhui | 14,241 | 4,296 | 30 | | | | |
| Fujian | 3,169 | 837 | 26 | | | | |
| Jiangxi | 5,676 | 2,462 | 43 | | | | |
| Shandong | 12,261 | 6,521 | 53 | | | | |
| Henan | 16,240 | 8,452 | 52 | | | | |
| Hubei | 7,389 | 1,520 | 21 | | | | |
| Hunan | 7,411 | 1,973 | 27 | | | | |
| Guangdong | 4,114 | 1,215 | 30 | | | | |
| Guangxi | 9,026 | 1,513 | 17 | | | | |
| Hainan | 3,936 | 1,033 | 26 | | | | |
| Chongqing | 15,446 | 2,077 | 13 | | | | |
| Sichuan | 13,843 | 4,690 | 34 | | | | |
| Guizhou | 8,504 | 3,962 | 47 | | | | |
| Yunnan | 5,291 | 515 | 10 | | | | |
| Tibet | 0 | 164 | - | | | | |
| Shaanxi | 10,934 | 2,438 | 22 | | | | |
| Gansu | 4,842 | 1,268 | 26 | | | | |
| Qinghai | 1,150 | 1,144 | 99 | | | | |
| Ningxia | 2,954 | 2,335 | 79 | | | | |
| Xinjiang | 10,685 | 3,323 | 31 | | | | |
| Xinjiang Legion | - | 1,076 | - | | | | |

Source: CEIC, Ministry of Land and Resources, Morgan Stanley Research

* Exclude Xinjiang Legion due to insufficient information

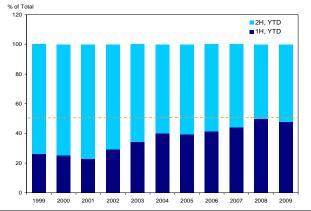
** Assume half of the planned land supply for slum area reconstruction to go to social housing construction

Seasonality in Residential Land Supply Realized

Source: CEIC, Morgan Stanley Research

While the current run-rates suggest that the land supply for social housing is largely on track, it is also worth noting that the social housing program did not begin in earnest until after Premier Wen delivered his Government Work Report for the Year 2010 in March 2010, if not even later as the anti-speculation measures in the real estate market were announced in early April. We can in fact no longer describe the run-rate as "lackluster" if we consider it a result of mostly one-quarter's worth of efforts. Given all these factors, the probability of achieving the land supply target does not look remote at all allowing for an expected significant pickup in activity for the rest of the year.





Source: CEIC, Morgan Stanley Research

Financing – Show Me the Money... One More Time!

Financing has always topped the list of most frequently asked questions. Investors are concerned about the lack of financing incentive from local governments, and the poor track record of social housing programs allegedly largely stemming from this very reason. A number of favorable developments on the

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financing front have emerged since our last report was published, making us become even more comfortable that it should not be a problem to, at the very least, make ends meet for a social housing program.

As a quick recap on the sources of financing, the central government has pledged to arrange Rmb63.2bn specifically for social housing construction. An estimated Rmb136.6bn will come from local government, which is 10% of Rmb1,366bn, the land sale revenue for year 2010 estimated by the Ministry of Finance (MoF).

Moreover, the fact that the MOHURD takes a leading role in encouraging local governments to borrow from the Housing Provident Funds (HPF) for social housing constructions represents a potential breakthrough in the financing bottleneck, in our view. Specifically, the construction of 133 social housing projects in 28 pilot cities was approved, to be financed by loans borrowed from the respective HPF now separately managed by the local governments. The eligible loan amount for these 28 pilot cities comes in at around Rmb49.3 (Exhibit 10).

According to a directive jointly issued last year by the MOHURD, MoF, NDRC, PBoC, National Audit Office and CBRC regarding "the use of loans from the HPF to support social housing constructions in certain pilot cities", up to 50% of the net outstanding balance in the fund (after setting aside enough funds for priority employee withdrawals, personal housing loans and provisions) can be used to support social housing construction. According to the MOHURD, as of end-2008, the net outstanding balance of all Housing Provident Fund nationwide add up to Rmb319.3bn, 50% of it (i.e., Rmb159.7bn), is thus potentially available for the specific purpose of social housing constructions. Furthermore, the same six agencies will also join forces to inspect the operation, management and decision-making processes of the funds, in order to ensure the fund assets are being utilized properly.

Moreover, a notable language change in PBoC's description of its credit policy in its 2Q Monetary Policy Report just recently published also leads us to believe that additional support is on the way (see <u>China Economics: Our Quick Reading of PBoC</u> <u>2Q Monetary Policy Report</u>, August 5, 2010). Specifically, the 2Q report refers to a principle of "support and control" (or "有扶有控"). This is a change from a long-standing principle of "assurance and control" (or "有保有控") that was usually mentioned in previous reports. While "assurance and control" means that credit demand by some priority sectors would be guaranteed, those by some other low-priority sectors would be tightly controlled. We believe under the new principle of "support and control", some priority demand for credit such as social housing programs will not only be satisfied, but will also

receive additional support (e.g., in the form of lower interest rates made possible by fiscal subsidy).

Financial Innovation Comes Into Play

It was reported in local media that a REIT based on Tianjin's low-rent housing projects recently received the PBoC's approval, and is likely to become China's first REIT once the State Council gives the final green light (see <u>China Strategy:</u> <u>Another Step Forward in Social Housing: REIT Financing</u> <u>Model Unveiling</u>, August 10, 2010). Our China equity Strategy team estimated that REIT financing can potentially cover 20% of the financing need for low-rent housing in China, on top of the 60% pledged by central government. The remaining 20%, or less than Rmb20bn, represents less than 1% of local governments' fiscal income in 2010.

All these favorable developments on the financing front not only reinforce the government's determination to ensure that "this time is different", but also point to increasing involvement from the private sector. The diversification of the sources of financing will be immensely helpful in the sustainable development of the social housing program going forward.

The Whole Nation Seems Playing Catch-Up...

Based on the flows of news coverage for social housing, we detect that social housing activity has picked up significantly not only in major cities, but also all across the nation (Exhibit 12). This anecdotal evidence suggests that the social housing program is quickly gaining traction, and will likely run in full gear soon, in our view.

Stage Is Set for Social Housing Delivery Beyond 2010

While all eyes are on the one single, allegedly most important figure of 5.8 million units of social housing completion target by end of 2010, investors should not lose sight of the fact that the "visible hand" managed not only to kick start, but also to create strong momentum toward a considerable acceleration in the social housing program for the rest of the year and beyond – from Premier Wen's address in March, the announcement of the anti-speculation measures in April, to the pledges repeatedly made by different officials to completing the social housing target this year, local governments are faced with increasing pressure to come up with detailed roadmaps contributing to the successful delivery of the target (Exhibit 11).

Reflecting strong political commitments, there are notable advances in the sources of financing this time around that effectively hit the nail on the head, and will help promote sustainable development of the social housing program in the long run. The potentially strong performance of social housing program in 2010 bodes well for MOHURD to deliver its pledge to "solve the housing problem for 15.4 million of low-income households by end of 2012".

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| Exhibit 10 | |
|---|--|
| Housing Provident Fund Financing in Details – 28 Pilot Cities | |

| City | HPF \$ (RMB bn) | Remarks |
|------------|--------------------|---|
| Beijing | 21.0 | 5mn sqm of economic and public rental housing |
| Huainan | 2.2 | 5 projects, Rmb5.12 bn investment, 4.13mn sqm construction floor space |
| Danzhou | 0.5 | Rmb0.9 bn investment: 0.5bn from HPF, Rmb25mn from central government, Rmb20mn from provincial government, Rmb0.3bn from local government |
| Luoyang | 0.6 | 1.2mn sqm construction floor space for 2010-2012 |
| Tangshan | 1.3 | 1.1mn sqm construction floor space, 15,000 slum area households will benefit |
| Jinan | 1.0 | - |
| Yinchuan | 0.4 | 5,000 units of economic housing |
| Changsha | 0.5 | 2 projects, 0.25mn sqm of construction floor space |
| Xi an | 3.5 | 2.1mn sqm, or 23,000 units of economic housing in 2 to 3 years |
| Tianjin* | 1.5 | - |
| Xiamen | 0.7 | - |
| Wuxi | 0.3 | Rmb0.3bn in 3 years |
| Urumqi | 2.5 | For slum area reconstruction |
| Chongqing | 3.0 | 6 public rental housing projects |
| Yuncheng | 0.3 | 0.2mn sqm construction to benefit 3,000 households, Rmb1.2bn in total, Rmb0.3 bn this year |
| Baotou* | 1.5 | NA |
| Dalian* | 1.5 | NA |
| Changchun* | 1.5 | Detailed information to be released by end of August |
| Wuhan | 0.5 | 2 economic housing and slum area reconstruction projects |
| Panzhihua | 0.5 | 7 projects, Rmb0.7 bn from HPF for the next 3 years |
| Hangzhou | 0.5 | 3 projects, Rmb1.1 bn from HPF for the next 3 years |
| Ningbo | 0.5 | Rmb0.5 bn from HPF, 2,300 units of economic housing in 3 years |
| Qingdao* | 1.5 | NA |
| Fuzhou | 0.2 | Rmb0.5bn in 3 years |
| Harbin | 0.7 | - |
| Kunming | 0.7 | 0.31mn sqm of economic housing |
| Lanzhou | 0.5 | 3 projects, 0.8mn sqm construction floor space |
| Xining | 0.1 | 3 projects, 0.2mn sqm construction floor space, 2,700 units |
| Total | 49.3 | |

Source: Various Media Reports ; *Morgan Stanley Estimates

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| Provinces / Regions | # of units | Floor Space Construction Target (sqm mn) |
|---------------------|------------|---|
| Beijing | 136,000 | 8.16 |
| Tianjin | 257,000 | 20.12 |
| Hebei | 31,800 | 1.91 |
| Shanxi | 86,667 | 4.40 |
| Inner Mongolia | 1,247,956 | 74.24 |
| Liaoning | 0 | 0.00 |
| Jilin | 490,833 | 29.45 |
| Heilongjiang | 155,113 | 9.31 |
| Shanghai | 300,000 | 20.00 |
| Jiangsu | 431,373 | 25.88 |
| Zhejiang | 75,220 | 4.51 |
| Anhui | 127,935 | 7.05 |
| Fujian | 371,147 | 22.27 |
| Jiangxi | 469,450 | 28.17 |
| Shandong | 104,000 | 6.00 |
| Henan | 308,538 | 19.43 |
| Hubei | 41,500 | 2.48 |
| Hunan | 136,836 | 7.02 |
| Guangdong | 264,600 | 16.98 |
| Guangxi | 118,674 | 9.43 |
| Hainan | 210,825 | 12.77 |
| Chongqing | 865,000 | 51.90 |
| Sichuan | 3,000 | 0.18 |
| Guizhou | 79,000 | 4.74 |
| Yunnan | 23,055 | 1.16 |
| Tibet | 2,000 | 0.12 |
| Shaanxi | 303,754 | 16.78 |
| Gansu | 43,133 | 2.55 |
| Qinghai | 187,120 | 11.23 |
| Ningxia | 91,000 | 5.46 |
| Xinjiang | 43,333 | 2.53 |
| Xinjiang Legion | 0 | 0.00 |

Source: MOHURD, Various Media Reports, Morgan Stanley Research

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Exhibit 12 Social Housing Gaining Tractions – Floor Space Constructions 2010 - 2012

| | | | Floor Space (so | pace (sqm mn) | | |
|---------------------|---------------|------------|------------------------------|---------------|--|--|
| Provinces / Regions | # of projects | # of units | Started & Under Construction | Completed | | |
| Beijing | 17 | 229,961 | 2.53 | 11.50 | | |
| Tianjin | 1 | 23,500 | 1.00 | 0.00 | | |
| Hebei | 14 | 367,071 | 14.54 | 7.09 | | |
| Shanxi | 4 | 111,889 | 0.03 | 6.66 | | |
| Inner Mongolia | 7 | 14,689 | 0.14 | 0.41 | | |
| Liaoning | 0 | 0 | 0.00 | 0.00 | | |
| Jilin | 1 | 481,583 | 3.28 | 0.00 | | |
| Heilongjiang | 3 | 101,262 | 0.00 | 6.08 | | |
| Shanghai | 3 | 102,990 | 0.00 | 6.18 | | |
| Jiangsu | 14 | 174,403 | 6.23 | 3.81 | | |
| Zhejiang | 1 | 2,000 | 0.03 | 0.00 | | |
| Anhui | 13 | 36,794 | 31.04 | 0.47 | | |
| Fujian | 8 | 264,659 | 7.95 | 0.01 | | |
| Jiangxi | 3 | 110,546 | 0.00 | 6.63 | | |
| Shandong | 2 | 12 | 0.00 | 0.00 | | |
| Henan | 7 | 393,425 | 0.42 | 12.07 | | |
| Hubei | 3 | 100,846 | 0.19 | 2.75 | | |
| Hunan | 3 | 18,129 | 0.00 | 0.26 | | |
| Guangdong | 0 | 0 | 0.00 | 0.00 | | |
| Guangxi | 3 | 75,334 | 2.73 | 1.12 | | |
| Hainan | 3 | 1,730 | 2.51 | 0.03 | | |
| Chongqing | 2 | 210,567 | 0.17 | 0.00 | | |
| Sichuan | 6 | 8,785 | 0.00 | 0.32 | | |
| Guizhou | 5 | 114,805 | 0.05 | 5.28 | | |
| Yunnan | 0 | 0 | 0.00 | 0.00 | | |
| Tibet | 2 | 13,036 | 0.39 | 0.60 | | |
| Shaanxi | 1 | 13,333 | 0.04 | 0.00 | | |
| Gansu | 5 | 161,418 | 0.12 | 0.32 | | |
| Qinghai | 3 | 74,200 | 0.00 | 1.70 | | |
| Ningxia | 1 | 23,625 | 0.19 | 0.00 | | |
| Xinjiang | 5 | 47,341 | 0.00 | 2.60 | | |
| Xinjiang Legion | 0 | 0 | 0.00 | 0.00 | | |
| Total | 140 | 3,277,932 | 73.56 | 75.89 | | |

Source: Various Media Reports, Morgan Stanley Research and Estimates

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| Glossary | |
|-----------------------------------|---|
| Residential Commodity Housing | The part of the market where construction and transaction are determined freely by the market, with homebuyers having access to residential mortgage for financing. |
| Residential Non-Commodity Housing | The part of the market where construction and transaction are not entirely market-based It is usually carried out in the rural area or by government agencies, state-owned companies, and even large private companies to provide subsidized housing to their employees who do not necessarily have full ownership entitlement to these houses. |
| Low-rent Housing | It is owned by the government, and rented to low-income families. Rental is about Rmb100-200 per month per unit. Land is provided for free for construction (<i>Source: Morgan Stanley Basic Materials team</i>) |
| Public Rental Housing | A new segment in the housing market for residents who do not qualify for low-rent housing, e.g., fresh graduates who may not have Hukou in the city. Rental is around Rmb1,000-1,300 per month in Beijing (<i>Source: Morgan Stanley Basic Materials team</i>) |
| Economic Housing | Part of commodity housing. Buyers need to be approved by the government, and buyer retain the ownership rights. Prices generally about one-third of market prices for commodity housing (<i>Source: Morgan Stanley Basic Materials team</i>) |
| Housing Provident Fund (HPF) | A long-term savings vehicle managed by local governments "specifically for employees for purchase, construction, rebuild or renovation of self-occupied housing. Contribution (50/50) come from the employees and the companies they work for (including various state departments, state-owned enterprises, township collective / private enterprises, foreign-funded enterprises, private & individual businesses, etc). The amount is transferred to the employees' personal account, and is owned by the employees. Employees' contributions must be higher than 5% of last year's average monthly wage Employees who contribute to the HPF can apply for loans from the HPF managers, usually with favorable terms |

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August 11, 2010

China Economics Moderation Continues with Intensified Supply-side Adjustment

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July Economic Data – Moderation continues with

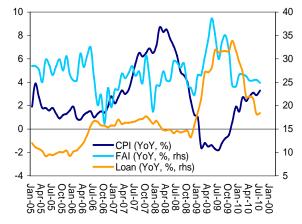
intensified supply-side adjustment: Against the backdrop of the authorities' redoubled efforts to shut down energy-inefficient production units, industrial production growth continued to moderate due to intensified supply-side adjustment. While fixed-asset investment growth saw a further slowdown, tailwinds (e.g., loosening controls on new projects, aggressive implementation of social housing program, easing in local government financing) have now appeared. Retail sales remain resilient on the back of improved labor market conditions and increased consumer confidence. Export growth looks to have peaked due to the kick-in of high base effect and weakening new orders, while imports continued to soften, reflecting demand-dampening effects of policy normalization and stable commodity prices. While headline CPI inflation rebounded to a new high since the financial crisis, driven almost entirely by reacceleration of food prices, PPI inflation registered a sharp decline, pointing to easing inflationary pressures going forward.

