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## India Economics

### Monthly

**Major Slowdown in Investment Cycle Ahead:** Based on the trend in fundraising activity, it appears this capex could have increased to 37% of GDP in F2008 from 35.9% in F2007. The key driver of this improvement was the sharp pick-up in private corporate sector investments to 16.1% of GDP in F2008 from the bottom of 5.2% in F2001. We believe the combined impact of slowing domestic consumption, higher domestic cost of capital, and reduced capital access from international capital markets will result in further major slowdown in investment cycle over the next 12 months. We expect the aggregate investment to GDP ratio will decline to 32% in F2010 from 37% in F2008.

*See page 4.*

#### **NRI Remittances: Key to India's Current Account**

**Stability:** The NRI remittances have shot up to US\$40.8 billion (3.5% of GDP) as of F2008 compared to US\$12.3 billion (2.7% of GDP) as of F2000. In 2007, in terms of the absolute amount of remittances inflows, India is ranked number one in the world. Remittances have accounted for 55% of net invisible receipts in the last three years, thus helping to moderate the negative impact of a widening trade deficit on the overall balance. We believe that remittance inflows could slow over the next 12 months to 2.5-2.8% of GDP from 3.5% of GDP during the QE March 2008. This could have some adverse impact on the current account balance, which is already in deficit due to higher oil imports.

*See page 8.*

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

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## Asia Ex-Japan Economic Forecast Summary

	2004	2005	2006	2007E	2008E	2009E
<b>Real GDP Growth (%)</b>						
Asia Ex-Japan	8.1	8.3	9.3	9.5	8.0	7.4
AXJ (x-China and India)	5.9	4.9	5.5	5.7	5.1	4.9
Asia Pacific*	7.4	7.3	8.2	8.5	7.1	6.5
China	10.1	10.4	11.6	11.9	10.0	9.0
Hong Kong	8.5	7.1	7.0	6.4	4.7	4.0
India	7.2	9.1	9.8	9.3	7.4	6.9
Indonesia	5.0	5.7	5.5	6.3	6.0	5.4
Korea	4.7	4.2	5.1	5.0	4.7	5.0
Malaysia	6.8	5.0	5.9	6.3	5.7	5.2
Philippines	6.4	4.9	5.4	7.2	5.2	5.0
Singapore	9.0	7.3	8.2	7.7	4.3	4.0
Taiwan	6.2	4.2	4.9	5.7	4.8	5.0
Thailand	6.3	4.5	5.1	4.8	5.4	5.0
Australia	3.7	2.8	2.8	4.3	1.8	2.6
<b>CPI Inflation (% , Period Average)</b>						
Asia Ex-Japan	3.7	3.1	3.5	4.6	7.0	4.9
Asia Pacific*	3.4	2.9	3.2	4.0	6.4	4.4
China	3.9	1.8	1.5	4.8	7.0	4.0
Hong Kong <sup>1</sup>	-0.4	0.9	2.0	2.0	4.5	4.5
India	3.8	4.0	6.3	6.4	8.2	7.4
Indonesia	6.1	10.5	13.1	6.4	10.0	8.2
Korea	3.6	2.8	2.2	2.5	4.5	3.5
Malaysia	1.4	3.0	3.6	2.0	5.7	4.5
Philippines	6.0	7.7	6.3	2.8	8.5	6.0
Singapore	1.7	0.5	1.0	2.1	6.5	3.2
Taiwan	1.6	2.3	0.6	1.8	3.5	3.5
Thailand	2.8	4.5	4.7	2.2	7.6	4.1
Australia	2.3	2.7	3.5	2.3	4.1	2.3
<b>Current Account (% of GDP)</b>						
Asia Ex Japan	3.8	4.6	6.2	7.4	5.6	4.7
China	3.6	7.2	9.4	11.3	8.5	6.6
Hong Kong	9.5	11.4	12.1	13.6	13.2	13.2
India	0.1	-1.3	-1.1	-1.1	-2.9	-2.3
Indonesia	0.6	0.1	2.7	2.4	2.1	2.0
Korea	4.1	1.9	0.6	0.6	-1.2	0.2
Malaysia	12.1	14.6	16.3	15.5	15.3	13.5
Philippines	1.9	2.0	4.3	4.5	3.9	4.1
Singapore	20.0	24.5	21.8	24.3	19.8	16.6
Taiwan	6.0	4.9	7.2	8.6	7.0	6.3
Thailand	1.7	-4.3	1.1	6.4	3.2	2.0
<b>Interest Rates (Prime Lending Rate, %, Period End)</b>						
China <sup>2</sup>	5.6	5.6	6.1	7.5	7.5	7.5
Hong Kong <sup>3</sup>	5.0	7.8	7.8	6.8	5.3	7.0
India	10.5	10.5	11.3	13.0	13.5	13.0
Indonesia <sup>2</sup>	13.4	16.2	15.1	13.0	14.3	14.5
Korea <sup>4</sup>	3.5	5.5	5.1	6.2	5.3	5.8
Malaysia	6.0	6.2	6.7	6.7	6.7	6.7
Philippines	11.3	10.8	9.0	9.0	9.3	9.3
Singapore	5.3	5.3	5.3	5.3	5.3	5.3
Taiwan <sup>5</sup>	3.5	3.7	4.0	4.2	4.5	5.0
Thailand	5.6	6.6	7.8	7.0	7.8	7.8
<b>Interest Rates (3-Month Interbank Rate, %, Period End)</b>						
China <sup>7</sup>	1.7	1.7	1.8	3.3	3.3	3.3
Hong Kong	0.3	4.2	3.8	3.5	2.3	4.2
India <sup>6</sup>	5.3	5.8	6.9	7.5	9.3	8.9
Indonesia <sup>7</sup>	6.7	11.8	9.7	7.4	8.7	9.0
Korea <sup>8</sup>	3.4	4.1	4.9	5.8	5.3	5.0
Malaysia	2.8	3.2	3.6	3.6	3.6	3.6
Philippines <sup>6</sup>	7.8	5.2	4.8	3.7	4.8	4.8
Singapore	1.4	3.3	3.4	2.4	1.0	3.0
Taiwan <sup>9</sup>	1.4	1.7	1.8	2.4	3.0	3.2
Thailand <sup>10</sup>	1.0	2.5	4.0	2.1	3.3	3.3
<b>USD Exchange Rate (Period End)</b>						
China	8.28	8.07	7.81	7.31	6.77	6.33
Hong Kong	7.77	7.75	7.78	7.80	7.80	7.80
India	43.98	45.65	44.63	39.44	45.23	47.00
Indonesia	9,272	9,825	9,090	9,419	9,367	9,100
Korea	1,035	1,008	930	936	1,150	1,100
Malaysia	3.80	3.78	3.53	3.31	3.50	3.20
Philippines	56.3	53.0	49.1	41.4	47.5	44.0
Singapore	1.66	1.66	1.54	1.44	1.48	1.32
Taiwan	31.7	32.8	32.6	32.4	32.5	30.5
Thailand	38.9	41.0	35.5	29.7	34.0	34.0
Australia	0.78	0.73	0.79	0.95	0.82	0.84

(1) Composite Consumer Price Index  
 (5) Taiwan First Commercial Bank Prime Lending Rate before 2003, Base Lending Rate since 2003  
 (8) 91-Day Yield on Certificates of Deposit  
 Dated as of September 2, 2008

(2) Exclude GST for 2000-2002  
 (6) 91-Day Treasury Bill Rate  
 (9) 90-Day Money Market Middle Rate  
 E = Morgan Stanley Research Estimates

(3) 1-Year Working Capital Rate  
 (10) 3-6 Month Time Deposit Rate

(4) 5-Year National Housing Bond Yield  
 (7) 3-Month Time Depositing Rate

\* GDP and CPI for Asia Pacific includes Asia Ex-Japan and Australia

## Major Slowdown in Investment Cycle Ahead

August 12, 2008

### Summary

After three years of above-trend growth, India is now facing major macro challenges sustaining its growth rates at 8-9%. First, domestic overheating resulted in RBI pursuing tight monetary policy since the last quarter of 2006. This tightening trend caused a major slowdown in the credit-funded consumption cycle. A rise in the domestic cost of capital and weakening business confidence due to slowing consumption demand caused the investment cycle to peak from the last quarter of 2007. Second, although both consumption and investment slowdown have already begun, the adverse global circumstances threatened further weakness. The Central Bank was forced to respond to increased cost pressures from higher commodity prices by tightening the monetary policy further. The emergence of the credit crisis in the US and Europe over the last 9-10 months has meant increased risk aversion in global financial markets and a slowdown in capital flows into emerging markets in general and India in particular. We believe the combined impact of slowing domestic consumption, higher domestic cost of capital, and reduced capital access from international capital markets will result in a further major slowdown in the investment cycle over the next 12 months. We expect private corporate capex to slow to 12.2% in F2010 from the peak of 16.1% in F2008.

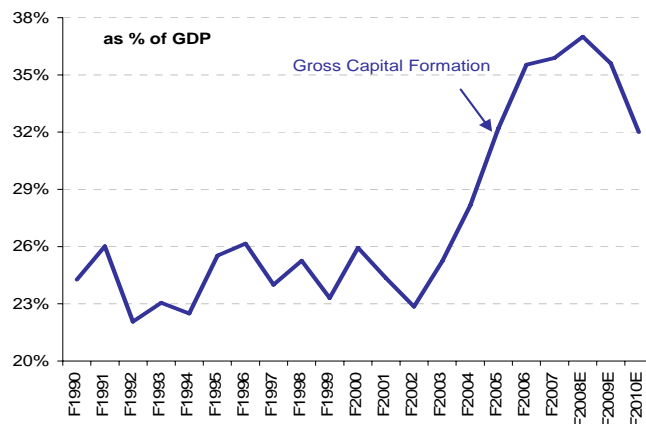
### Investments Hit a New High in F2008

Official investment (as measured by gross capital formation) data tends to be released with a lag, but corporate sector fundraising activity tends to be a good proxy for this trend. Aggregate capex fundraising by the corporate sector rose to a new high of 14.3% of GDP (US\$168 billion) in F2008 (12 months ended March 2008). In that fiscal year, aggregate fundraising was a full 4.4 percentage points (ppt) higher than the peak of 9.9% of GDP in the mid-1990s investment cycle. We arrive at the F2008 aggregate figure by adding fundraising by the corporate sector through various sources, including bank credit, external commercial borrowings/foreign currency convertible bonds, domestic bond issuances, equity issuances, and FDI inflows. If we include internal accruals generated by the corporate sector for this exercise, the total funding available for investments increased to 18.7% of GDP (US\$219 billion) in F2008 compared with the previous cycle peak of 11.3% of GDP (US\$37 billion) in F1995 (see Exhibit 4).

The official industrial/infrastructure investment (including private corporate plus government capex) increased to 22.3% of GDP in F2007 from a bottom of 11.8% in F2003. Based on

Exhibit 1

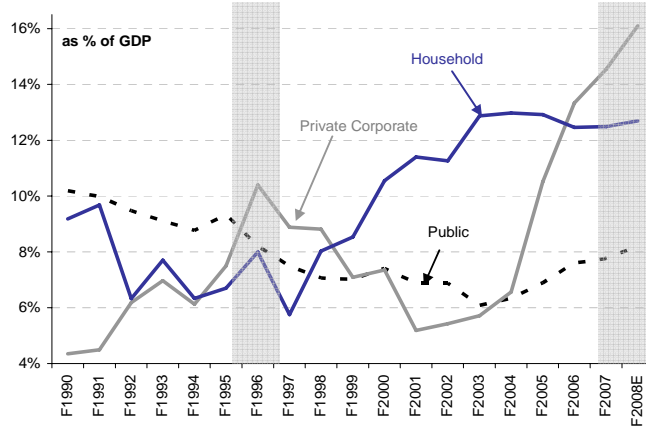
### Total Investments Trend



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

Exhibit 2

### Pvt. Corporate Sector Driving Overall Investments



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

Exhibit 3

### Sector Wise Gross Capital Formation (as % of GDP)

	Public	Private Corporate	Household	Total
F2002	6.9%	5.4%	11.3%	22.8%
F2003	6.1%	5.7%	12.9%	25.2%
F2004	6.3%	6.6%	13.0%	28.2%
F2005	6.9%	10.5%	12.9%	32.2%
F2006	7.6%	13.3%	12.5%	35.5%
F2007	7.8%	14.5%	12.5%	35.9%
F2008E	8.2%	16.1%	12.7%	37.0%
F2009E	8.0%	15.0%	12.6%	35.6%
F2010E	7.4%	12.2%	12.4%	32.0%

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

the trend in fundraising activity, it appears this capex could have increased to 24.3% of GDP in F2008. The key driver of this improvement is the sharp pick-up in private corporate sector investments to 16.1% of GDP in F2008 from the bottom of 5.2% in F2001. We estimate public sector investments increased to 8.2% of GDP in F2008 from 6.1% in F2003. However, we estimate household investments have been weak, at 12.7% of GDP in F2008, against a peak at 13% in F2004. The aggregate investments (including household, corporate, and government) to GDP increased to 37% in F2008 from 35.9% in F2007 and 22.8% in F2002.