Implications to Economic and Policy Outlook: In the light of moderation in growth and receding inflationary pressures, we believe the policy cycle has troughed and will likely turn growth-supportive by 4Q10. In particular, the pattern of sequential growth momentum suggests that a soft landing is well under way. With regard to the policy outlook, we expect:

 no rate hike through 2H10; 2) a visible softening in policy tone in 3Q10 (which has largely materialized, in our view);
 new loan target will be revised up and investment projects approval eased by early 4Q10; and 4) sustained RMB appreciation against the USD. Last but not least, the ambitious social housing program should be an important cushion for fixed asset investment growth, in our view.

July Economic Statistics Summary

| | Jul-10 | Jul-10 | Jul-10 | Jun-10 |
|-------------------------|--------|--------|--------|--------|
| YoY, % | Actual | MS F | Con F | Actual |
| CPI | 3.3 | 3.4 | 3.3 | 2.9 |
| PPI | 4.8 | 6.6 | 6.0 | 6.4 |
| Urban FAI (YTD) | 24.9 | 25.3 | 25.3 | 25.5 |
| Industrial Value Added | 13.4 | 13.5 | 13.4 | 13.7 |
| Retail Sales | 17.9 | 18.5 | 18.5 | 18.3 |
| M2 | 17.6 | 19.5 | 18.5 | 18.5 |
| New Loans (Rmb, bn) | 533 | 700 | 600 | 603 |
| Trade Balance (USD, bn) | 28.7 | 20.0 | 19.6 | 20.0 |
| Exports | 38.1 | 35.0 | 35.0 | 43.9 |
| Imports | 22.7 | 29.0 | 30.0 | 34.1 |



Source: NBS, PBoC, CEIC, Morgan Stanley Research

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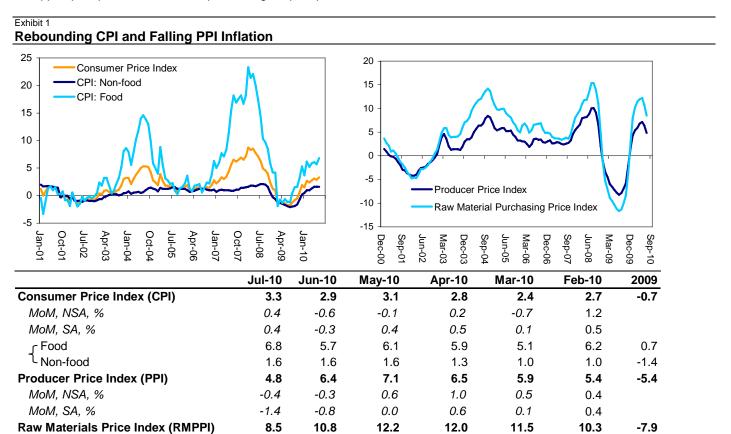
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Inflation

CPI rebounded on higher food price inflation: CPI inflation rebounded to +3.3% YoY in July (vs. +2.9% YoY in June), in line with market consensus of +3.3% and our forecast of +3.4%. On a MoM basis, CPI increased 0.4% (and the same after being seasonally adjusted). Vegetable prices staged a big rally in July due to supply disruption caused by heavy rain and floods, while state reserve-building and low-hog inventory triggered renewed rise of meat (mainly pork) prices. Therefore, food price inflation remained the primary driver of headline CPI inflation rising to +6.8% YoY in July (vs. +5.7% YoY in June). The non-food CPI was flattish with June at +1.6% YoY. As the dominant driver of non-food inflation, prices for residence edged down to +4.8% in July from +5% in June, reflecting softening in property prices.

Faster-than-expected easing of upstream inflation: After peaking at +7.1% YoY in May, PPI inflation dipped rather sharply to +4.8% YoY in July (vs. +6.4% YoY in June), much lower than market consensus of +6.0% and our forecast of +6.6%. On a sequential basis, PPI slid 0.4% MoM (and 1.4% MoM after being seasonally adjusted) in July. The sharp decline in headline PPI inflation was mainly due to a marked slowdown in price increase of raw materials. RMPPI slipped to +8.5% YoY in July (vs. +10.8% YoY in June) by recording the biggest slowdown since February 2009, led by fuel & power (+12% YoY in July vs. +19.5% YoY in June) and ferrous metals (+8.4% YoY in July vs. +10.2% YoY in June).

Renewed fear of inflation is unjustified: While CPI rebounded in July, renewed fear of inflation is unjustified, in our view. This is because: (1) non-food CPI inflationary pressures appear to have been well contained and do not pose risk to inflation outlook; (2) of food CPI components, recent grain prices increase will unlikely pose meaningful inflationary pressures due to high domestic inventory level; and (3) hog prices have only started to rise above the hog-corn breakeven point, in part reflecting the government's intervention to support pork prices. We do not expect a surge in pork prices as was the case in 2007-08.



Source: NBS, CEIC, Morgan Stanley Research

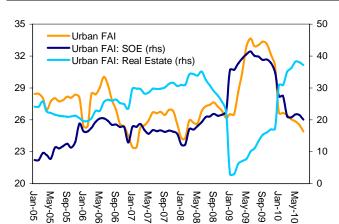
Exhibit 2

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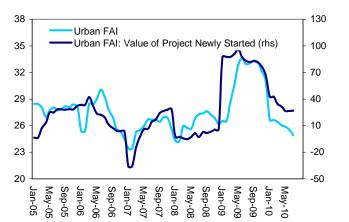
Fixed Asset Investments

Headwinds remain: Urban FAI softened to +24.9% Ytd YoY in July (vs. +25.5% Ytd YoY in June), lower than market consensus and our forecast of +25.3% Ytd YoY. It also translates into a further slowdown to +22.1% YoY in July (vs. +24.9% YoY in June). On a seasonally-adjusted sequential basis, FAI declined 3.1% MoM in July (vs. -0.3% MoM in June). Reflecting the austerity measures against property speculation, real estate investments slid to +37.2% Ytd YoY in July (vs. +38.1% Ytd YoY in June). Meanwhile, the gradual exit from stimulus package also contributed to weakening public investments, reflecting in softening SOE FAI (+20.1% Ytd YoY in July vs. +21.5% in June). In terms of FAI financing, while bank lending continued to decline (+23.3% Ytd YoY in July vs. +24.8% in June), state budget was more supportive by rebounding to +10.4% Ytd YoY (vs. +8.6% in June). Private financing remained strong with self-raising edging up to +31.3% Ytd YoY (vs. +30.7% in June) and foreign capital improving to +1.5% Ytd YoY (vs. -2.2% in June).

Tailwinds appearing: In light of moderating economic growth, controls on local government financing appear to have started to ease, as signaled by the modest rebound in the budgeted investments of newly-started projects to +26.8% Ytd YoY in July (vs. +26.5% Ytd YoY in June). Given the slow progress of planned Rmb200bn of local government bonds for 2010 in 1H10 (Rmb43.8bn), ample ammunition has been saved for 2H10 as the issuance scale would be quadrupled to Rmb165.9bn. Meanwhile, the issuance of city development bond resumed after a brief suspension. Moreover, the social housing program has gained significant momentum of late (see *China Economics: Can Social Housing Program Help Secure a Soft Landing?* dated June 17, 2010). All in all, although the comparative base of last year remains elevated, we do not expect there to be a further substantial slowdown of FAI in 2H10.







| YoY, %, Ytd | Jul-10 | Jun-10 | May-10 | Apr-10 | Mar-10 | Jan-Feb 10 | 2009 |
|-------------------------------|--------|--------|--------|--------|--------|------------|-------|
| Urban fixed asset investment | 24.9 | 25.5 | 25.9 | 26.1 | 26.4 | 26.6 | 30.5 |
| State-owned & state-holding | 20.1 | 21.5 | 21.7 | 20.8 | 21.1 | 27.4 | 33.8 |
| Real estate development | 37.2 | 38.1 | 38.2 | 36.2 | 35.1 | 31.1 | 16.1 |
| Progress of Projects | | | | | | | |
| ∫ Projects under construction | 27.0 | 27.0 | 28.7 | 27.5 | 30.4 | 29.9 | 34.0 |
| Projects newly-started | 26.8 | 26.5 | 26.5 | 31.3 | 34.5 | 42.7 | 67.2 |
| Source of funds breakdown: | | | | | | | |
| ∫ State Budget | 10.4 | 8.6 | 10.1 | 14.2 | 25.3 | 14.1 | 53.7 |
| Domestic Loans | 23.3 | 24.8 | 33.1 | 33.8 | 41.2 | 41.1 | 52.4 |
| Foreign Fund | 1.5 | -2.2 | -6.8 | -9.5 | -10.2 | -11.8 | -15.6 |
| Self-raised Funds | 31.3 | 30.7 | 32.3 | 31.9 | 33.6 | 29.9 | 30.9 |

Source: NBS, CEIC, Morgan Stanley Research

Industrial Production & Retail Sales

Supply-side adjustment at work: Industrial production growth slowed to +13.4% YoY in July (vs. +13.7% in June), in line with our forecast of +13.5% and market consensus of +13.4%. On a seasonally-adjusted basis, industrial production contracted 0.6% MoM (vs. +0.9% MoM in June). We ascribe the noticeable slowdown of industrial production in recent months to supply-side adjustment to achieve energy conservation target instead of material deterioration of demand. According to NBS release, the growth of energy consumption per unit GDP has dropped from +3.2% YoY in 1Q 10 to +0.09% in 1H 10, implying material improvement in 2Q10. Given marginal negative progress in 1H 10 as a whole, China's government re-doubled its efforts by announcing a long list of energy-inefficient enterprises in 18 sectors that are to be closed by end September. We estimate that in order to reduce energy consumption per unit of GDP by another 5.6% within this year (China only managed to reduce energy consumption per unit of GDP by another 5.6% within this year (China only managed to reduce energy consumption per unit of GDP by another 5.6% by end-2010), this policy initiative could shave off 1.5 percentage points in industrial production growth (see *China Economics: Goldilocks on Track Despite Faster Moderation in Growth*, July 15, 2010). We believe the sharp decline in industrial production growth in June from the level in May was primarily caused by this policy measure.

Robust retail sales indicate resilient consumption: Retail sales decelerated to +17.9% YoY in July (vs. +18.3% YoY in June), lower than market consensus and our forecast of +18.5% YoY. Adjusting for the pickup in headline inflation, real growth of retail sales moderated to +14.7% YoY (vs. +15% YoY in June). However, on a seasonally-adjusted MoM basis, retail sales gained +1.4% MoM in July (vs. +1.1% MoM in June). Improved employment conditions and restored consumer sentiment underpinned the resilience of retail sales, in our view.

| Exhibit 3 | | - | | | | |
|--|--|------------------------|-------------------------------|--------------------------------------|----------------------------|----------------------------|
| Moderating Industrial Production a | nd Retail S | ales | | | | |
| 30 | | 25 | | | | |
| | | | Retail Sale | es (YoY, %) | Δ. | |
| 20 - | Λ Λ. | 20 - | Real Reta | il Sales (YoY, %) | ^ \ | |
| and the second s | | | | | ,, | h |
| 10 - | · • • • • • | | | | N 1 | |
| | <u>۱</u> ۷۲ | 15 - | | | M | |
| 0 Industry Value-added (YoY, %) | | | • | | | |
| Electric Generated (YoY, %) | N | 10 - | NALLY A | \mathcal{N} | v ~ v | |
| | V | l l | www | | | |
| -10 L -10 L - 2 0 2 0 2 2 5 0 5 2 5 0 5 2 5 0 5 2 5 0 5 2 5 0 5 2 5 0 5 2 5 0 5 5 5 5 | < 0 > 0 < | z - | V | | | |
| Aug-06 Jan-Feb 06 Jul-05 Dec-04 Jun-04 Nov-03 May-03 Oct-02 Apr-02 Sep-01 Mar-01 Aug-00 Jan-Feb 00 | May-09 Oct-08 Apr-08 Sep-07 Mar-07 | 5 Jun-10 Nov-09 | | μ. Ο Γ Α | | |
| | 07 07 08 08 09 | Jan-01 1-10 v-09 | Apr-03 Jul-02 Oct-01 | Apr-06 Jul-05 Oct-04 Jan-04 | Jul-08 Oct-07 Jan-07 | Oct-10 Jan-10 Apr-09 |
| 00 06 | | 01 | 01 ² ¹³ | 8 ⁰ 4 4 | 8 N7 | |
| | Jul-10 | Jun-10 | May-10 | Apr-10 | Mar-10 | 2009 |
| Value Added of Industry | 13.4 | 13.7 | 16.5 | 17.8 | 18.1 | 11.0 |
| MoM, SA, % | -0.6 | 0.9 | 1.0 | -2.3 | 4.2 | |
| ∫ Light Industry | 13.5 | 12.0 | 13.6 | 14.1 | 13.4 | 9.7 |
| ^て Heavey Industry | 13.3 | 14.5 | 17.8 | 19.4 | 20.0 | 11.5 |
| Electricity Generation | 11.5 | 11.4 | 18.9 | 21.4 | 17.6 | 7.0 |
| Output value for export delivery | 27.9 | 31.4 | 31.7 | 27.5 | 25.7 | -10.1 |
| · · · · · · | Jul-10 | Jun-10 | May-10 | Apr-10 | Mar-10 | 2009 |
| Retail Sales | 17.9 | 18.3 | 18.7 | 18.5 | 18.0 | 15.5 |
| Real YoY, % | 14.7 | 15.0 | 15.1 | 15.3 | 15.2 | |
| MoM, SA, % | 1.4 | 1.1 | 2.3 | 2.1 | -1.9 | |
| | | | | | | |

Source: NBS, CEIC, Morgan Stanley Research

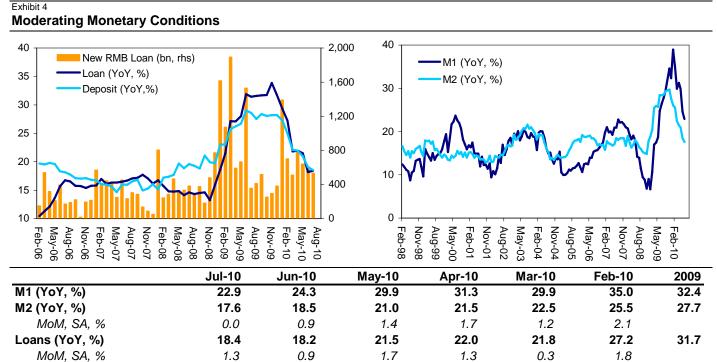
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Monetary

New loan creation lower-than-expected: New loan creation of Rmb533 bn in July was lower than our forecast of Rmb700 bn and market consensus of Rmb600 bn. We had expected that the pent-up lending impetus in June due to the mid-year check on loan/deposit ratio and the seasonality of rush at the beginning of every new quarter might trigger a jump in new loan creation in July. However, it seems that the PBOC may have maintained strict control on new loan growth in light of the uncertainties on the inflation front. Looking into the details, new household loans fell to Rmb172 bn in July (vs. Rmb231 bn in June), echoing the slump in property transactions and suspension of third mortgages in some cities. New non-fin & other loans contracted by Rmb35 bn to Rmb360 bn in July, but remained higher than Rmb333 bn in the same month of 2009. Given the normalization of comparative base of last year, loan growth rebounded to +18.4% YoY (vs. +18.2% YoY in June). However, due to contraction in new loan creation, M2 growth slowed down to +17.6% in July (vs. +18.5% YoY in June), lower than our forecast of +19.5% and market consensus of +18.5%.

Monetary policy remained supportive: The PBoC issued its 2Q10 Monetary Policy Report last week to assess the recent developments. The PBoC thinks that the economy is broadly in good shape, moving in the right direction as anticipated by policymakers. Meanwhile, the PBOC reiterated its stance to ensure the continuity and stability of current macro policies. Specifically, it underscored the adherence to appropriately loose monetary policy (see *China Economics: Our Quick Reading of PBoC 2Q Monetary Policy Report*, August 5, 2010). We reiterate our call that we expect no interest rate hikes through 2010, and the annual target of new loan would be revised up by early 4Q 10.



New Loans (RMB, bn) 533 603 639 774 510 Household 172 231 263 326 271 Non FI & Other 360 395 377 448 231 **Bill Financing** -44 -113 38 47 -269 Short-term 99 245 105 142 95 Medium-long term 453 477 501 556 669

Source: PBoC, CEIC, Morgan Stanley Research

700

199

507

-174

242

662

9.577

2,460

7,140

2,137

6,700

456

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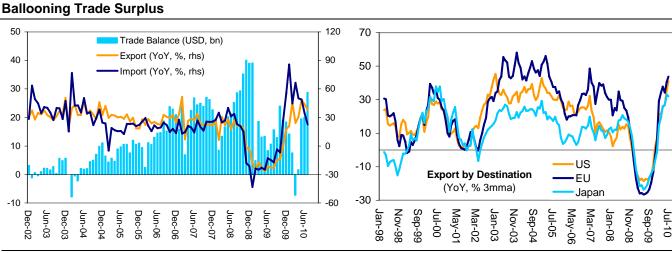
September 6, 2010 Greater China Economics

Trade

Exhibit 5

July Trade Data – Ballooning Trade Surplus Despite Softening Headline Growth: China reported July trade data today which are broadly in line with our and market expectation. Export growth slowed to +38.1% YoY from +43.9% YoY in June, beating market consensus and our forecast of +35%. Import growth decelerated to +22.7% YoY from +34.1% YoY in June, lower than our forecast of +29% and market consensus of +30%. On a seasonally adjusted MoM basis, exports grew +1.2% (vs. +4.2% in June) while imports declined 5.6% (vs. +0.9% in June). The positive sequential growth of exports suggests the headline weakness should come from high comparative base of last year instead of contraction of shipments. We believe that part of the strength of exports in July may come from the government's decision to remove the export tax rebate on more than four hundred export commodities given improved external demand. The gap between announced date (June 22) and effective date (July 15) may motivate exporters to catch the final train of export tax rebates, which might give a one-off push to exports in June and July. The trade surplus widened to US\$28.73 bn (vs. US\$20 bn in June), higher than our forecast of US\$20 bn and market consensus of US\$19.6 bn.

Outlook and Policy Implications: Since the new export order index under Mfg PMI had weakened sequentially from 54.5 in April to 51.2 in July, we expect the sequential growth of exports would continue to slow down. However, given that the new export order index stayed in expansionary form (above 50), export growth should remain positive on a sequential basis. In this context, the envisaged gear-down of YoY growth should mainly come from the kick-in off the high base. The continued rise of the trade surplus points to the need for Chinese authorities to allow sustained Renminbi appreciation against the USD, given their pledge to allow market forces to determine the exchange rate. We therefore maintain our forecasts of USD/CNY rates to reach 6.6 by end 2010 and 6.2 by end 2011, and we believe risk to these forecasts is tilted to the upside.



| | Jul-10 | Jun-10 | May-10 | Apr-10 | Mar-10 | Feb-10 | 2009 |
|------------------------|--------|--------|--------|--------|--------|--------|-------|
| Trade Balance, US\$ bn | 28.7 | 20.0 | 19.5 | 1.7 | -7.2 | 7.6 | 196.1 |
| Exports, US\$ bn | 146 | 137 | 132 | 120 | 112 | 95 | 1,202 |
| YoY, % | 38.1 | 43.9 | 48.5 | 30.5 | 24.2 | 45.7 | -16.0 |
| MoM, NSA, % | 5.9 | 4.3 | 9.9 | 7.0 | 18.6 | -13.7 | |
| MoM, SA, % | 1.2 | 4.2 | 10.9 | 11.4 | 0.0 | -2.2 | |
| Imports, US\$ bn | 117 | 117 | 112 | 118 | 119 | 87 | 1,006 |
| YoY, % | 22.7 | 34.1 | 48.3 | 49.7 | 66.4 | 44.7 | -11.2 |
| MoM, NSA, % | -0.4 | 4.6 | -5.1 | -0.9 | 37.3 | -8.9 | |
| MoM, SA, % | -5.6 | 0.9 | -0.9 | 6.9 | 4.6 | 6.3 | |

Source: General Administration of Customs, CEIC, Morgan Stanley Research

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September 6, 2010 Greater China Economics

August 5, 2010

China Economics Our Quick Reading of PBoC 2Q Monetary Policy Report

Morgan Stanley Asia Limited

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Recent Developments: PBoC issued its 2Q10 Monetary Policy Report on Thursday, August 05. In assessing the recent developments, the PBoC thinks that the economy is broadly in good shape, moving in the same direction as anticipated by policymakers. Moreover, PBoC notes that money and credit growth is normalizing, while interbank liquidity remains abundant.

Growth Outlook: PBoC expects economic growth to stabilize and become more sustainable going forward. PBoC particularly highlights several positive factors including strong enthusiasm for economic growth at local government levels, urbanization, and consumption upgrade. At the same time, PBoC also identifies a few sources of downside risks, including tepid global recovery, unstable global financial markets, weak domestic private investment, as well as the need to rebalance the economy and achieve energy conservation target.

Inflation Outlook: PBoC thinks that the inflation outlook has become complicated and therefore warrants strengthened management of inflation expectations. Favorable factors in helping to manage inflation pressures include stable international commodity prices, abundant domestic production capacity, moderation in growth, and decline in money and credit growth. However, PBoC considers abundant global liquidity poses potential inflation risk. Moreover, rising labor costs, higher environmental protection costs, and reform of pricing mechanism for natural resource products could contribute to inflationary expectations.

Policy Outlook: While pledging a continuation of the "appropriately loose monetary policy", which has long been a party line, PBoC underscored a two-handed approach: on the one hand, the monetary policy stance should help satisfy the demand for funds stemming from economic growth; on the other hand, it should help create a monetary environment conducive to stable inflation.

There is a notable language change in PBoC's description of its credit policy. The 2Q10 report refers to a principle of "support and control" (or "有扶有控"). This is a change from a

long-standing principle of "assurance and control" (or "有保有 控") that was usually mentioned in previous reports. While "assurance and control" means that credit demand by some priority sectors would be guaranteed, while that by some other low-priority sectors would be tightly controlled. We believe under the new principle of "support and control", some priority demand for credit (e.g., social housing program, SMEs) will not only be satisfied but also receive additional support (e.g., in the form of lower interest rates made possible by fiscal subsidy). We believe the new principle carries a stronger intention of policy makers to support growth.

On exchange rate policy, there is no change in language in this report compared with the official statement made upon Renminbi's exit from its peg against USD in June (see *China Economics: Renminbi Exits from USD Peg and Returns to Pre-Crisis Arrangement*, June 20).

Impact on Our Calls: We detect a visible softening in policy tone in this report compared with previous reports. Specifically, PBoC strikes a slightly more dovish tone in its assessment of growth outlook and the attendant implications to credit policy, in our view. We therefore would like to reiterate our call for a soft landing of the economy in 2010 under a Goldilocks scenario, featuring relatively high growth and low CPI inflation (see China Economics: Revising 2010-11 Forecasts, Jul 19). In particular, we believe the ambitious social housing program could be an important cushion for fixed asset investment growth (see China Economics: Can Social Housing Program Help Secure a Soft Landing? June 17). With regard to the policy outlook, we expect: 1) no rate hike through 2H10; 2) a visible softening in policy tone in 3Q10 (which has largely materialized, in our view); 3) new loan target will be revised up and investment projects approval eased by early 4Q10; and 4) sustained RMB appreciation against the USD.

MORGAN STANLEY RESEARCH

September 6, 2010 Greater China Economics

September 3, 2010

Hong Kong Economics Monetary Conditions Monitor

Morgan Stanley Asia Limited

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Monetary Conditions Monitor (Issue No.7): We launched the *Hong Kong Monetary Conditions Monitor* in early February to help keep track of monetary trends, as policy exits around the globe and possible reversal of capital flows pose great uncertainty for Hong Kong's economic recovery in 2010, which as been predominantly asset-market-led thus far. As a recap, the HK\$-denominated financial system not only serves the local economy, but also functions as a key channel of financial intermediation between Chinese enterprises and international investors. This subjects the financial system, and hence the Hong Kong economy, to volatile cross-border capital flows, which are driven by factors unrelated to local economic conditions. These capital flows have, in turn, ironically, become an unpredictable and volatile component of Hong Kong's macro fundamentals.

Summarizing recent developments: Topping headlines in the Hong Kong monetary space has been the expansion in offshore renminbi financial services in Hong Kong, and the prospect of increasing renminbi internationalization and appreciation. The Hong Kong banking system saw a significant increase in renminbi deposits (Rmb14 bn) in July, and this has not hurt the growth of HK\$ or other foreign currency deposits, signaling a genuine expansion in the banking sector balance sheet upon the further development in the offshore renminbi business. Meanwhile, our proxy for the total liquidity stock jumped by US\$10 bn in July, indicating capital inflows, allowing an ease in the loan-to-deposit ratio even amid accelerating credit growth, and lending support to asset prices. HK\$ interbank rates eased again after the uptick in June and July on the back of the liquidity inflows and a further delay in expected Fed tightening (to 2H11). Fundamentally, the stock of excess liquidity in the banking system has remained close to record-high levels since late 2009, offering a sizable buffer for outflows before interest rates see significant upward pressure. Our global team expects major central banks to maintain a dovish stance over the next year, and we see 3M HIBOR staying below 1% until late 2011.

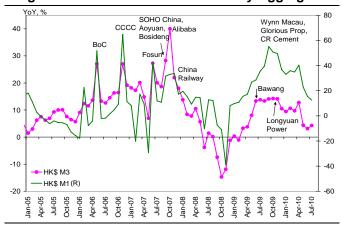
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September 6, 2010 Greater China Economics

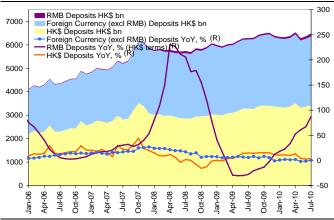
Monetary Aggregates: Monetary aggregates growth has been broadly stable in the last couple of months. The multi-billion fund-raising activities by Chinese banks has not lifted HK\$ M3 growth on a YoY basis, possibly due to the high base in the year-ago period amidst IPOs that received strong investor interest. HK\$ M3 grew 4.3% YoY in July, little changed from the 3.1% in June and 4.4% in May. Meanwhile, narrow money HK\$ M1 growth retreated to 12.5% YoY in July, due primarily to the base effect, from 15.4% in June and 22.9% in May, but the relatively fast pace was maintained amid the low interest rate environment.

Deposits: The ending of the renminbi peg to the US\$ (announced June 19), the expansion of the renminbi trade settle scheme (announced June 22), and the lifting of restrictions on Hong Kong banks in establishing renminbi accounts since July have led to a significant pick-up in renminbi deposit growth in the Hong Kong banking system. Renminbi deposits jumped by Rmb14 bn MoM in July, the biggest MoM increase in more than two years, bringing the total to Rmb103.7 bn (+86% YoY), or 1.8% of total deposits. An interesting observation is that the increase in renminbi deposits has not taken place at the expense of deposit growth in HK\$ (+3.8% YoY in July vs. +2.7% in June) or other foreign currencies (+0.2% vs. -1.6%), signaling a genuine expansion in the banking sector balance sheet upon the further development in the offshore renminbi business in Hong Kong.

Loans: Domestic credit growth powered ahead in June (+14% YoY) and July (+17.5%) after the temporary retreat in May, consistent with strong economic growth. Trade financing (+54.9% YoY) continued to extend its contribution to overall credit growth (+3.4 ppts in July, +2.8 ppts in June), in line with the trade recovery. The growth in, and contribution from, mortgages (+13.2% YoY in July, +3.1 ppts) have remained stable for four months (no longer accelerating), while other loans (+15.7% in July, +11 ppts) saw a noticeable acceleration in growth and contribution. Exhibit 1 Large Cross-month IPOs and Monetary Aggregates







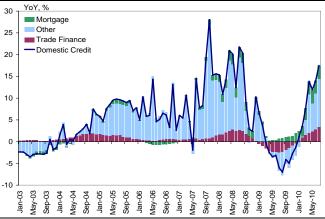
Deposits – HK\$, RMB and Foreign Currency

Source: HKMA, CEIC, Morgan Stanley Research

Exhibit 3

Exhibit 2

Breakdown of Domestic Credit Growth



Source: HKMA, CEIC, Morgan Stanley Research

Banking Sector Balance Sheet: The banking sector balance sheet expanded for two months and reached a new record in July. The expansion in July was attributable mainly to the foreign currency (including renminbi) portion. The net foreign asset position of the banking system jumped by US\$10.2 bn in July, nearly reversing the drop in the preceding three months (totaling US\$11.7 bn), indicating respectable capital inflows, possibly drawn by equity fund-raising (e.g., Agricultural Bank of China IPO).

Loan-to-Deposit Ratio and Asset Prices: Capital inflows in July recharged liquidity in the banking system and allowed the HK\$ loan-to-deposit ratio (LDR) to ease slightly to 77.3% (77.7% in June) after rising for three months (amid credit growth and capital outflows). This has helped support asset prices. Although not timed coincidentally, LDR trends in recent months have demonstrated a good relationship with stock market performance, as we have always advocated. Meanwhile, we have yet to see any response in property prices to further measures to cool speculation announced by the government in August, after the last package in May proved ineffective in capping the ascent in prices. Short supply remains a key support for property prices, in our view.

Aggregate Clearing Balance of the Banking System:

Capital inflows into Hong Kong have been absorbed in the net foreign asset position of the banking system, instead of recorded through the aggregate clearing balance in the banking system. Coupled with the cessation of bumper issues of Exchange Fund (EF) papers by the HKMA, the aggregate balance has been stable at around HK\$149 bn since mid-May.

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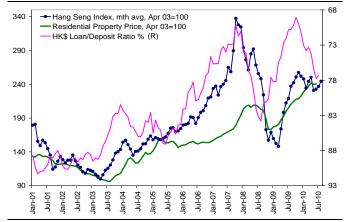
Exhibit 4 Banking Sector Balance Sheet

| HK\$ bn | Aug-08 | Jun-10 | Jul-10 | Change: Jul- 10 vs Jun-10 |
|---|--------|--------|--------|------------------------------|
| Total Assets | 10475 | 10953 | 11167 | 214 |
| Foreign Currency | 6535 | 6385 | 6563 | 178 |
| HK\$ | 3939 | 4567 | 4604 | 36 |
| Notes and Coins | 13 | 15 | 14 | 0 |
| Amount Due from Banks in HK | 328 | 205 | 242 | 37 |
| Amount Due from Banks Abroad | 372 | 227 | 225 | -2 |
| Loans and Advances to Customers | 2393 | 2620 | 2636 | 16 |
| NCD Held (issued by other financial institutions) | 43 | 52 | 55 | 4 |
| Negotiable Debt Instruments (NDI) | 399 | 921 | 918 | -3 |
| Acceptances & Bills of Exchange | 4 | 4 | 4 | 0 |
| Floating Rate Notes & Com Papers | 77 | 54 | 54 | -1 |
| Government Papers - includes EF papers | 231 | 786 | 785 | -1 |
| Other Debt Instruments | 87 | 77 | 76 | -1 |
| Investments in Shareholdings | 67 | 62 | 69 | 7 |
| Interest in Land and Buildings | 73 | 96 | 96 | 0 |
| Other Assets - includes aggregate balance | 251 | 369 | 347 | -22 |
| Foreign Currency Liabilities | 6258 | 6214 | 6314 | 100 |
| Net Foreign Asset Position | 277 | 171 | 250 | 79 |

Source: HKMA, CEIC, Morgan Stanley Research

Exhibit 5

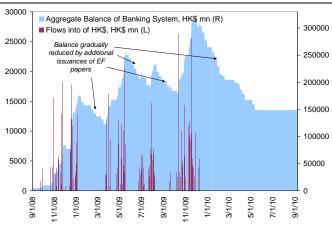
Loan-to-Deposit Ratio and Asset Price Performance



Source: HKMA, CEIC, Morgan Stanley Research

Exhibit 6

FX Flows and Aggregate Balance



Source: HKMA, CEIC, Morgan Stanley Research

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Size and Breakdown of the Monetary Base: The size of the total monetary base has remained broadly stable since December 2009 as capital inflows ceased, totaling HK\$1.02 th at present. And in the absence of additional issues of EF papers, all three components of the monetary base – currency in circulation (HK\$220 bn), aggregate clearing balance (HK\$149 bn) and holdings of EF papers (HK\$656 bn) – have remained stable over the past month.