### Slowdown Is Now Underway

A number of indicators show that investment growth has decelerated over the last six months. Capital goods output growth has slowed to 6.8% during the three months ending June 2008 from the peak of 24.2% during the three months ending October 2007. Similarly, the trend for aggregate fund raising has also suffered over the last six months. Bank credit, equity issuances, foreign-debt borrowing have trended down. Bank credit, which has been the largest source of fundraising for the corporate sector, is likely to slow further. Annual incremental bank credit funding had accelerated to an average of 6.7% of GDP in the four years ended March 2008, compared with 2.5% in the preceding three years. Bank credit accounted for about half of the total funds raised by the corporate sector in the past four years. The central bank's tight monetary policy will cause a slowdown in credit growth.

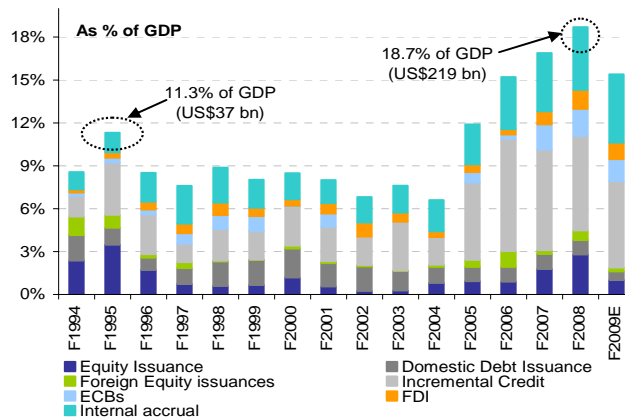
### Domestic Hurdles to Investment Cycle

Overall investment growth has been strong, but micro imbalances are challenging the sustainability of the high growth. That is, imbalances in investments are affecting overall productivity growth. For example, we estimate private corporate investments rose to 16.1% of GDP in F2008 from 5.4% in F2002, but that infrastructure investments remained low at 5.3% of GDP in F2008, albeit higher than 3.5% of GDP in F2002. Indeed, rapid growth in demand for infrastructure over the past five years and a less than proportionate rise in infrastructure spending have meant that capacity utilization in electricity generation, roads, seaports, and major airports is at maximum levels. A complex set of factors is causing this delayed response in infrastructure development. Weak regulatory framework (particularly in the case of electricity), land acquisition problems, stretched capacity of domestic construction companies, and the lack of availability of equipment in certain areas, have been the major impediments.

This imbalance in investments results in overall "effective" capacity growth being weaker than total investments would

Exhibit 4

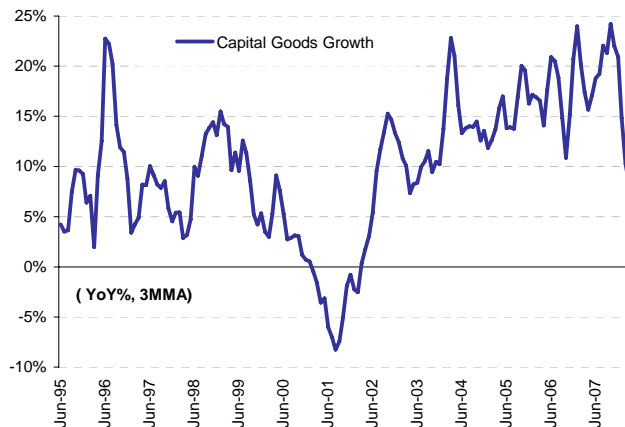
### Aggregate Fundraising – Peaking Out



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

Exhibit 5

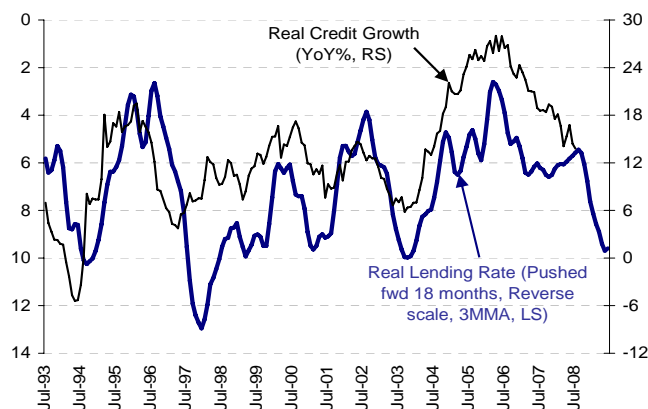
### Capital Goods Production Growth Decelerating



Source: CSO, Morgan Stanley Research

Exhibit 6

### Credit Growth to Decelerate Further



Source: RBI, Morgan Stanley Research

imply. The bottom line is that, while theoretically India's potential economic growth can be higher at 10%-plus, as in China, we think the slower-than-warranted response from policy makers to create the infrastructure supply is restraining "practical" potential growth. The micro imbalance in investments is one of the key factors behind the recent overheating of the economy. This overheating in turn forces the central bank to pursue a relatively tighter monetary policy, lifting the cost of capital, implying a lower sustainable growth rate. We believe the current policy response for infrastructure is not strong enough to lift the equilibrium growth to a sustained 9.0-9.5% in the near term.

With clear evidence of overheating in the economy, the central bank's tolerance to allow aggregate demand pressures – even if it is because of investment growth – is low. In its monetary policy statement released on July 29, the RBI listed investment spending as one of the factors adding to aggregate demand pressures.

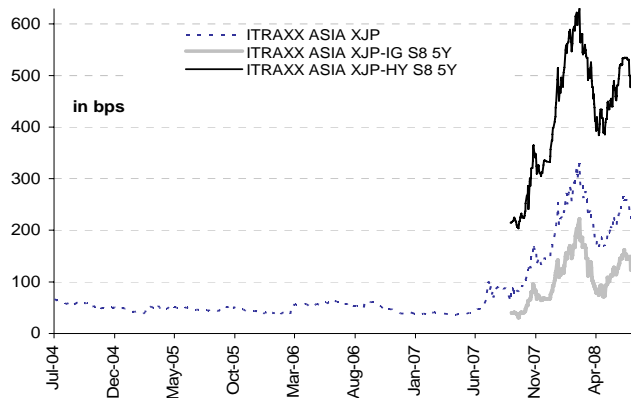
The lagged impact of the central bank's tightening measures will reflect on credit growth and capex spending. The Reserve Bank of India's tightening measures have lifted the prime lending rates by around 300bp from the bottom to close to a 10.5-year high. Indeed, based on this rise in interest rates, we believe banking sector credit growth will decelerate to 20% by March 2009, compared with 25.7% as at July 2008.