Total Liquidity Stock – Monetary Base + Banking Sector

Net Foreign Assets: Hong Kong banks ran up their aggregate net foreign asset (NFA) position by US\$10.2 bn in July, reversing the drops in June (US\$3.7 bn), May (US\$4.4 bn) and April (US\$3.5 bn). With no capital inflows/outflows recorded through the monetary base, this implies an increase in our proxy of the total liquidity stock, helping to explain the easing in interbank rates in August (3M HIBOR averaged 0.29%) after the uptick in June (0.4%) and July (0.43%) partly attributable to large equity fund-raising activities. Hong Kong's liquidity stock has remained close to its record-high level since late 2009, offering a sizable buffer for capital outflows (before HK\$ interest rates see significant upward pressure) amidst concerns over the health of the global economy and financial conditions.

Exchange Rate: The HK\$ showed some strength against the US\$ throughout July (HK\$/US\$ averaged 7.776) and August (average 7.77) amid capital inflows to the equity market. The forward discount narrowed somewhat, in line with the covered interest parity condition, as the HIBOR-LIBOR discount narrowed with lower LIBOR rates as the market pushed forward monetary tightening expectations.

Exhibit 7 Components of the Monetary Base

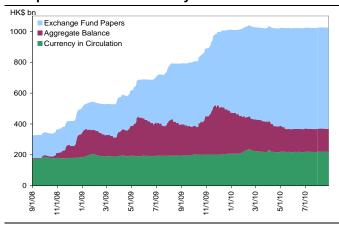
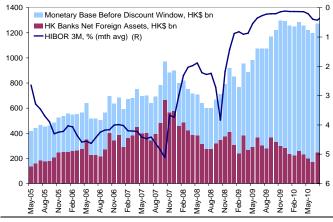




Exhibit 8

Monetary Base + Banks NFA – Total Liquidity Stock



Source: HKMA, CEIC, Morgan Stanley Research

Exhibit 9 Spot and 12M Forward Exchange Rates



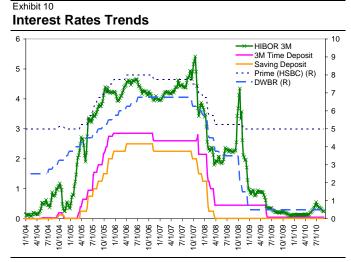
Source: HKMA, CEIC, Datastream, Morgan Stanley Research

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Interest Rates: After the uptick in June (3M HIBOR averaged 0.4%) and July (0.43%) from their record-low levels amid equity fund-raising activities and accelerating loan growth, capital inflows and a further expected delay in Fed tightening (we now forecast that the Fed and Hong Kong will remain on hold until 2H11) have enabled some easing again in interbank rates, with 3M HIBOR coming back down to an average of 0.295% in August. 3M HIBOR-LIBOR discount averaged 6 bps in August, narrowing from 9 bps in July and 14 bps in June. Meanwhile, banks have not made any changes to their prime lending and deposit rates. On the other hand, an increasing portion of new mortgages made in the last few months (87.4% in July, 83.9% in June, 82.7% in May) are priced on HIBOR instead of prime, raising the interest rate risk in home loans. Nevertheless, our global team believes that major central banks will maintain a dovish stance over the next year, and we see HIBOR (3M) remaining below 1% until late 2011.

Summary and Conclusion: Topping headlines in the Hong Kong monetary space has been the expansion in offshore renminbi financial services in Hong Kong and the prospect of increasing renminbi internationalization and appreciation. The Hong Kong banking system saw a significant increase in renminbi deposits (Rmb14 bn) in July, and this has not hurt the growth of HK\$ or other foreign currency deposits, signaling a genuine expansion in the banking sector balance sheet upon the further development in the offshore renminbi business. Meanwhile, our proxy for the total liquidity stock jumped by US\$10 bn in July, indicating capital inflows, allowing an ease in the loan-to-deposit ratio even amid accelerating credit growth and lending support to asset prices. HK\$ interbank rates eased again after the uptick in June and July on the back of the liquidity inflows and a further delay in expected Fed tightening (to 2H11). Fundamentally, the stock of excess liquidity in the banking system has remained close to record-high levels since late 2009, offering a sizable buffer for outflows before interest rates see significant upward pressure. Our global team expects major central banks to maintain a dovish stance over the next year, and we see 3M HIBOR staying below 1% until late 2011. Nevertheless, we shall continue to monitor changes in monetary conditions conscientiously, as adverse capital flows still represent a significant threat to the Hong Kong's growth cycle.



Source: HKMA, CEIC, Datastream, Morgan Stanley Research

[This publication primarily reviews and highlights empirical evidence from latest monetary data. For more detailed explanations of the concepts and our analysis framework on Hong Kong monetary conditions, please refer to our earlier report, "Q&A on Monetary Conditions", May 21, 2009, as well as "Monetary Conditions Monitor (Inaugural Issue)", February 5, 2010.]

MORGAN STANLEY RESEARCH

September 6, 2010 Greater China Economics

August 13, 2010

Hong Kong Economics Sustained Robust Growth in 2Q10; Forecasts Upgraded

Morgan Stanley Asia Limited

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Sustained robust growth in 2Q10: The Hong Kong economy sustained robust growth in 2Q10. Real GDP expanded 6.5% YoY, or 1.4% QoQ (+5.7% annualized), albeit slowing from the 8% YoY jump in 1Q10.

Service exports still the key growth driver: The sharp surge in service exports was again a key driver of growth in 2Q10. Service exports jumped 28.8% YoY to HK\$186.4bn, or 45.1% of GDP, accelerating further from the 27.2% gain in 1Q, more than reversing the contraction in the year-ago period. The service trade surplus expanded significantly to 22.3% of GDP from 16.6% a year ago. In real terms, this contributed 4.3ppt to overall GDP growth.

Marking forecasts to market; economy to grow 6% in

2010: We revise our 2010 GDP growth forecast to 6%, up from 4.5% previously. We expect a slowdown to follow in 2011, to around 4%, up from 3.5% in our last round of forecasts. The latest revisions, however, merely mark to market rather than representing a fundamental change in our view. Although our team has repeatedly pushed forward the expected timing of US monetary tightening, thereby extending the support from easy liquidity conditions, we continue to see asset market fragility as a key risk factor to growth in the months ahead, especially following additional measures announced today to cool the property market through increasing land supply and tightening mortgage lending.

Investment Case

2Q10 GDP - Sustained Robust Growth

The Hong Kong economy sustained robust growth in 2Q10. Real GDP expanded 6.5% YoY, or 1.4% QoQ (+5.7% annualized), albeit slowing from the 8% YoY (revised) jump (+2.1% QoQ) in 1Q10 attributable to the base effect. In nominal terms, nevertheless, the economy demonstrated a more noticeable slowdown, from 10.1% YoY in 1Q to 5.9% in 2Q, implying a dip in the GDP deflator to -0.6% YoY (+2% in 1Q) and reflecting the worsening loss in terms of trade. For 1H10 as a whole, the economy grew 7.2% YoY in real terms and 8% in nominal terms, reversing the 2.8% and 2.6% respective declines in 2009.

Continued Revival in Service Exports amidst Global Recovery

Similar to the story in 1Q10, the sharp surge in service exports was again a key driver of growth in 2Q10 (Exhibits 1&2). Service exports jumped 28.8% YoY to HK\$186.4bn, or 45.1% of GDP, accelerating further from the 27.2% (revised) gain in 1Q, more than reversing the contraction in the year-ago period. The biggest contributor to this strong growth was inbound travel (+10.7ppt), followed by transportation (+8.6ppt) and trade-related services (+6.4ppt) (Exhibit 3). The contribution from other (i.e., financial and business) services (+3.1ppt vs. +5.3ppt in 1Q) dipped somewhat in 2Q10, attributable to the lull in equity fundraising activities in the quarter (US\$2bn vs. US\$4.4bn in 1Q) in the midst of European sovereign credit woes, although this is set to recover noticeably in 3Q.

Despite considerable growth in service imports (+17.8% YoY), the service trade surplus expanded significantly to 22.3% of GDP from 16.6% a year ago. In real terms, this contributed 4.3ppt to overall GDP growth (Exhibits 1 & 2). Meanwhile, as global demand gradually recovers, the negative contribution from the goods deficit narrowed to 8.8ppt from 12.2ppt in 1Q.

Domestic Demand Supported by Asset Market Resilience

Domestic demand growth also remained robust in 2Q10, underpinned by asset market resilience, in our view. Private consumption grew 4.6% YoY in real terms (albeit slowing from +7.1% in 1Q on base effect), while private fixed investment surged 12.1% (+6.4% in 1Q). The pickup in public sector construction activity (commencement of construction of the Express Rail Link) was worth highlighting. Public investment surged 41% YoY, contributing 0.9ppt to overall real GDP growth, unseen since the airport construction program in the mid-1990s. Stock accumulation, which is traditionally a volatile component in the national income accounts and claimed 8.4ppt (even more than the overall growth rate) in 1Q10, normalized somewhat in 2Q, although it still contributed 4.7ppt.

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September 6, 2010 Greater China Economics

Exhibit 3

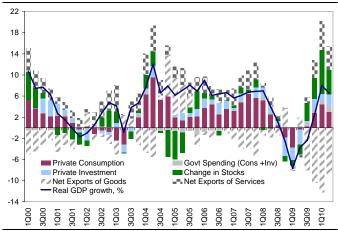
Exhibit 1 Expenditure-based GDP Breakdown and Contribution

| YoY, % | 2009R | 4Q09R | 1Q10R | 2Q10 |
|---------------------------------|-------|-------|-------|-------|
| Nominal GDP | -2.6 | 2.7 | 10.1 | 5.9 |
| GDP deflator | 0.2 | 0.2 | 2.0 | -0.6 |
| Real GDP | -2.8 | 2.5 | 8.0 | 6.5 |
| Private Consumption | -0.4 | 4.8 | 7.1 | 4.6 |
| Contribution, ppts | -0.2 | 2.8 | 4.4 | 3.0 |
| Public Consumption | 2.4 | 2.0 | 3.4 | 2.7 |
| Contribution, ppts | 0.2 | 0.2 | 0.3 | 0.2 |
| Fixed Investment | -1.8 | 14.0 | 8.2 | 15.2 |
| Contribution, ppts | -0.4 | 2.4 | 1.7 | 3.1 |
| Domestic Demand x-Stocks | -0.4 | 6.4 | 6.9 | 6.6 |
| Contribution, ppts | -0.4 | 5.4 | 6.4 | 6.3 |
| Change in Stocks, % of real GDP | 1.7 | 4.8 | 6.6 | 3.3 |
| Contribution, ppts | 1.2 | 4.0 | 8.4 | 4.7 |
| Exports of Goods | -12.7 | -2.8 | 21.6 | 20.1 |
| Imports of Goods | -9.5 | 3.3 | 28.0 | 23.6 |
| Goods balance, % of real GDP | -15.7 | -18.2 | -22.9 | -21.0 |
| Contribution, ppts | -4.5 | -10.4 | -12.2 | -8.8 |
| Exports of Services | 0.3 | 8.9 | 17.9 | 16.9 |
| Imports of Services | -3.7 | 2.5 | 10.9 | 12.3 |
| Services balance, % of real GDP | 22.5 | 25.2 | 24.8 | 22.4 |
| Contribution, ppts | 0.9 | 3.3 | 5.4 | 4.3 |

Contribution, ppts = Component contribution to real GDP growth, in percentage points. Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Exhibit 2

Expenditure-based GDP Breakdown and Contribution



Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Service Exports – Hong Kong's Growth Engine 40 Transportation Travel 30 Trade-related Other (Financial & Business) Exports of Services, YoY, % 20 10 n -10 -20 Q02 3Q02 Q03 Q06 3Q06 1Q08 3Q08 1Q09 Q10 3003 Q05 3Q05 1007 3Q09 004 3Q04 3Q07 ğ ò Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Marking Forecasts to Market

The Hong Kong economy has performed better than our earlier forecast in 1H10. We attribute this mainly to the resilience in asset markets, as the positive support to monetary conditions from delayed policy exits in developed markets more than offset the challenges presented by the lackluster recovery in the US and deterioration in sovereign financial health in Europe. We had maintained more conservative forecasts for 2010 than consensus as we refrained from extrapolating the recovery dynamics from 2009 – which were powered primarily by asset market gains – but factored in downside risks from government policy and asset market correction (see our report, *A Fragile Recovery in 3Q09*, November 15, 2009), to which Hong Kong's economic cycle is more vulnerable than other economies in the region.

Nevertheless, having realized such robust growth in 1H10, we are lifting our forecasts. We raise our 2010 GDP growth forecast to 6%, from 4.5% previously. We expect a slowdown to follow in 2011, to around 4%, up from 3.5% in our last round of forecasts. Detailed forecasts on the expenditure components are laid out in Exhibit 5. The latest revisions, however, merely mark to market rather than representing a fundamental change in our view. Although our team has repeatedly pushed forward the expected timing of US monetary tightening (the Fed is now forecast not to hike rates until 2H11) (Exhibit 4), thereby extending the support from easy liquidity conditions, we continue to see asset market fragility as a key risk factor to growth in the months ahead, especially following additional measures announced today to cool the property market through increasing land supply and tightening mortgage lending.

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|--------|---------|----------|

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Exhibit 5 Hong Kong – Economic Forecast Summary

(YoY, %, unless otherwise stated)

| | 2008 | 2009 | 2010F | 2011F |
|----------------------------|-------|-------|-------|-------|
| Nominal GDP | 3.7 | -2.6 | 7.1 | 5.4 |
| GDP deflator | 1.5 | 0.2 | 1.0 | 1.3 |
| Real GDP | 2.2 | -2.8 | 6.0 | 4.0 |
| Domestic demand x-Stocks | 2.0 | -0.4 | 5.7 | 4.2 |
| Private Consumption | 2.4 | -0.4 | 4.8 | 4.0 |
| Public Consumption | 1.8 | 2.4 | 3.0 | 2.0 |
| Fixed Investment | 0.8 | -1.8 | 9.7 | 5.7 |
| Private Investment | 0.2 | -3.4 | 8.3 | 5.0 |
| Net exports, % of real GDP | 10.2 | 6.8 | 5.4 | 6.7 |
| Current Account, US\$ bn | 29.3 | 18.3 | 8.9 | 7.4 |
| % of GDP | 13.6 | 8.7 | 4.0 | 3.1 |
| Trade balance, US\$ bn | -25.9 | -28.9 | -48.0 | -55.0 |
| Exports | 5.1 | -12.6 | 19.0 | 9.8 |
| Imports | 5.4 | -11.0 | 22.9 | 10.4 |
| Service exports | 8.6 | -6.7 | 20.0 | 10.0 |
| Service imports | 10.3 | -6.1 | 13.5 | 8.0 |
| Composite CPI | 4.3 | 0.5 | 2.8 | 3.0 |

 ${\sf F}$ = Morgan Stanley Research Forecasts. Source: Census and Statistics Department, CEIC, Morgan Stanley Research

On the inflation front, recent trends in the headline CPI have been in line with our forecasts. Indeed, asset price recovery significantly shortened the deflationary episode in the aftermath of the global financial crisis. We are maintaining our 2010 CPI inflation forecast at 2.8%. Yet, cost pressures stemming from the property sector are feeding through the economy, meeting with increasingly vocal demands for higher wages, and planned hikes in public transport fees. So we forecast a pickup in inflation to 3% in 2011, revised up from 2.5% previously.

Exhibit 4

| | Fed | нк | | | | |
|--------|--------|-----------|-------|-------|-------|----------|
| | Funds | Discount | | | | нк |
| Period | Target | Window | LIBOR | HIBOR | US | Average |
| End, % | Rate | Base Rate | 3M | 3M | Prime | Mortgage |
| | | | | | | |
| 4Q 07 | 4.25 | 5.75 | 4.70 | 3.45 | 7.25 | 4.15 |
| 4Q 08 | 0.13 | 0.50 | 1.43 | 0.95 | 3.25 | 3.50 |
| 4Q 09 | 0.13 | 0.50 | 0.25 | 0.14 | 3.25 | 2.25 |
| 1Q 10 | 0.13 | 0.50 | 0.29 | 0.15 | 3.25 | 2.25 |
| 2Q 10 | 0.13 | 0.50 | 0.53 | 0.57 | 3.25 | 2.25 |
| 3Q 10F | 0.13 | 0.50 | 0.45 | 0.45 | 3.25 | 2.35 |
| 4Q 10F | 0.13 | 0.50 | 0.45 | 0.45 | 3.25 | 2.50 |
| 1Q 11F | 0.13 | 0.50 | 0.45 | 0.45 | 3.25 | 2.50 |
| 2Q 11F | 0.13 | 0.50 | 0.55 | 0.55 | 3.25 | 2.50 |
| 3Q 11F | 0.50 | 1.00 | 0.95 | 0.70 | 3.50 | 2.75 |
| 4Q 11F | 1.00 | 1.50 | 1.55 | 1.30 | 4.00 | 3.25 |

F = Morgan Stanley Research Forecasts. Source: HKMA, CEIC, Morgan Stanley Research

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September 6, 2010 Greater China Economics

August 20, 2010

Taiwan Economics 2Q GDP Beat Expectations by Wide Margin

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Quick Comment: Taiwan's GDP expanded 12.5% YoY in 2Q10, ahead of our and consensus forecasts by a wide margin (MS: 10.4%; consensus: 10.2%). In terms of sequential growth, GDP grew 1.8% QoQ (i.e. 7.2% annualized) in 2Q, lower than 1Q10's 13.7% YoY and 2.6% QoQ. We believe that Taiwan's YoY growth rate peaked in 1Q10 at 13.7% and the QoQ growth rate peaked in 4Q09 at 3.9%. We expect normalization to continue in 2H, after some exceptional low base effects pushed the 1H growth rates to historical highs. Having said that, we think the overall growth in Taiwan will likely be resilient, backed by strong exports, rising private consumption and capex expansion.

A brief glance at the breakdown:

Private Consumption - much stronger than expected: Upside surprise came in Taiwan's private consumption in 2Q10, as the growth rate accelerated to 4.4% YoY, from 3.1% in 1Q10. We believe the strong growth in private consumption was driven by three factors: the positive consumer sentiment, the improving labor market and the wealth effect from Taiwan's property market. Taiwan's consumer confidence has reached its highest level in six years. The signing of ECFA could be one of the reasons, as Taiwan's consumer confidence is usually very much affected by cross-strait ties, in our view. The improving labor market is another factor. Taiwan's jobless rate dropped from 5.7% in March to 5.2% in June, and intensive hiring activities were seen, particularly in the manufacturing sectors. We believe manufacturers' capacity expansion activities will continue to benefit the labor market. The upside surprise in private consumption could also have come from the property market in our view, as the buoyed property prices could have created wealth effects, driving up private consumption.

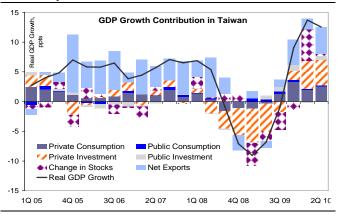
Taiwan: GDP Breakdown by Expenditure

| | 2Q10 | 1Q10 | 2009 | 2008 |
|--------------------------------|------------|------------|-------|-------|
| Real YoY Growth, % | | | | |
| GDP | +12.5 | +13.7 | -1.9 | +0.7 |
| Private Consumption | +4.4 | +3.1 | +1.5 | -0.6 |
| Public Consumption | +1.7 | +1.8 | 3.6 | +0.7 |
| Fixed Investment | +30.8 | +29.3 | -11.8 | -11.2 |
| Private | +37.5 | +41.3 | -19.4 | -13.8 |
| Public enterprises | +32.2 | +3.2 | +4.0 | -2.4 |
| Government | +7.1 | -8.9 | +18.8 | -0.4 |
| Exports of Goods & Services | +34.3 | +41.4 | -9.2 | +0.6 |
| Imports of Goods & Services | +34.4 | +48.8 | -13.7 | -3.1 |
| Contribution to GDP Growth, pe | rcentage p | oints (ppt | s) | |
| Domestic Demand | +8.0 | +11.9 | -3.3 | -1.5 |
| Private Consumption | +2.6 | +2.0 | +0.8 | -0.3 |
| Public Consumption | +0.2 | +0.2 | +0.4 | +0.1 |
| Fixed Investment | +5.0 | +4.5 | -2.2 | -2.4 |
| Change in Inventory | +0.3 | +5.3 | -2.4 | +1.1 |
| Net Exports | +4.5 | +1.8 | +1.5 | +2.3 |
| Exports of goods and Services | +22.2 | +24.1 | -6.5 | +0.4 |
| Imports of Goods & Services | +17.7 | +22.3 | -7.9 | -1.9 |

Source: Taiwan Statistics Office, CEIC and Morgan Stanley Research

Exhibit 1

Strong Growth Driven by Capex, Exports and Private Consumption in 2Q10



Source: Taiwan Statistics Office, CEIC and Morgan Stanley Research

Exhibit 2

2001

2002

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Six Years

Consumer Sentiment Rises to its Highest Level in

Source: CEIC and Morgan Stanley Research

2004

2005

2006

2007

2008

2009

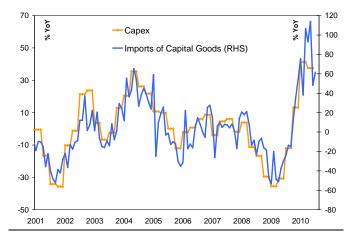
2010

2003

Government Consumption - slightly stronger than expected: Government spending increased 1.7% YoY in 2Q10, lower than 1.8% in 1Q10. But given the high base in the same period last year as the government increased stimulus in the middle of the financial crisis, the YoY growth rate at 1.7% YoY in 2Q10 could still be considered high. We believe that normalization will continue to be seen in Taiwan's government consumption, particularly as the private sector has already shown a strong rebound in 1H.

Capex - in line: The rise in investment accelerated to 30.8% YoY in 2Q10, from 29.3% in 1Q10. Private investment increased 37.5% YoY in 2Q10 (vs. +41.3% in 1Q10), and public investment increased 32.2% YoY in 2Q10 (vs. 3.2% in 1Q10). The rise in capex is largely in line with our expectation, as we believe that capacity expansion is the ongoing theme in Taiwan and manufacturers are in a capex investment upcycle at the moment. The continual rise in capital goods imports and machinery orders have supported our views.

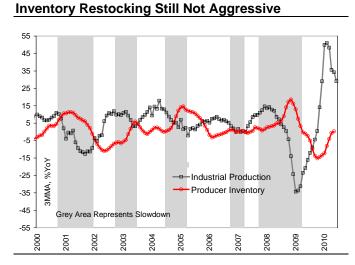
Exhibit 3 Capex Remains the Pillar of Growth



Source: CEIC and Morgan Stanley Research

Exhibit 4

Inventory - in line: Inventory contributed 0.3 pps to the total of 12.5% GDP in 2Q10, compared to 5.3 pps to 13.7% growth in 1Q10. This was in line with our expectation, as we believe that Taiwan's restocking has not been aggressive, considering the inventory rise in 1H10 was only 41% of the inventory cut in 1H09. Therefore, Taiwan manufacturers still took a disciplined approach on adding up their inventory.



Source: CEIC and Morgan Stanley Research

External Trade - in line: With the reported trade statistics in 2Q, the GDP contributions from exports were largely in line with our expectations. Exports increased 34.3% YoY in 2Q10 (vs. 41.4% in 1Q10), and imports increased 34.4% YoY (vs. 48.8% in 1Q10). We believe the global demand for high-tech products has been rising strongly in this round of recovery, and Taiwan

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is one of the biggest beneficiaries. Taiwan's industrial production reached record highs for four consecutive months from March to June, and we believe the export sector will remain the driver of the economy.

Bottom line: The increase in private consumption is the major upside surprise in 2Q10 GDP data. We think this is positive for the economy as a whole, as it adds resilience to the overall economy in case external demand faces any uncertainties. Concerns over a potential slowdown in demand from major economies, especially China, have emerged recently. However, we believe Taiwan's economy could become more resilient with a stronger private consumption sector. Government investment and consumption are more likely to decline in 2H. The economy is already boosted by the growing private sector, and thus policy stimulus could gradually be withdrawn under this backdrop. With the economy expanding faster-than-expected, we believe that interest rate normalization will continue in the rest of the year. We are forecasting two more rate hikes in 2H10 (+12.5 bps each) to bring the policy re-discount rate to 1.625% by year-end.

China Economics: PBOC OMOs Monitor: Surge in Net Injections to Meet Temporary Liquidity Shortage

Exhibit 1

September 5, 2010

Development and Policy Implications: In light of the liquidity shortage triggered by ICBC's capital raising and shown in the surge of short-end SHIBOR rates, the PBOC injected RMB70 bn in net liquidity into the interbank market (vs. RMB91 bn of net withdrawals last week).

Injection in bill issuance vs. withdrawal in repo sales: PBOC bill issuance dwindled to RMB25 bn (RMB12 bn of 1-yr bills this Tuesday, and RMB13 bn of 3-m bills this Thursday), from RMB121 bn last week. Given a rise in redemption pressure to RMB100 bn (vs. RMB60 bn last week), RMB75 bn of net liquidity was injected through bill issuance this week (vs. withdrawals of RMB61 bn last week) (Exhibit 3). Meanwhile, the PBOC drained RMB5 bn through the same amount of 91-day repos this Thursday, given no matured repos this week (Exhibit 4). All in all, RMB70 bn of net liquidity was injected by the PBOC this week.

Short-lived surge of SHIBOR: Short-end SHBIOR jumped last Friday (August 27) with overnight, 7-day and 1-month surging 32.5bps, 38.2bps, and 20.3bps respectively. The long-end rates 3-month SHBIOR and above hardly moved. Short-end SHIBOR rates continued to drift up this week by Wednesday. However, sharp corrections were witnessed on Thursday with overnight, 7-day and 1-month falling 55bps, 50bps and 10bps respectively. 7-day and 1-month fell 14.6 bps and 5.2bps respectively on Friday.

Similarities behind the latest surge of SHIBOR rates and that of late May to mid-July

(1) Mega capital raisings: the issuance of RMB40 bn in BOC convertible bonds and RMB60 in the ABC IPO was conducted in June and July. Central Huijin Investments sold RMB54 bn of bonds in the interbank market last Tuesday and ICBC issued RMB20 bn in convertible bonds this Tuesday.

Weekly Open Market Operations

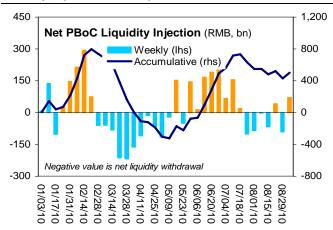
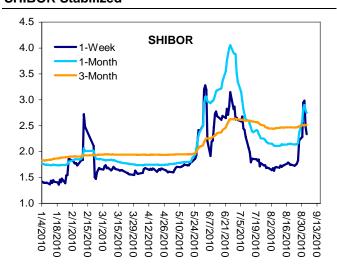


Exhibit 2 SHIBOR Stabilized



Source: CEIC, Morgan Stanley Research:

(2) Continued liquidity withdrawals: Eleven weeks' continued liquidity withdrawals by the PBOC from March to May drained more than RMB1 trillion. This time, net liquidity withdrawals were witnessed in five out of the six weeks before prior to this week, draining more than RMB300 bn liquidity in total.

However, a couple of dissimilarities, in our view, suggest that the latest surge of SHIBOR will be short-lived:

(1). Muted long-end rates: Long-end SHIBOR rates picked up noticeably between late May and mid-July and have remained high since. However, only short-end rates jumped this time; long-end (3-month and above) rates hardly moved.

(2). Easing money supply from rebounding FX purchase: The liquidity shortage in Q2 had to do with the sharp depreciation of Euro and possibly sizeable capital outflows which reduced the money supply to some extent. The Euro has rebounded as concerns about European sovereign debt have reduced, and capital outflows have eased. Wednesday's release by the PBOC showed incremental FX purchases rebounded to Rmb171bn in July (vs Rmb117bn in June and Rmb132bn in May). In addition, we expect trade surplus to continue to widen in the coming months.

(3). Smaller size of liquidity withdrawals: Liquidity withdrawals by the PBOC before the surge from late May to mid July were much bigger than this time (RMB1.1 tn vs. RMB300 bn)

(4). Expectations differ: There was strong concern about policy tightening back in Q2 and the market interpreted any short rate moves as signaling a policy tightening. There is no such expectation/fear at the current juncture.

What's next: Redemptions could surge to RMB274 bn next week (vs. RMB100 bn last week), second only to the RMB348 bn seen during Chinese New Year (Exhibit 5). In this context, we expect that PBOC OMOs will result in a modest injection even with the help of 3-Yr bill issuance. The odds of an RRR hike to drain liquidity remains low, in our view.

Note: Pls refer to "China Economics: China Interbank Liquidity Monitor, July 26, 2010" for A Primer on China's Interbank Bank Market and the PBoC OMOs

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Exhibit 3 POBC Bills Issuance & Redemption

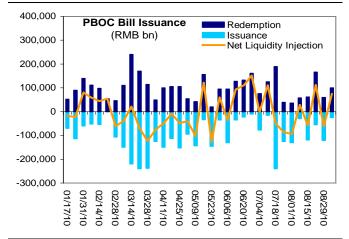


Exhibit 4

PBOC Repos and Matured

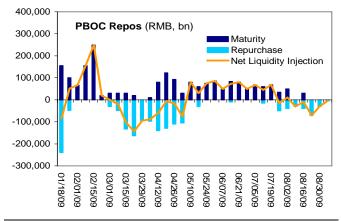
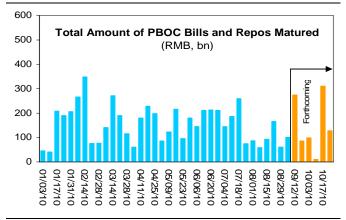


Exhibit 5

Total Redemption of POBC Bills and Repos



Source: CEIC, Morgan Stanley Research

September 6, 2010 Greater China Economics

China Economics: August PMI Rebound Helped by Seasonality

September 1, 2010

August PMI rebound helped by seasonality: China

Manufacturing PMI rebounded from an 18-month low of 51.2 in July to 51.7 in August, beating our forecast and market consensus of 51.5. The rebound in August can be explained partly by the supportive seasonality. However, compared with the magnitude of historical rebounds in August (1.5pp in 2005, and 0.7pp in 2006, 2007 and 2009), the 0.5pp of this August was rather modest, implying that moderation in industrial activity as a result of tightening on the property sector and supply-side adjustment to achieve energy-conservation targets remains broadly on track. This is in line with our expectation for a trough in QoQ sequential growth in 3Q at around an 8% annualized rate. We expect a sequential pick-up in the growth rate again in 4Q.