### Adverse Global Environment Is Another Key Hurdle

First, high commodity prices and the resultant input cost pressures have forced the central bank to tighten aggressively. Even if commodity prices continue to fall, we believe the central bank is unlikely to cut policy rates until the year-end. Second, increased risk aversion in the global financial markets will result in a sharp slowdown in capital inflows into India. The stress in the US and European credit markets has already been transmitted to Asian credit markets. This is reflected in the sharp rise in the credit default swap rate (CDS), which measures perceived credit risk. The average CDS rate in AXJ, as measured by Bloomberg's iTraxx Asia ex-Japan Index, which comprises 70 equally weighted entities, has increased from 48bp at early July 2007 to 226bp currently. The average CDS for non-investment grade bonds has shot up to 511bp currently from 216bp as of end-September 2007, while that for investment grade has increased to 126bp from 40bp as at end-September 2007 (Exhibit 7). The Indian paper has suffered a similar fate, with CDS rates rising to 210-575bp from the lows of 60-100bp in July 2007 (Exhibit 8). If this trend continues, foreign capital raising will become difficult.

Exhibit 7

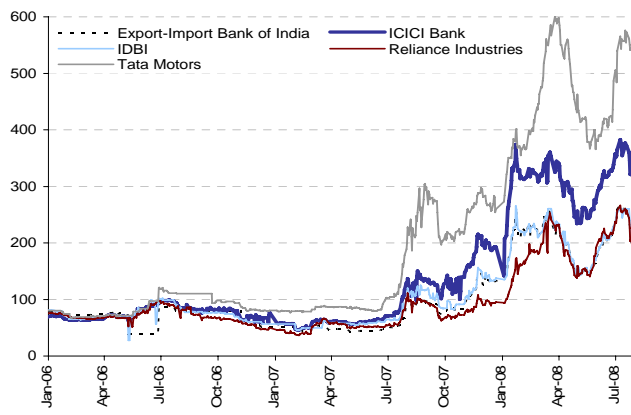
### Credit Default Swaps – Non-Japan Asia Bonds



Source: Bloomberg, Morgan Stanley Research. The iTraxx Asia ex-Japan Index comprises 70 equally-weighted entities and includes two sub-indices - the iTraxx Asia ex-Japan IG Index with 50 investment grade entities and the iTraxx Asia ex-Japan HY Index with 20 non-investments grade entities. All entities meet certain criteria as defined in the Index Rules.

Exhibit 8

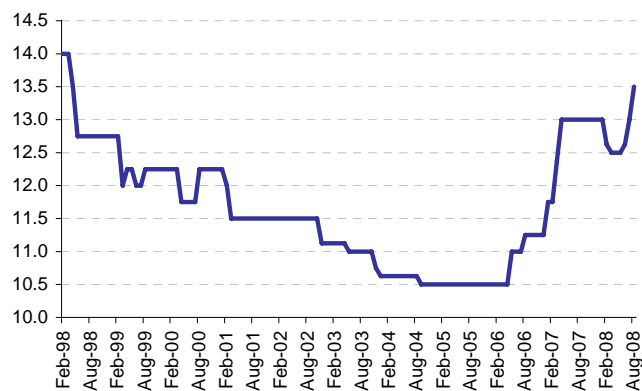
### Indian Paper – Credit Default Swap Rates (Bp)



Source: Bloomberg, Morgan Stanley Research

Exhibit 9

### Prime Lending Rate at a New High



Source: CEIC, Morgan Stanley Research

We expect capital inflows to slow over the next 12 months. We believe that a sustained favorable global risk appetite trend has been at the heart of India's current growth acceleration cycle – average GDP growth accelerated to 9.3% during the last three financial years (F2006, F2007, and F2008) from an average of 6.2% in F2003 and F2004. We believe one of the key drivers of India's virtuous growth cycle has been large capital inflows, providing a major liquidity infusion and pushing up domestic demand. Indeed, during F2008 India received US\$108 billion (9.2% of GDP) of capital inflows (Exhibit 9).

Out of this, US\$40 billion was foreign debt, US\$29 billion was equity market-related inflows, US\$15.5 billion was net foreign direct investment, or FDI (a significant part of which was private equity and real estate investments), and the balance was other hybrid inflows. In our view, a significant part, the non-debt inflows, could also have been funded by way of debt leveraging in the international market. Recent credit market developments are making it difficult for global financial institutions to raise wholesale funds. This, in turn, is reflected in the ability of these institutions to lend to companies. Already many of the Asian and Indian companies are withdrawing their foreign currency bond issuances. Similarly, property companies are finding it very difficult to get access to foreign debt as well as equity capital. We believe that capital inflows into India could slow to US\$30-40 billion over the next 12 months compared with US\$108 billion in F2008, unless there is a dramatic turnaround in the global credit market environment.

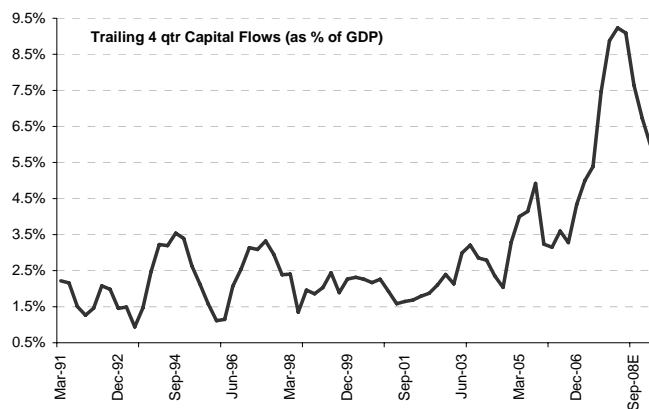
### Will It Be A Repeat of Mid-1990s Cycle?

We believe the current macro economic trend is similar to the 1993-96 cycle, but the duration of the down cycle is unclear. In the 1990s, the private corporate capex to GDP ratio increased to a peak of 10.4% in F1996 from a low of 6.1% in F1994. During that period, the capex cycle recovered sharply with the support of positive sentiment for emerging markets and due to investment sector deregulation implemented by the government. However, it was soon constrained by a tightening monetary policy triggered by signs of overheating. A

simultaneous reversal in risk appetite for emerging markets and reduced capital inflows caused further tightening in interest rates and affected corporate sector's ability to raise funds from international investors. Moreover, a slowdown in domestic consumption meant the corporate sector suffered major negative operating leverage. This adversely weighed on their profitability and investment confidence. Private corporate capex to GDP declined gradually to 7.1% in F1999 and further to 5.2% in F2001. As in the mid-1990s, we believe the combined impact of slowing domestic consumption, higher domestic cost of capital and reduced capital access from international capital markets will result in a further major slowdown in investment cycle over the next 12 months. We expect the overall investment to GDP to fall to 35.6% in F2009 and fall further to 32% in F2010 from 37% in F2008. Similarly, we expect the private corporate capex to decline to 12.2% in F2010 from 16.1% in F2008. However, the outlook for the capex cycle beyond 2009 will depend on the global macro environment particularly for emerging markets.

Exhibit 10

### Capital Flows to Slow Over the Coming Quarters



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

# NRI Remittances: Key to India's Current Account Stability

September 1, 2008

## Summary

Remittances from NRIs (non-resident Indians) have been one of the major sources of foreign exchange earnings for India. NRI remittances shot up to US\$40.8 billion (3.5% of GDP) as of F2008 (12 months ended March 2008) compared to US\$12.3 billion (2.7% of GDP) as of F2000. Indeed, India is one of the top recipients of remittances inflows in the world (see Exhibit 2). NRI remittances were about 2.6 times the net foreign direct investment and 1.4 times the portfolio investments in F2008. They play a big role in ensuring that current account deficit does not rise significantly. A large part of these remittances are for family maintenance of relatives and have been a relatively stable source in foreign inflows. Over the years, easier norms for international labor mobility have been one of the key factors supporting the rising non-resident Indian population. In addition, the improving domestic macro-environment has also attracted savings of non-residents in the form of remittances for application into investments. The government's measures implementing gradual capital account convertibility and relaxation of norms and procedures for speedier transfer of funds into the country also helped attract more inflows.

## India Remains the Top Recipient of Remittances Flows

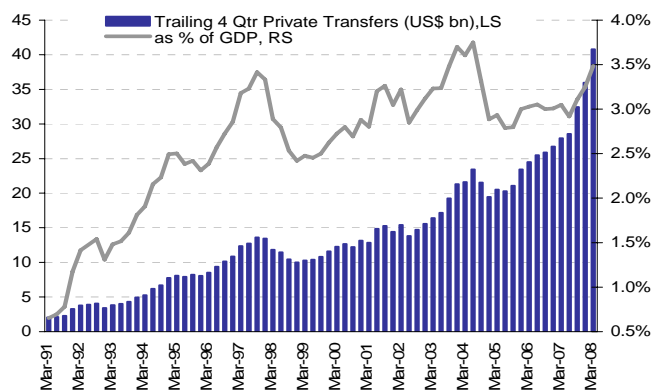
India has consistently been amongst the top recipients in terms of remittances over the last 14 years. As per the World Bank, total remittance flows to developing countries increased three and half times to an estimated US\$251 billion in 2007 from US\$71 billion in 1997. Following this trend, total remittance flows into India increased to US\$36 billion in 2007 from US\$13 billion in 1997. In 2007, in terms of absolute amount of remittances inflows, India is ranked number one in the world. In terms of percentage of GDP, India received 3.3% of remittances in 2007 compared with an average of 1.8% for developing countries.

## NRI Population Could Be Over 20 Million

According to a report from the high-level committee on the Indian Diaspora, there were about 16.6 million people, including Indian citizens, living abroad and people of Indian origin in 2001. We believe the total non-resident Indian population has increased significantly since then. For instance, according to the American Community Survey 2006, the non-resident India population based in the US has increased by about 46% to 2.5 million in 2006 from 1.7 million in 2001. As per the Indian Diaspora Committee, the total non-resident

Exhibit 1

## Private Transfers to India Accelerating



Source: CEIC, World Bank, Morgan Stanley Research

Exhibit 2

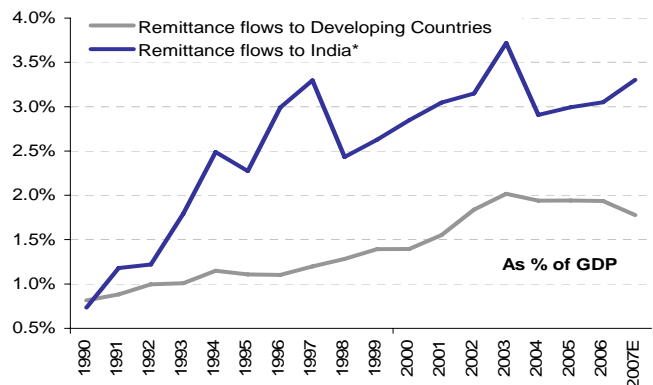
## Cross Country Comparison – Top 10 Recipients of Remittances Inflows

US\$bn	1980	1990	2000	2007E
<b>India *</b>	<b>2.9</b>	<b>2.3</b>	<b>13.2</b>	<b>36.0</b>
China	0.6	0.2	6.2	25.7
Mexico	1.0	3.1	7.5	25.1
Philippines	0.6	1.5	6.2	17.2
France	1.4	4.0	8.6	13.9
Poland	0.0	0.0	1.7	10.7
Spain	2.2	2.2	4.5	10.6
Romania	0.0	0.0	0.1	8.5
United Kingdom	0.0	2.1	3.6	8.1
Belgium	1.1	3.6	4.0	8.0

E = World Bank estimates \*Data for India is taken from RBI. Source: RBI, CEIC, World Bank, Morgan Stanley Research. Note: The data includes Workers' remittances, compensation of employees, and migrant transfers.

Exhibit 3

## Remittance Flows to India vs. Developing Countries



E = World Bank estimates \*Data for India is taken from RBI Source: RBI, CEIC, World Bank, Morgan Stanley Research



Indian population could be easily larger than 20 million. Even if we assume a conservative income stream of US\$10,000 per capita, the total annual income of this population should be above US\$200 billion, with their wealth being even higher. (As per the American Community Survey 2006, the average per capita income of Asian Indians in the US is estimated at US\$34,895 as of 2006).

### Changing Profile of NRI Population

The profile of remittance inflows has changed dramatically over the years. In the past, the Middle East was the largest source for remittances into India. The oil boom during the mid-1970s resulted in a large number of semi-skilled and unskilled labor migrating to Middle East countries for work. However, from the mid-1990s, emigration of Indian skilled labor to the US to find jobs in the information technology sector resulted in a dramatic rise in the US share of remittances flows into India. This skilled work force with high savings potential remits large amounts per capita. As per an RBI report (November 2006), while the inflow of remittances from North America is estimated to be 44% of the total, inflows from Middle East account for 24% of the total.