Sub-indices tell more: Domestic demand rebounded strongly, with New Orders leaping to 53.1 in August (vs. 50.9 in July). Production edged up 0.4pp to 53.1 in August from 52.7 in July, which largely reflected the supportive seasonality, in our view. External demand demonstrated resilience, with New Export Orders rebounding to 52.2 in August (vs. 51.2 in July). However, thanks to demand-dampening domestic tightening, Imports continued to soften to 48.4 in August (vs. 49.3 in July), suggesting that the trade surplus will stay elevated in 2H10. Destocking remained on track, evidenced by a slide in both Raw Material Inventory (47.3 in August vs. 47.8 in July) and Finished Products Inventory (46.6 in August vs. 49.9 in July). Since the ratio of New Orders to Finished Products Inventory started to rebound in August, we expect industrial sales to pick up accordingly, due to strengthening demand stemming from rising orders and restocking needs. Finally, what is most eye-catching is the strong rebound in In-put Price to 60.5 in August (vs. 50.4 in July), which is in line with the pick-up in activity in upstream sectors.

| | Aug-10 | Jul-10 | 1H10 Avg | 09 Avg |
|--------------------------|--------|--------|----------|--------|
| Mfg PMI | 51.7 | 51.2 | 54.1 | 52.9 |
| New Order | 53.1 | 50.9 | 56.3 | 55.4 |
| Production | 53.1 | 52.7 | 57.7 | 56.5 |
| Employment | 51.7 | 52.2 | 51.6 | 49.9 |
| Supplier Delivery | 50.7 | 49.9 | 50.5 | 50.7 |
| Raw Material Inventory | 47.3 | 47.8 | 50.5 | 47.8 |
| New Export Order | 52.2 | 51.2 | 53.0 | 49.5 |
| Purchases | 51.9 | 52.2 | 56.7 | 55.5 |
| Finished Goods Inventory | 46.9 | 49.9 | 48.4 | 45.7 |
| In-put Price | 60.5 | 50.4 | 62.9 | 55.5 |
| Imports | 48.4 | 49.3 | 51.8 | 49.0 |
| Overstock Order | 48.2 | 46.8 | 49.9 | 47.9 |

Exhibit 2

Broad-based Contract



Source: CEIC, Morgan Stanley Research

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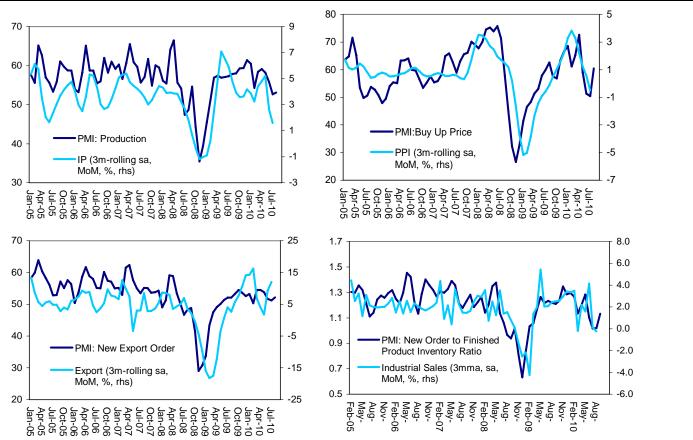
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Industrial-wise Diagnosis: Among 20 industries surveyed by the China Federation of Logistics and Purchasing, PMIs of non-metal minerals, transportation equipment, chemical fibers & rubber products, and textiles were below 50, while metal products, petroleum processing & coking, and telecom, computer & other electronic equipment remained resilient, staying above 50. Broadly speaking, the upstream and downstream sectors fared well compared to mid-stream industries in August.

Policy Implications and Outlook: Although Manufacturing PMI staged a mild rebound in August, we believe it was helped partly by the supportive seasonality. Since the headwinds from supply-side adjustment to achieve energy-conservation targets is intensifying, and with no sign that the tightening on the property sector will be loosened soon, industrial production will likely remain in weak shape before policy turns growth-supportive in Q4. We reiterate our call that the policy cycle has troughed and will turn growth-supportive by 4Q 10 with: 1) No rate hike through 2H10; 2) visible softening in policy tone in 3Q10; 3) new loan target will be raised and investment project approvals eased by early 4Q10; and 4) sustained RMB appreciation against the USD (*China Economics: Revising 2010-11 Forecasts*)

Exhibit 3

PMI Index Leading Economic Indicators



Source: CEIC, Morgan Stanley Research

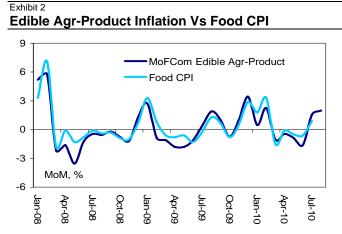
China Economics: China Inflation Tracker: No Change to August CPI Forecast at 3.4%

Weakening upward momentum: Both food prices and producer prices continued to drift up last week. However, the magnitude of the increase has been reduced to some extent, implying weakening upward momentum of headline inflation. We maintain our forecasts for August CPI and PPI inflation made last week at +3.4% YoY and +4.5% YoY, respectively. We will finalise our August forecasts next week after factoring in the price movements of the final week.

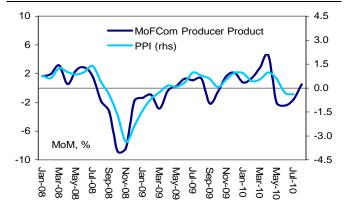
Food prices drifting up: On the back of a broad rise in the sub-categories, the index of edible agricultural food prices (EAFP) gained +0.58% WoW last week (Exhibit 7). In contrast to the recent surge in international grain prices, domestic price increases were rather benign, edging up +0.4% last week (Exhibit 9). Given the high inventory-to-sales ratio and relative isolation from the international market, pressure from grain price inflation should be well-contained, in our view. The increase in meat prices started to lose momentum by slowing down to +0.3% WoW last week, much milder than +2% and +1.2% rises of the previous two weeks (Exhibit 7). We do not expect a repeat of the surge in pork prices in 2007-08. Vegetable prices rebounded +2.9% WoW last week (vs. -0.7% WoW in the week before), implying continued negative impacts from bad weather (Exhibit 9). Egg prices remained high, rising +1.4% WoW due to the hot weather. Poultry, edible oil and aquatic products edged up +0.2%, +0.1% and +0.4%, respectively, while fruit lost another 0.7% after 0.4% in the week before.

Exhibit 1 Weekly Inflation Forecast

| | Aug-1 | 0 (F) | Jul-10 | Jun-10 | May-10 |
|------------------------|--------|-------|--------|--------|--------|
| СРІ | YoY, % | 3.4 | 3.3 | 2.9 | 3.1 |
| CPI: Carry-over Effect | YoY, % | 1.6 | 2.1 | 2.1 | 1.6 |
| Food CPI | YoY, % | 6.9 | 6.8 | 5.7 | 6.1 |
| Non-Food CPI | YoY, % | 1.7 | 1.6 | 1.6 | 1.6 |
| CPI | MoM, % | 0.9 | 0.4 | -0.6 | -0.1 |
| Food CPI | MoM, % | 1.3 | 0.9 | -1.6 | -0.5 |
| Non-Food CPI | MoM, % | 0.2 | 0.2 | -0.1 | 0.1 |
| PPI | YoY, % | 4.5 | 4.8 | 6.4 | 7.1 |
| PPI: Carry-over Effect | YoY, % | 2.1 | 2.8 | 3.8 | 4.1 |
| | MoM, % | 0.1 | -0.4 | -0.3 | 0.6 |



Producer Product Inflation Vs PPI



Source: CEIC, MoCom, Morgan Stanley Research

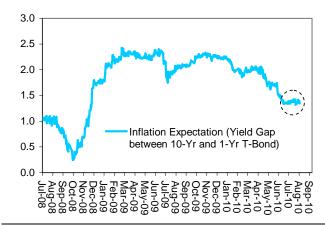
Slower increase in producer prices: The producer price index continued to rise last week but the increase slowed to +0.2% WoW last week (vs. +1.1% WoW and +0.5% WoW in the previous two weeks) (Exhibit 13). Metal prices cooled down noticeably. The price of non-ferrous metals inched up +0.1% WoW last week while ferrous metals were flattish from the previous week. Energy and chemical products climbed +0.2% and +0.1% WoW, respectively. Rubber products jumped +1.1% WoW while construction materials lost 0.1% last week.

Proxy Index for Inflation Expectations

Exhibit 3

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Source: CEIC, Morgan Stanley Research

Inflation Outlook: In light of the recent surge in grain prices, market participants have started to worry about the outlook for food inflation and its policy implications. Since no material deterioration was found on the supply side, we believe the growth of three major drivers of food prices (grain, pork and vegetables) will be well-capped with proper supply adjustment through government intervention. Six measures introduced by the government last week to smooth the volatility in vegetable prices show its determination to ensure broadly stable pricing, in our view.

We expect headline inflation to peak in August and continue to soften in the following months, if it hits a new high in August as we expect. If this were to happen, we expect the PBOC to remain neutral on the monetary front, with low risk of RRR and interest rate hikes.

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Food Price Monitor

Exhibit 4 Meat Prices Trending Up YoY

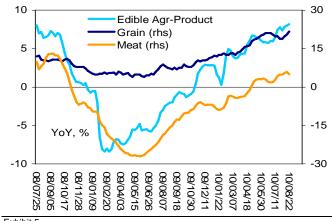
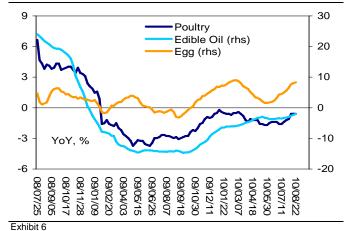
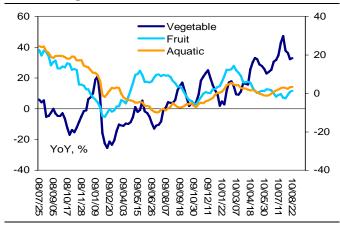


Exhibit 5

Mild YoY Rebound in Eggs

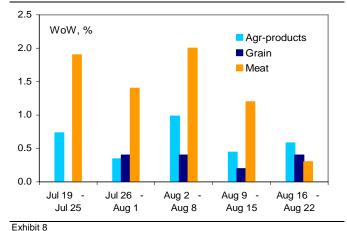


Volatile Vegetable Prices YoY



Source: MoCom, CEIC, Moran Stanley Research

Exhibit 7 Meat Prices Continue to Rebound WoW



xhibit 8

Egg Prices Continue to Rise WoW

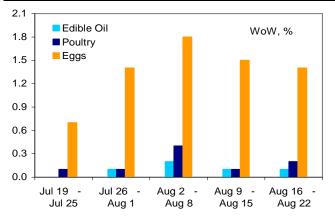
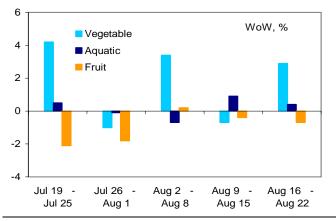


Exhibit 9

Vegetable Prices Rally WoW



Source: MoCom, CEIC, Morgan Stanley Research

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September 6, 2010 Greater China Economics

Producer Goods Price Monitor

Exhibit 10



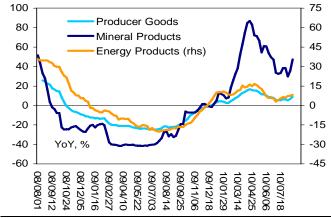
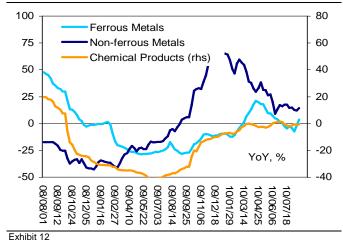
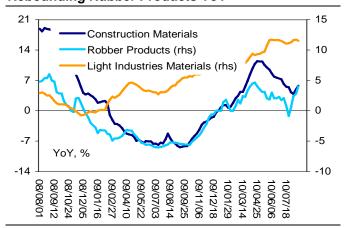


Exhibit 11

Stabilizing Non-ferrous Metals YoY



Rebounding Rubber Products YoY



Source: MoCom, CEIC, Morgan Stanley Research

Exhibit 13 Mineral Products Strengthened WoW

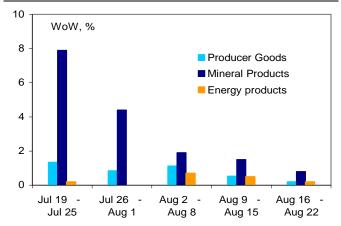


Exhibit 14

Metals Tended to Stabilize WoW

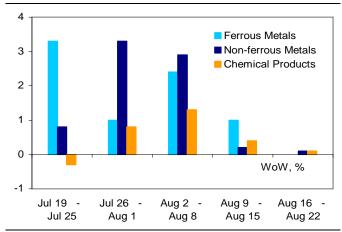
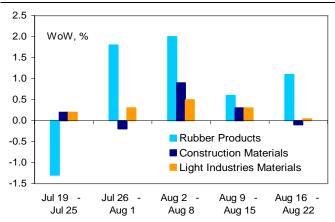


Exhibit 15

Resilient Light Industrial Materials



Source: MoCom, CEIC, Morgan Stanley Research

China Economics: July Trade Data – Ballooning Trade Surplus

August 10, 2010

July Trade Data – Ballooning Trade Surplus Despite Softening Headline Growth: China reported July trade data today which are broadly in line with our and the market's expectation. Export growth slowed to +38.1% YoY from +43.9% YoY in June, beating market consensus and our forecast of +35%. Import growth decelerated to +22.7% YoY from +34.1% YoY in June, lower than our forecast of +29% and market consensus of +30%. On a seasonally adjusted MoM basis, exports grew +1.2% (vs +4.2% in June) while imports declined 5.6% (vs +0.9% in June). The positive sequential growth of exports suggests the headline weakness should come from high comparative base of last year instead of contraction of shipments. We believe that part of the strength of exports in July may come from the government's decision to remove the export tax rebate on more than four hundred export commodities given improved external demand. The gap between the announced date (June 22) and the effective date (July 15) may motivate exporters to catch the final train of export tax rebates, which might give a one-off push to exports in June and July. The trade surplus widened to US\$28.73bn (vs US\$20bn in June), higher than our forecast of US\$20bn and market consensus of US\$19.6bn.

Broad-based Slowdown in Export Growth on High Base

Effect: Except for a marginal correction for Japan (-1.2% MoM), positive MoM sequential growth were recorded for exports to both DM (US: +7.2%, EU: +5.4%) and EM (ASEAN: +2%, Taiwan: +4.7%, Korea: +0.6%) economies. Moreover, the acceleration in sequential growth rates were found in July, compared with June. However, ascribing to a kick-in of high base effect, broad-based sluggishness in YoY growth was witnessed in the exports to both DM and EM markets

Trade Performance

| | Jul-10 | Jun-10 | May-10 | YTD |
|----------------------------------|-------------|--------|--------|-------|
| Trade Balance, US\$ bn | 28.7 | 20.0 | 19.5 | 83.9 |
| Exports, US\$ bn | 146 | 137 | 132 | 850 |
| YoY, % | 38.1 | 43.9 | 48.5 | 35.6 |
| MoM, SA, % | 1.2 | 4.2 | 10.9 | NA |
| By destination, YoY, % | | | | |
| US | 35.0 | 43.8 | 44.3 | 29.4 |
| Japan | 22.0 | 37.1 | 37.1 | 24.7 |
| EU | 38.3 | 43.2 | 49.7 | 36.4 |
| ASEAN | 31.8 | 42.2 | 48.0 | 43.2 |
| Hong Kong | 32.2 | 37.4 | 46.4 | 33.8 |
| Korea | 40.3 | 37.4 | 52.2 | 36.5 |
| Taiwan | 49.3 | 58.3 | 77.7 | 62.6 |
| South Afirca | 58.7 | 74.8 | 66.3 | 50.9 |
| Russia | 132.5 | 83.3 | 91.6 | 70.7 |
| Brazil | 96.2 | 125.0 | 110.1 | 102.1 |
| Imports, US\$ bn | 117 | 117 | 112 | 767 |
| YoY, % | 22.7 | 34.1 | 48.3 | 47.2 |
| MoM, SA, % | -5.6 | 0.9 | -0.9 | NA |
| By product, YoY, % | | | | |
| Hi Tech Products | 30.3 | 33.0 | 50.2 | 42.8 |
| Mechanical & Electrical Products | 30.1 | 32.8 | 50.0 | 42.8 |
| Unwrought Copper & Products | 11.8 | 1.1 | 52.8 | 59.1 |
| Steel Products | -0.3 | 8.4 | 5.4 | 6.3 |
| Plastics in Primary Forms | -2.8 | 6.9 | 35.1 | 34.7 |
| Crude Petroleum Oil | 7.9 | 81.8 | 69.2 | 88.4 |
| Iron Ore & Concentrates | 68.8 | 75.0 | 70.1 | 55.6 |
| 50 | | | | - 120 |
| Trade Balance | e (USD, bn) |) | | |
| 40 - Export (YoY, S | %, rhs) | | | - 90 |
| Import (YoY, 9 | %, rhs) | | | |
| 30 - | | | ₩. | - 60 |
| | الما | | .//\ | |
| | | M | | 30 |



Source: General Administration of Customs, CEIC, Morgan Stanley Research

Export growth to US, EU, and Japan dropped to +35%, +38.3% and +22% YoY in July from +43.8%, +43.2%, and +37.1% YoY in June. ASEAN, Taiwan, HK also fell to +31.8%, 49.3%, and +32.2% YoY in July (vs +42.2%, +58.3%, and +37.4% YoY in June). Of note, due to a relatively low base and improved consumer demand, exports to Korea strengthened to +40.3% YoY (vs +37.4% YoY in June). In terms of export goods, both capital goods and labor-intensive products slid on a high base as well. Mechanical & electrical products and hi-tech products

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softened to +37.6% and +30% YoY in July from +41.8% and +38.6% YoY in June. Textile yan & fabrics and garments dropped to +35.1% and +23.1% YoY in July from +44% and +27.7% YoY in June. Only integrated circuits and footwear defied the overall trend by rising to +27.2% and +36.3% YoY in July (vs +18.2% and +32.3% YoY in June).