### Application of Remittances – Largely for Family Maintenance

NRI remittance inflows are used for a variety of purposes, dominant amongst them being for family maintenance (private consumption). As per the RBI (Invisibles in India's Balance of Payments, dated November 2006), the average utilization pattern of remittances sent to India includes maintenance of families of migrants in India (54% share in total), bank deposits (20%), investment in land/property (10%), investment in equity shares (3%), and other uses (13%).

### Critical for Stability of India's Current Account Balance

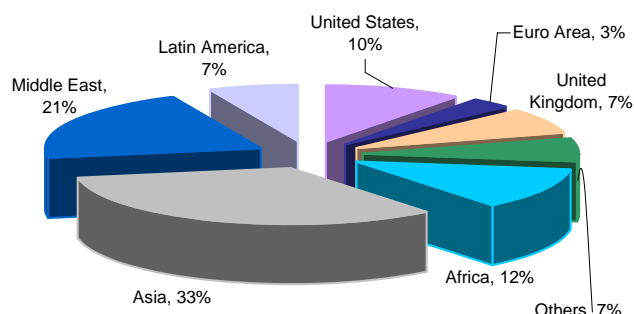
Over the years, India's goods trade balance has deteriorated. Trade deficit as percentage of GDP increased to 7.7% during the four quarters ended March 2008. However, strong growth in invisibles has ensured that the current account has remained within the manageable range of 1% to 2%. Remittances have accounted for roughly 55% of net invisible receipts in the last three years, helping to moderate the negative impact of a widening trade deficit on the overall balance. Excluding remittances, the four-quarter trailing sum of current account deficit would have been 5.1% as of March 2008.

### How Stable Are Remittances Inflows?

Over the last 10 years, remittances inflows have been a more stable source of foreign exchange earnings compared to other sources of capital flows like portfolio inflows. Remittances have been in narrow range of 2.5% to 3.6% of GDP over the last 10

Exhibit 4

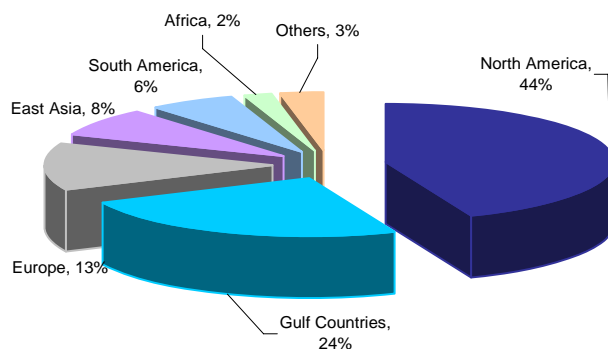
### Spatial Distribution of Overseas Indian Community



Source: Report of the High Level Committee on the Indian Diaspora, December 2001, RBI, Morgan Stanley Research

Exhibit 5

### Source Regions of Remittances Inflows to India



Source: RBI Report on Invisibles in India's Balance of Payments, dated November 2006, Morgan Stanley Research

Exhibit 6

### Trend and Composition of Private Transfers to India

US\$bn	Family maintenance	Local withdrawals/redemptions from NRI Deposits	Gold and silver brought through passenger baggage	Personal gifts/donation to charitable/religious inst.	Total
F2000	7.42	4.12	0.01	0.73	12.29
F2001	7.75	4.73	0.01	0.58	13.07
F2002	6.58	8.55	0.01	0.62	15.76
F2003	9.91	6.64	0.02	0.61	17.19
F2004	10.38	10.59	0.02	1.20	22.18
F2005	9.97	8.91	0.03	2.17	21.08
F2006	10.46	12.45	0.02	2.03	24.95
F2007	13.56	13.21	0.03	2.16	28.95

Source: RBI Monthly Bulletin, dated February 2008, Morgan Stanley Research

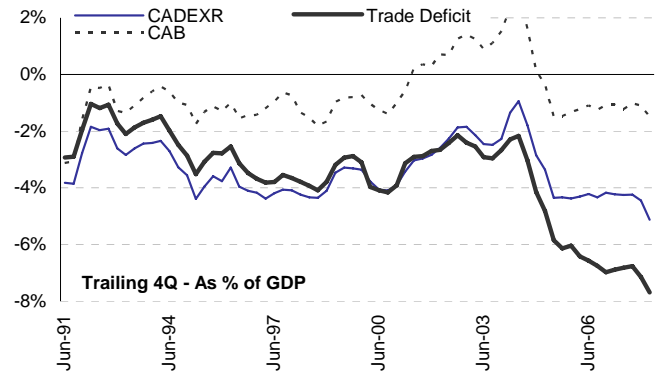
years. During this period, there were two instances when remittance inflows declined YoY: once post the East Asian crisis and the second during 2004-05.

### Bottom Line

Remittances from non-residents are likely to remain one of the most important sources of foreign inflows into India. While on a longer-term basis these inflows have been in a relatively stable range as a percentage of GDP, in times of severe global slowdown remittance inflows could slow as percentage of GDP. Based on past trends, we believe that remittance inflows could slow over the next 12 months to 2.5-2.8% of GDP from 3.5% of GDP in the quarter ended March 2008. This could have some adverse impact on the current account balance, which is already in deficit due to higher oil imports.

Exhibit 7

### Trailing Four-quarter Trade and Current Account Balance (As % of GDP)



CADEXR = Current Account Deficit Excluding Remittances; Source: RBI, CEIC, Morgan Stanley Research

## GDP Growth Decelerates to 7.9% in QE June-08

August 29, 2008

**GDP growth was 7.9% at QE June 2008:** The Central Statistical Organization (CSO) announced that GDP growth in the quarter ended June 2008 (QE June-08) was 7.9%. This compares with 8.8% registered in both QE Mar-08 and QE-Dec-07. The deceleration was at the upper end of our expectation of 7.5-8% and slightly below consensus expectation (as per Bloomberg survey) of 8%.

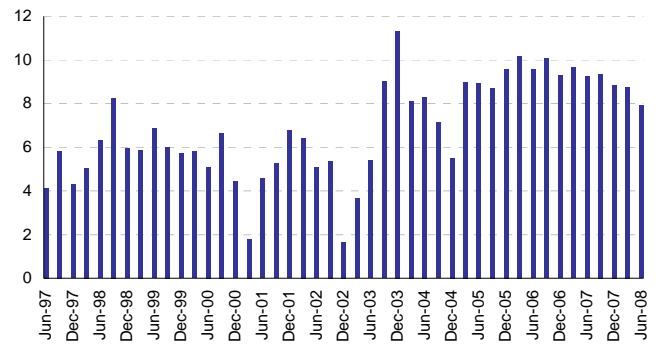
**Momentum weakened across the board:** The growth in the agriculture and allied activities decelerated marginally to 3.1% in QE June-08 from 3.2% in the previous quarter. The industry segment growth decelerated to 7% from 7.8%. Within industry, while manufacturing growth remained weak, the electricity, gas and water supply (2.6% vs. 5.6% earlier) and construction (11.4% vs. 12.6% earlier) segment growth decelerated in QE June-08. Services segment growth also slowed to 10% in QE Jun-08 compared with 11.2% in the previous quarter.

**Consumption and investment growth slowed:** In the QE Jun-08, consumption expenditure slowed to 7.9% from 9.7% in the previous quarter, driven largely by deceleration in government expenditure (7.7% vs. 16.7%). The private consumption expenditure decelerated to 8% from 8.3%. Fixed investment growth also slowed to 9% compared with 11.2% in the previous quarter. Net exports contribution to growth was -0.7% in QE Jun-08 from nil in the previous quarter.

**Growth to slow further:** We expect further moderation in the overall GDP growth to 7.4% in the next quarter. We believe that high domestic cost of capital and reduced access to the international market will cause a further slowdown in India's growth.

Exhibit 1

### Quarterly GDP Growth Trend



Source: CSO, Morgan Stanley Research

Exhibit 2

## Quarterly GDP Growth by Industry (F1Q07-F1Q09, YE March)

YoY% Sector	FY2007				FY2008				FY2009
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
<b>Agriculture and allied activities</b>	<b>2.8</b>	<b>3.3</b>	<b>4.1</b>	<b>5.2</b>	<b>4.1</b>	<b>4.8</b>	<b>5.9</b>	<b>3.2</b>	<b>3.1</b>
---Agriculture	2.7	3.2	4.0	4.9	4.4	4.7	6.0	2.9	3.0
---Mining & Quarrying	4.1	3.9	6.0	8.2	1.7	5.5	5.7	5.9	4.8
<b>Industry</b>	<b>11.4</b>	<b>11.6</b>	<b>10.8</b>	<b>12.0</b>	<b>9.7</b>	<b>9.7</b>	<b>8.4</b>	<b>7.8</b>	<b>7.0</b>
---Manufacturing	11.7	12.2	11.3	12.8	10.9	9.2	9.6	5.8	5.6
---Electricity, gas & water supply	4.3	6.6	7.6	5.4	7.9	6.9	4.8	5.6	2.6
---Construction	13.1	12.0	10.8	12.2	7.7	11.8	7.1	12.6	11.4
<b>Services</b>	<b>11.5</b>	<b>11.5</b>	<b>11.1</b>	<b>10.3</b>	<b>11.0</b>	<b>10.5</b>	<b>10.4</b>	<b>11.2</b>	<b>10.0</b>
---Trade, hotels, transport & communication	10.9	12.7	12.1	11.6	13.1	11.0	11.5	12.4	11.2
---Financing, insurance, real est. & busi. Services	13.6	13.9	14.7	13.4	12.6	12.4	11.9	10.5	9.3
---Community, social & personal services	10.3	7.2	5.6	5.1	5.2	7.7	6.2	9.5	8.4
<b>GDP at factor cost</b>	<b>9.6</b>	<b>10.1</b>	<b>9.3</b>	<b>9.7</b>	<b>9.2</b>	<b>9.3</b>	<b>8.8</b>	<b>8.8</b>	<b>7.9</b>

Source: Central Statistical Organization (CSO), Morgan Stanley Research

Exhibit 3

## Annual GDP Growth by Industry (F2004-10E, YE March)

	Share of GDP* (F2008)	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009E	FY2010E
<b>Agriculture and allied activities</b>	<b>19.7%</b>	<b>9.3%</b>	<b>0.7%</b>	<b>5.8%</b>	<b>4.0%</b>	<b>4.6%</b>	<b>2.8%</b>	<b>3.1%</b>
---Agriculture	17.8%	10.0%	0.0%	5.9%	3.8%	4.5%	2.6%	2.9%
---Mining & Quarrying	2.0%	3.1%	8.2%	4.9%	5.7%	4.7%	4.0%	4.5%
<b>Industry</b>	<b>24.7%</b>	<b>7.8%</b>	<b>10.5%</b>	<b>10.6%</b>	<b>11.5%</b>	<b>8.9%</b>	<b>6.3%</b>	<b>6.5%</b>
---Manufacturing	15.4%	6.6%	8.7%	9.0%	12.0%	8.8%	5.7%	6.1%
---Electricity, gas & water supply	2.1%	4.8%	7.9%	4.7%	6.0%	6.3%	4.2%	5.3%
---Construction	7.3%	12.0%	16.1%	16.5%	12.0%	9.8%	8.2%	7.5%
<b>Services</b>	<b>55.6%</b>	<b>8.5%</b>	<b>9.1%</b>	<b>10.3%</b>	<b>11.1%</b>	<b>10.8%</b>	<b>9.0%</b>	<b>8.5%</b>
---Trade, hotels, transport & communication	27.5%	12.0%	10.7%	11.5%	11.8%	12.0%	9.4%	9.0%
---Financing, insurance, real est. & busi. Services	14.7%	5.6%	8.7%	11.4%	13.9%	11.8%	9.2%	8.5%
---Community, social & personal services	13.4%	5.4%	6.9%	7.2%	6.9%	7.3%	8.1%	7.5%
<b>GDP at factor cost</b>	<b>100.0%</b>	<b>8.5%</b>	<b>7.5%</b>	<b>9.4%</b>	<b>9.6%</b>	<b>9.0%</b>	<b>7.1%</b>	<b>7.0%</b>

\* The share of GDP is calculated on the basis of GDP data for F2008 (at factor cost).