Resilient imports of capital goods but weaker appetite for basic materials: Import growth of capital goods, machinery and hi-tech products, edged down to +30.1% and +30.3% YoY in July from +32.8% and +33% YoY in June. However, on a MoM basis, they gained +3.2% and +2.5%, respectively. For commodities, imports of crude oils slumped to +7.9% YoY in July from +81.8% YoY in June due to high base and sequential contraction (-17.9% MoM). Imports of iron ore slid to +68.8% YoY in July (vs +75% YoY in June), but gained +9.7% on a MoM sequential basis. Plastics in primary form and steel products dipped to negative territory at -2.8% and -0.3%, respectively, YoY in July from +6.9% and +8.4% YoY in June.

Outlook and policy implications: Since the new export order index under Mfg PMI had weakened sequentially from 54.5 in April to 51.2 in July, we expected that the sequential growth of exports would continue to slow down. However, given that the new export order index stayed in expansionary form (above 50), exports growth should remain positive on a sequential basis. In this context, the envisaged gear-down of YoY growth should mainly come from the kick-in off the high base. The continued rise of the trade surplus points to the need for Chinese authorities to allow sustained Renminbi appreciation against the USD, given their pledge to allow market forces to determine the exchange rate. We therefore maintain our forecasts of USD/CNY rates to reach 6.6 by end 2010 and 6.2 by end 2011, and we believe risk to these forecasts is tilted to the upside (China Economics: Revising 2010-11 Forecasts, July 19, 2010)

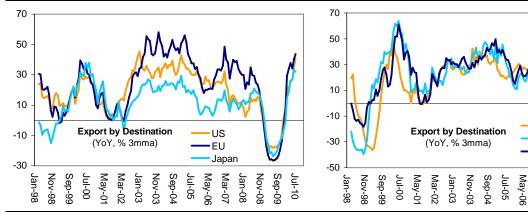
ΗK

Jul-10 Sep-09 Nov-08 Jan-08 Mar-07

Korea

ASEAN

Exhibit 1 Broad-based Recovery in Both DM and EM Markets

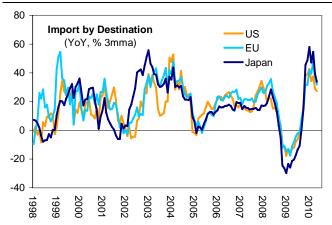


Source: General Administration of Customs, CEIC, Morgan Stanley Research

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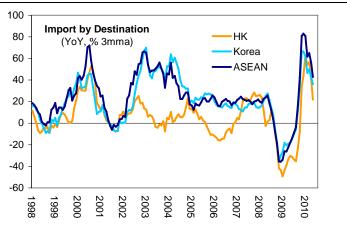
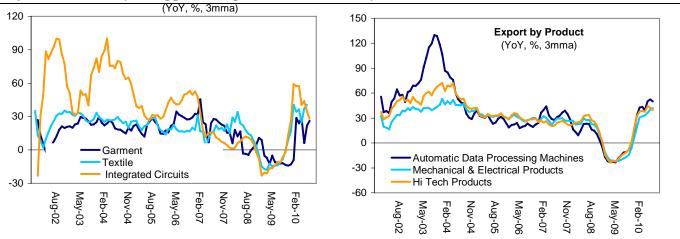


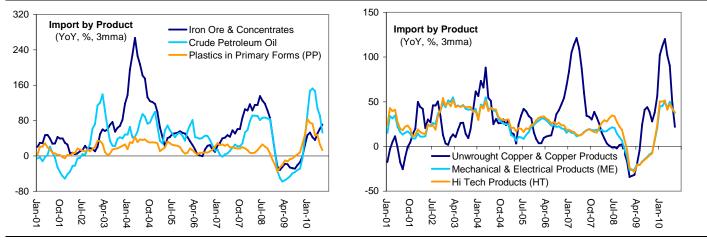
Exhibit 3

Exhibit 4

Export Breakdown (Six Biggest Categories in Value Terms)







Source: General Administration of Customs, CEIC, Morgan Stanley Research

Hong Kong Data Release: Inbound Tourism Buoyed Retail Sales

August 31, 2010

July retail sales beat expectations: Retail sales grew 18.9% in value (totaling HK\$27.2bn) and 16% in volume in July, beating market expectations (value +14.1%, volume +11.2%) by a wide margin. Aggregating results for the first seven months of 2010, sales value gained 18.0% YoY and volume was up 14.9% YoY, partly due to the low base from the global financial crisis and the noticeable improvement in labor market conditions compared to last year.

Buoyed by inbound tourism: According to the latest data from the Hong Kong Tourism Board, visitor arrivals grew 31.9% YoY in July, with foreign and Mainland Chinese tourist arrivals rising 19.0% and 40.4% YoY, respectively. As a result, retail categories generally popular with tourists continued to see the strongest gains in sales, such as jewelry / luxury (+36.0% in July vs. +30.6% in June), department stores (+20.2% vs. +18.3%), medicine / cosmetics (+17.9% vs. +17.1%), clothing / footwear (+16.5% vs. +13.6%), and consumer electronics (+15.4% vs. +18.2%). Meanwhile, autos (+73.7% vs. +38.2%) and consumer durables (+29.2% vs. 20.5%) recorded another month of strong sales growth, supported by the robust domestic demand underpinned by asset market resilience.

Steady retail pricing power: Implied retail inflation eased to +2.5% YoY in July compared to +3.0% YoY in June and +2.7% YoY for the first seven months in 2010. Despite the weakness in the headline figure, retailers of most categories, including fruits / vegetables (+10.9% YoY in July vs. +7.5% in June), jewelry / luxury (+10.0% vs. +10.1%), medicine / cosmetics (+3.5% vs. +3.0%), and autos (+2.2% vs. +2.1%) maintained their pricing power over consumers.

Growth forecast revised upward for 2010: The YoY growth in retail sales should remain resilient given the ongoing strength in domestic demand growth reported so far this year, the solid support from the buoyant inbound tourism, and the relatively low base from last year. We expect retail sales growth to reach 13% and 10% in value and volume terms for the full year, respectively, and we have recently revised our 2010 GDP growth forecast to 6%, up from 4.5% previously (see *Hong Kong Economics: Sustained Robust Growth in 2Q10; Forecasts Upgraded,* dated August 13, 2010).

Breakdown of Retail Sales by Category

| | Jul 10 | Jun 10R | YTD | 2009 |
|-----------------------------|--------|---------|-------|-------|
| | | | | |
| Retail Sales, HK\$ bn | 27.2 | 24.3 | 183.5 | 274.7 |
| YoY, % | +18.9 | +15.3 | +18.0 | +0.6 |
| Food x-supermarkets | +10.2 | +10.7 | +11.3 | +3.6 |
| Supermarkets | +6.4 | +2.6 | +3.4 | +3.3 |
| Fuels | +8.1 | +4.2 | +8.1 | -9.7 |
| Clothing / Footwear | +16.5 | +13.6 | +16.5 | -0.8 |
| Clothing | +16.0 | +13.1 | +16.0 | -0.9 |
| Department Stores | +20.2 | +18.3 | +18.4 | +1.2 |
| Consumer Durables | +29.2 | +20.5 | +27.6 | -5.8 |
| Elec. / Photographic | +15.4 | +18.2 | +20.4 | -0.2 |
| Motor Vehicles & Parts | +73.7 | +38.2 | +57.0 | -18.7 |
| Furniture | +11.8 | +12.1 | +13.8 | -1.8 |
| Jewelry / Luxury | +36.0 | +30.6 | +37.2 | +5.0 |
| Optical Shops | +16.0 | +9.4 | +9.5 | -4.3 |
| Medicines / Cosmetics | +17.9 | +17.1 | +15.7 | +9.4 |
| Sales Volume, YoY, % | +16.0 | +11.9 | +14.9 | -0.8 |
| Food x-supermarkets | +7.3 | +8.5 | +9.1 | +0.2 |
| Supermarkets | +4.7 | +1.3 | +1.4 | -1.4 |
| Fuels | +4.0 | +1.7 | +1.9 | +5.5 |
| Clothing / Footwear | +14.7 | +10.2 | +14.5 | -4.2 |
| Clothing | +14.1 | +10.0 | +14.6 | -5.1 |
| Department Stores | +16.2 | +15.2 | +16.0 | +0.1 |
| Consumer Durables | +29.9 | +23.6 | +30.3 | -0.9 |
| Elec. / Photographic | +21.1 | +26.1 | +26.9 | +7.0 |
| Motor Vehicles & Parts | +69.9 | +35.4 | +54.7 | -17.1 |
| Furniture | +7.1 | +9.7 | +11.5 | -3.9 |
| Jewelry / Luxury | +23.7 | +18.6 | +24.8 | +2.5 |
| Optical Shops | +13.9 | +5.8 | +7.2 | -5.5 |
| Medicines / Cosmetics | +14.0 | +13.7 | +12.4 | +6.0 |
| Implied Retail Inflation, % | +2.5 | +3.0 | +2.7 | +1.4 |
| R = Revised | | | | |

R = Revis

Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Hong Kong Data Releases : Sustained Trade Recovery in July in Line with Forecasts

August 26, 2010

Trade recovery sustains into 2H: After realizing a strong rebound that powered the Hong Kong economy ahead in 1H10, trade flows continued to post impressive YoY gains in July, albeit slowing consistent with the base effect. Exports grew 23.3% YoY to HK\$262 bn in the month (+26.7% in Jun), slightly stronger than our forecast for 20% growth, of which domestic exports (2.3% of total) rose 16.4%, and re-exports hopped 23.5%. Imports, on the other hand, gained 24.9% YoY to HK\$292 bn (+31% in Jun), very close to our forecast (+24%). As import growth continued to outpace that in exports amidst the relative strength in domestic demand, the trade deficit expanded YoY again by 41% to HK\$30.5 bn, nevertheless narrower than our forecast (HK\$35 bn).

US and Japanese demand losing steam, China shipments

still strong: In July, the slowdown in export growth was led by shipments to the US (+24% YoY in Jul vs +29.4% in Jun) and Japan (+14% vs +25.6%), while exports to China still gained strongly (+26.5% vs +26.2%). Exports to Europe remain lackluster (Germany +12.2%, the UK +6.3%) amidst their weak economies.

Trade recovery looking more secure; the key growth

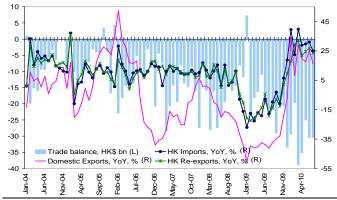
driver this year: The year-to-date rebound in trade (+27.9% YoY in total trade in Jan-Jul) more than reversed the decline in the year-ago period (-18.1%), and drove the 28% surge in Hong Kong's service exports, a key pillar of the economy. Amid the base effect, we do expect YoY gains in trade to taper off in the remainder of the year. Nevertheless, we recently upgraded

our growth forecasts on realization of the strong momentum in 1H. We now see merchandise trade flows as well as service exports gaining by 20% in 2010, lifting real GDP growth to 6%.

Trade Statistics

| HK\$ bn | Jul 10 | Jun 10 | YTD | 2009 |
|------------------|--------|--------|-------|-------|
| Trada Dalanca | 24 | 24 | 200 | 004 |
| Trade Balance | -31 | -31 | -209 | -224 |
| Exports | 262 | 268 | 1,661 | 2,471 |
| YoY, % | +23.3 | +26.7 | +24.8 | -12.6 |
| Re-Exports | +23.5 | +26.8 | +24.9 | -11.8 |
| Domestic Exports | +16.4 | +25.3 | +22.1 | -36.0 |
| Imports | 292 | 298 | 1,871 | 2,695 |
| YoY, % | +24.9 | +31.0 | +30.8 | -11.0 |

Trade Performance



Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Hong Kong Data Release: Steady Uptrend in Underlying Inflation

August 20, 2010

Underlying inflation edges up further to 1.9% YoY in July: Underlying inflation continued to creep up in Hong Kong,

reaching 1.9% YoY in July. The pick-up in inflation was largely attributable to higher food prices (food for home consumption +3.8% YoY in July vs. +3% in June, eating out +1.9% vs. +1.7%), private housing rent (+1% vs. +0.8%) and transport costs (+2.2% vs. +1.6%).

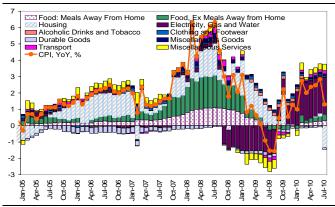
Headline inflation rate biased downwards by waiver on public housing rents: The headline inflation rate, however, was distorted by the waiver on public housing rents; it dropped to only 1.3% YoY (vs. our forecast of 3.4%), from 2.8% in June. The 2010/11 Budget granted a two-month waiver on public housing rent, similar to that in the 2009/10. However, the waiver started in July this year but took place in August-September in 2009, hence the estimated 1.8-ppt reduction in the headline inflation rate in July. This also implies that the headline inflation rate will be biased upwards by the same magnitude this coming September. Meanwhile, the Housing Authority is considering additional one-off waivers on public housing rent in the coming year, so there could be further distortions to the CPI ahead.

Further price increases ahead: Asset price recovery shortened the deflationary episode in the aftermath of the global financial crisis. The private housing rent component of the CPI had been gaining sequentially for eight months, and resumed positive YoY growth for three months. It will continue to contribute positively to the headline, and the consumer demand recovery will allow upside in pricing in discretionary items. That said, trends in the last few months have been in line with our expectations, and we maintain our 2.8% forecast for headline inflation this year (+2.1% in Jan-Jul). Cost pressures from the property sector are feeding through the economy, meeting with vocal demand for higher wages and planned hikes in public transport fees. We forecast a pick-up in inflation to 3% in 2011.

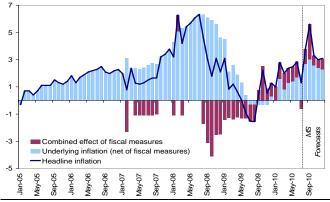
Consumer Price Indices

| ••••••• | | | | |
|-------------------------------|--------|--------|-------|-------|
| YoY, % | Jul 10 | Jun 10 | YTD | 2009 |
| Composite CPI | +1.3 | +2.8 | +2.1 | +0.5 |
| Food (home consumption) | +3.8 | +3.0 | +2.4 | +0.9 |
| Meals Away from Home | +1.9 | +1.7 | +1.2 | +1.6 |
| Private Housing (incl. rates) | +1.0 | +0.8 | +0.3 | +3.6 |
| Public Housing | -96.8 | -0.3 | -13.7 | +9.5 |
| Electricity/Gas/Water | +62.8 | +63.4 | +62.6 | -25.3 |
| Clothing/Footwear | +2.2 | +2.7 | +1.7 | +2.7 |
| Durable Goods | -2.0 | -1.3 | -1.7 | -3.0 |
| Transport | +2.2 | +1.6 | +1.5 | -0.9 |
| Miscellaneous Services | +2.4 | +2.3 | +1.5 | -2.1 |
| CPI (A) | -0.8 | +3.2 | +2.3 | +0.4 |
| CPI (B) | +2.1 | +2.7 | +2.2 | +0.5 |
| CPI (C) | +2.6 | +2.4 | +1.9 | +0.6 |

Contribution to CPI Inflation



Headline and Underlying Inflation



Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Hong Kong Data Release: Breakthrough in Unemployment Rate

August 17, 2010

Unemployment rate drops to 4.3% in May-July, lowest since end-08: Hong Kong's joblessness managed to ease in May-July for the first time in four months, dipping by 0.3 percentage points to 4.3%, the lowest level since 4Q08. The underemployment rate, on the other hand, remained unchanged at 2% for the third straight month.

Genuine improvement in labor market conditions: We have witnessed genuine and convincing improvement in labor market conditions for two straight months. The total job count increased by 8,100 in May-July over April-June (+8,800 in April-June), above the 3,600 expansion in the labor force (+8,300 in April-June). The breakthrough in the last two months followed what we believe to be a period of consolidation, when conditions appeared stagnant after the initial

1-percentage-point ease in joblessness as the economy emerged from recession.

Industry breakdown shows further rebalancing of Hong

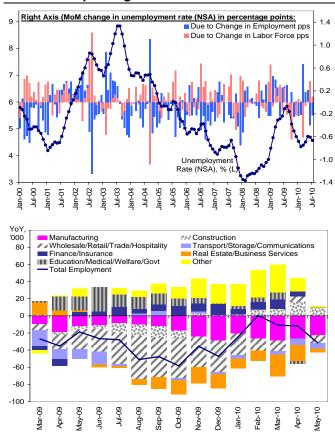
Kong's economy: Further shrinkage of the manufacturing sector and the cyclical downsizing of the international trade sector has been compensated for by sustained expansion in finance and other services, while the launch of a series of public works projects has helped raise employment in construction.

We remain cautiously optimistic as the external environment stabilizes: As the EU sovereign debt issues and the associated contagion risk to Asia are now largely under control, the continued recovery in service exports should remain a key growth driver and catalyst for further improvement in labor market conditions in 2H10, in our view. We remain cautiously optimistic and are hopeful that the unemployment rate can retreat to below 4% by the end of 2010.

Labor Market Statistics

| | May-Jul 10 | Apr-Jun 10 | Mar-May 10 |
|------------------------|------------|------------|------------|
| Unemployment, SA, % | 4.3 | 4.6 | 4.6 |
| Unemployment, '000 | 167.4 | 171.8 | 172.4 |
| Underemployment, SA, % | 2.0 | 2.0 | 2.0 |
| Underemployment, '000 | 72.9 | 73.7 | 74.7 |
| Employment, '000 | 3,500 | 3,492 | 3,483 |
| YoY, % | -0.1 | -0.4 | -0.9 |
| Labor Force, '000 | 3,668 | 3,664 | 3,656 |
| YoY, % | -1.4 | -1.2 | -1.6 |

Stable-to-improving Labor Market Conditions



Source: Census and Statistics Department, CEIC, Morgan Stanley Research

Taiwan Data Release: July Exports Recover from June, but Normalization Continues

August 10, 2010

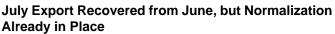
Quick Comment: Taiwan's exports increased 38.5% YoY in July, in line with our forecast of 39.0%, but ahead of the consensus forecast of 31.0% by a wide margin. The YoY growth rate was also higher than the 34.1% YoY reported in June despite the diminishing low base effect. On a MoM basis, exports increased 5.2% in July but it was after a 10.8% decline in June. Import growth accelerated to 42.7% YoY in the month, higher than 40.4% in June. Trade surplus widened to US\$2.2bn in July from US\$1.4bn in June. Although July's export growth recovered from the sluggishness in June, it still represented a normalization of growth from 1H10 at 49%.

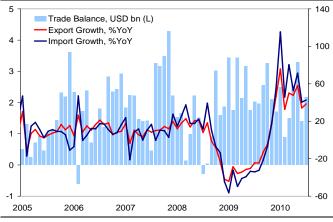
Rebounds to ASEAN and Europe Most on MoM Basis:

Exports to China (including Hong Kong) increased 38.8% YoY in July, above the rise of 33.6% in June and slightly higher than the average growth rate of 38.5% across all geographic locations. On a MoM basis, exports to China rose 3%; this should not be considered as that impressive after they plunged 16% in June. Export to China and Hong Kong accounted for 40.7% of Taiwan's total exports in July. Exports to ASEAN-6 also rebounded substantially, to 49.5% YoY in July (or 12.1% MoM) from 27.8% in June. ASEAN-6 is increasingly an important export destination for Taiwan and accounted for 20.7% of Taiwan's exports in July, partly reflecting Taiwan's production outsourcing there but also robust domestic demand. Exports to Europe rose 33.8% YoY (or 7.8% MoM) in the month compared to 30.0% in June, and accounted for 10.1% of Taiwan's total exports in July. The US accounted for only 12.1% of total exports in July, and it increased 47.0% YoY in July (or 0.7% MoM), lower than the 53.4% in June mainly due to diminishing low base effects. Taiwan's exports to both Korea and Japan posted faster growth in July, increasing 34.0% YoY (vs. 25% in June) and 33.9% (vs. 16.8% in June), respectively.

| Taiwan: Monthly Trade Data | | | | | |
|-------------------------------------|-----------------|---------------|--------|-------|--|
| | Jul-10 | Jun-10 | YTD-10 | 2009 | |
| Trade Balance, US\$ bn | 2.2 | 1.4 | 14.1 | 29.0 | |
| Exports, US\$ bn | 23.9 | 22.7 | 155.8 | 203.7 | |
| YoY, % | +38.5 | +34.1 | +47.4 | -20.3 | |
| By Destination: | | | | | |
| US | +47.0 | +53.4 | +32.9 | -23.5 | |
| Europe | +33.8 | +29.9 | +37.8 | -24.6 | |
| China+HK | +37.2 | +33.9 | +57.8 | -16.0 | |
| Japan | +33.9 | +16.8 | +30.6 | -17.4 | |
| ASEAN | +49.5 | +27.8 | +54.6 | -21.5 | |
| By Commodity: | | | | | |
| Tech | +41.6 | +41.2 | +60.1 | -14.1 | |
| Electronic Products | +35.3 | +35.6 | +52.0 | -10.7 | |
| Information & Comm | +46.8 | +41.4 | +46.6 | -9.6 | |
| Optical Instruments | +62.4 | +62.3 | +104.4 | -26.2 | |
| Non-Tech | +36.3 | +29.6 | +39.8 | -24.0 | |
| Plastics & Rubber | +26.3 | +23.5 | +40.8 | -16.0 | |
| Chemicals | +29.8 | +35.2 | +56.9 | -19.2 | |
| Base Metals | +38.8 | +39.1 | +41.8 | -31.4 | |
| Imports, US\$ bn | 21.7 | 21.3 | 141.7 | 174.7 | |
| YoY, % | +42.7 | +40.4 | +61.0 | -27.4 | |
| By Category: | | | | | |
| Capital Goods | +61.6 | +48.2 | +75.3 | -21.3 | |
| Consumer Goods | +25.8 | +13.6 | +28.3 | -4.1 | |
| Raw Materials | +41.1 | +42.2 | +62.5 | -30.5 | |
| Source: Ministry of Finance, CEIC a | and Morgan Star | nley Research | | | |

Exhibit 1





Source: Ministry of Finance, CEIC and Morgan Stanley Research

The MoM Rebound Was Not Broad-based Across Industries: Non-tech exports posted faster growth in July at 36.3% YoY (or 4.0% MoM) compared to 29.6% in June. On a MoM basis, exports in mineral products increased the most at

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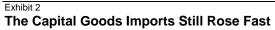
September 6, 2010 Greater China Economics

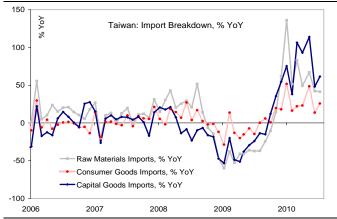
29.8%, as June exports were particularly weak with a decline of 21.7% MoM from May. Mineral product exports increased 52.8% YoY in July, higher than 5.4% YoY in June. Both machinery and electrical machinery posted strong rebounds, rising 81.1% YoY (or 8.3% MoM) and 22.7% YoY (or 8.9% MoM), respectively. The strong recovery in these capital goods exports implies growing capex expansion needs among the overseas manufacturers on the back of the positive economic outlook. On the other hand, chemical export growth continued to ease to 29.8% YoY (or 5.3% MoM) compared to 35% in June, although its MoM growth picked up slightly in July after very disappointing results in June. Metals and textiles were also relatively sluggish as sequential growth declined again last month at 38.8% YoY (or -0.3% MoM) and 20.6% YoY (or -0.9% MoM), respectively, in July. In the tech space, precision instruments posted the strongest recovery from June, rising 62.4% YoY (or 8.6% MoM) as some TFT-LCD shipments were postponed from June to July, followed by electronic products at 35.3% YoY (or 8.0% MoM). Information/communication product export, which includes PCs, NBs, and handsets, was the only tech category that posted a MoM decline at -2.5% after strong growth in June, but it still reported a positive YoY growth rate of 46.8% in July. Tech exports increased 41.6% YoY (or 6.8% MoM) in total compared to 41.2% in June.

Capital Goods Imports Continued to Surge: Backed by the positive sentiment in Taiwan, capital imports continued to surge in July, rising 61.6% YoY (or 6.5% MoM) compared to 48.2% in June. Consumer goods imports also saw an accelerated growth rate of 25.8% YoY (or 1.5% MoM) from 13.6% in June, while imports of industrial raw material and agriculture products increased 41.1% YoY (or 1.1% MoM), slightly lower than 42.2% in June.

Growth Normalization Will Continue in 2H: Despite the rebound in July exports from June, we believe growth normalization will continue in the rest of the year, after some

exceptional base effects pushed the growth of many macro indicators to record highs in 1H10. Besides, the gradual withdrawal of stimulus measures could also ease these growth rates to a more reasonable level. Having said that, we believe Taiwan's overall growth rate could remain resilient, backed by the continual capex expansion of the private sector, the improving household consumption, and the structural positive factors like ECFA. We think the rising domestic demand is already starting to pull consumer prices higher, as Taiwan's CPI inflation reached 1.3% in July compared to 1.2% in June and 0.8% in May. Given that the liquidity environment in Taiwan is still excessive, we believe the interest rate normalization will continue, but the pace could be mild and gradual. We are forecasting two more rate hikes in the rest of the year of +12.5bp each to bring the policy re-discount rate to 1.625% by year end.





Source: Ministry of Finance, CEIC and Morgan Stanley Research

Taiwan Data Release: Higher CPI Inflation in July

August 5, 2010

Quick Comment: In line with expectations, Taiwan's headline CPI inflation came in at 1.3% in July, higher than the 1.2% in June and 0.7% in May. On a MoM basis, July's consumer price increased 0.3% compared to June's 0.3% and May's -0.1%. The inflation in wholesale prices eased further to 5.3% in July, lower than 7.0% in June and 9.4% in May. Import and export prices also saw lower inflation pressures, as they increased 6.3% YoY (vs. 7.2% in June) and 3.6% YoY (vs. 5.3% in June) in July.

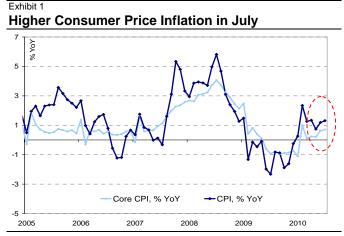
Food, clothing, and recreation prices drove the headline inflation higher: Food prices increased 2.2% YoY in July (vs. 1.7% in June) as the rainy and hot weather continued to push vegetable and fishery prices higher. On a YoY basis, vegetable, eggs, and fishery prices increased 12.4%, 10.9%, and 7.4%, respectively, while meat prices increased 2.9%. Clothing prices increased 3.3% YoY in July (vs. 2.2% in June), as there were fewer promotional sales compared to last year. The rise in jewel prices also contributed to the higher clothing price in July. Recreation prices increased 3.7% YoY in the month (vs. 1.8% in June), because the overseas travel expenses of the tour groups increased during the summer holidays compared to last year. Lower YoY growth rates were seen in transportation/ communication prices at 1.5% (vs. 1.6% in June), housing prices at 0.4% (vs. 0.7% in June), miscellaneous items prices at 3.1% (vs. 4.3% in June), and medical prices at -0.1% (vs. 0.1% in June).

Lower inflation pressure in wholesale and import prices due to stabilizing commodity prices: Inflation in both WPI and import prices eased in July. WPI reported a rise of 5.3% YoY in July (vs. 7.0% in June), while import prices rose 6.3% YoY (vs. 7.2% in June).

Taiwan: Monthly Price Indices

| %YoY | Jul-10 | Jun-10 | May-10 | 2009 |
|---------------------------|--------|--------|--------|-------|
| | | | | |
| Headline CPI | +1.3 | +1.2 | +0.7 | -0.9 |
| Food | +2.2 | +1.7 | -0.4 | -0.4 |
| Vegetable | +12.4 | +12.8 | -3.1 | -7.1 |
| Transportation | +1.5 | +1.6 | +3.7 | -4.0 |
| Fuel | +3.1 | +4.8 | +15.7 | -10.4 |
| Clothing | +3.3 | +2.2 | +1.2 | -0.1 |
| Housing | +0.4 | +0.7 | +0.5 | -0.3 |
| Rent | 0.0 | 0.0 | 0.0 | -0.2 |
| Utilities | +2.6 | +3.3 | +4.2 | -0.6 |
| Education | -1.2 | -1.3 | -1.3 | -1.0 |
| Entertainment | +3.7 | +1.8 | +0.9 | -3.1 |
| Medicine & Medical Care | -0.1 | +0.1 | +0.9 | +0.6 |
| Miscellaneous | +3.1 | +4.3 | +3.5 | +2.9 |
| Core CPI | +0.7 | +0.6 | +0.2 | -0.1 |
| Wholesale Price Index | +5.3 | +7.0 | +9.4 | -8.7 |
| Domestic | +6.2 | +8.0 | +11.0 | -10.0 |
| Export Price (NT\$ terms) | +3.6 | +5.3 | +6.2 | -6.6 |
| Import Price (NT\$ terms) | +6.3 | +7.2 | +11.0 | -9.6 |
| Terms of Trade | -2.7 | -1.9 | -4.8 | +3.0 |

Core Inflation excludes energy and food prices Source: Taiwan Statistic Office, CEC and Morgan Stanley Research



Source: Taiwan Statistics office, CEIC and Morgan Stanley Research

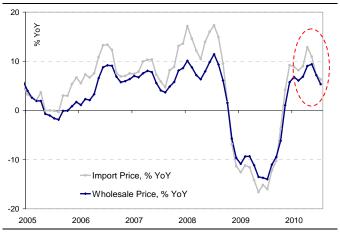
We believe these declines are good reflections of the lowering in commodity prices in the international market and diminishing low base effects. As to import price breakdown, the price of basic metal registered a rise of 17.8% YoY (vs. 28.9% in June) and the price of chemicals/plastic/rubber increased 7.4% YoY (vs. 10.9% in June). Imported mineral prices continued to see a rise of 14.4% YoY in July compared to 11.3% in June and 26.1% in May.

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Interest rate normalization will continue: While the rising headline inflation in July was driven by some seasonal factors, like the rainy/hot weather (food price) and the summer holidays (the entertainment price), we do think the inflation in Taiwan's consumer prices will continue to trend up in the coming months due to the base effect, abundant liquidity, and rising domestic demand. Despite the 12.5bp rate hike by the CBC in the quarterly monetary policy meeting in June, Taiwan's liquidity environment is still excessive. As the domestic demand recovers with the record-high industrial production and improving labor market, we believe that the abundant liquidity could very easily translate into higher prices in Taiwan. Interest rates need to be normalized further in order to avoid the unwanted consequences of low rates such as asset misallocation. Currently, we are forecasting a 12.5bp rate rise in the quarterly monetary policy meeting in September, and we expect policy rediscount rate to reach 1.625% by end of this year, which will still be very low compared to the GDP growth this year.

Exhibit 2 Inflation Pressure in Both WPI and Import Price Eased in Recent Months



Source: Taiwan Statistics Office, CEIC and Morgan Stanley Research

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