E = Morgan Stanley Research estimates, Source: Central Statistical Organization (CSO)

Exhibit 4

## Quarterly GDP Growth by Expenditure (F1Q08-F1Q09, YE March)

Sector	YoY%					% Point Contribution to Growth				
	F2008				F2009	F2008				F2009
	Q1	Q2	Q3	Q4	Q1	Q1	Q2	Q3	Q4	Q1
<b>Consumption Expenditure</b>	<b>6.1</b>	<b>8.0</b>	<b>8.5</b>	<b>9.7</b>	<b>7.9</b>	<b>4.4</b>	<b>5.5</b>	<b>5.9</b>	<b>6.2</b>	<b>5.6</b>
--Private Final Consumption Expenditure (PFCE)	7.6	7.6	9.4	8.3	8.0	4.6	4.6	5.7	4.5	4.8
--Government Final Consumption Expenditure	-2.2	10.3	2.2	16.7	7.7	-0.2	0.9	0.2	1.7	0.8
<b>Gross Capital Formation (GCF)</b>	<b>12.6</b>	<b>16.0</b>	<b>14.4</b>	<b>10.7</b>	<b>8.9</b>	<b>4.3</b>	<b>5.5</b>	<b>4.7</b>	<b>3.6</b>	<b>3.1</b>
--Gross Fixed Capital Formation (GFCF)	13.3	16.7	14.3	11.2	9.0	4.1	5.2	4.2	3.5	2.9
--Change in Stocks	9.1	7.4	7.7	4.0	4.3	0.2	0.2	0.2	0.1	0.1
--Valuables	2.6	12.9	29.8	10.0	15.8	0.0	0.2	0.3	0.1	0.2
<b>Net Exports</b>	<b>7.6</b>	<b>7.9</b>	<b>9.9</b>	<b>1.7</b>	<b>64.8</b>	<b>-0.1</b>	<b>-0.6</b>	<b>-0.6</b>	<b>0.0</b>	<b>-0.7</b>
Exports	6.0	-2.8	15.8	10.1	19.5	1.5	-0.5	2.8	2.2	4.6
less Imports	6.0	0.4	14.2	9.6	21.5	1.5	0.1	3.4	2.2	5.4
<b>Statistical Discrepancies</b>	<b>-11.4</b>	<b>-26.7</b>	<b>-23.8</b>	<b>-33.0</b>	<b>2.3</b>	<b>0.6</b>	<b>-1.2</b>	<b>-1.0</b>	<b>-1.0</b>	<b>-0.1</b>
<b>GDP at market price</b>	<b>9.2</b>	<b>9.2</b>	<b>8.9</b>	<b>8.8</b>	<b>7.9</b>	<b>9.2</b>	<b>9.2</b>	<b>8.9</b>	<b>8.8</b>	<b>7.9</b>

Source: Central Statistical Organization, Morgan Stanley Research

Exhibit 5

## Annual GDP Growth by Expenditure (F2004-08, YE March)

Sector	YoY%					% Point Contribution to Growth				
	F2004	F2005	F2006	F2007	F2008	F2004	F2005	F2006	F2007	F2008
<b>Consumption Expenditure</b>	<b>5.3</b>	<b>4.8</b>	<b>8.2</b>	<b>7.0</b>	<b>8.1</b>	<b>4.0</b>	<b>3.5</b>	<b>5.8</b>	<b>4.9</b>	<b>5.5</b>
--Private Final Consumption Expenditure (PFCE)	5.8	5.2	8.7	7.1	8.3	3.7	3.2	5.2	4.3	4.9
--Government Final Consumption Expenditure	2.6	2.6	5.4	6.2	7.0	0.3	0.3	0.6	0.6	0.7
<b>Gross Capital Formation (GCF)</b>	<b>13.9</b>	<b>23.5</b>	<b>18.2</b>	<b>14.4</b>	<b>13.3</b>	<b>3.5</b>	<b>6.2</b>	<b>5.5</b>	<b>4.7</b>	<b>4.5</b>
--Gross Fixed Capital Formation (GFCF)	13.7	18.9	17.4	15.1	13.8	3.2	4.7	4.7	4.4	4.2
--Change in Stocks	-13.4	144.0	47.7	3.9	6.9	-0.1	1.0	0.8	0.1	0.1
--Valuables	66.6	57.2	-2.2	14.9	13.9	0.4	0.5	0.0	0.2	0.2
<b>Net Exports</b>	<b>-99.1</b>	<b>15627.8</b>	<b>-278.2</b>	<b>62.9</b>	<b>8.2</b>	<b>-1.5</b>	<b>1.8</b>	<b>-4.8</b>	<b>-1.8</b>	<b>-0.3</b>
Exports	5.8	28.1	14.8	18.9	7.5	0.9	4.3	2.7	3.6	1.6
less Imports	16.8	16.0	45.6	24.5	7.7	2.4	2.4	7.5	5.3	1.9
<b>Statistical Discrepancies</b>	<b>-127.4</b>	<b>-706.8</b>	<b>-105.3</b>	<b>1497.3</b>	<b>-37.7</b>	<b>2.3</b>	<b>-3.3</b>	<b>2.7</b>	<b>1.9</b>	<b>-0.7</b>
<b>GDP at market price</b>	<b>8.4</b>	<b>8.3</b>	<b>9.2</b>	<b>9.7</b>	<b>9.0</b>	<b>8.4</b>	<b>8.3</b>	<b>9.2</b>	<b>9.7</b>	<b>9.0</b>

Source: Central Statistical Organization, Morgan Stanley Research

## Inflation Closer to Peak Levels

September 4, 2008

**Weekly inflation decelerates:** Headline inflation (WPI) decelerated to 12.34% during the week ended August 23, 2008, from 12.4% during the week ended August 16 and 12.63% during the week ended August 9, 2008. Inflation has remained significantly higher than the RBI's (Reserve Bank of India) comfort zone of 5% since mid-February 2008. Inflation for the week ended June 28 was also revised upward to 12.03% from 11.89% reported earlier.

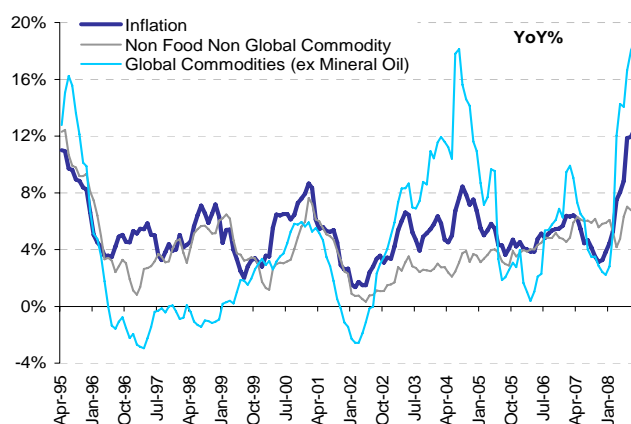
**Inflation deceleration driven by lower food prices:** Of the 6bp deceleration in headline inflation during the week ended August 23, the bulk of it came from lower primary food prices (-19bp). However, the positive impact was offset by an acceleration in prices for basic metals (+7bp) and chemicals and chemical products (+7bp). See Exhibit 2 for the key contributors to this deceleration in inflation.

**Headline inflation (WPI) closer to peak levels:** We believe that headline inflation (WPI) is closer to peak levels. While there is a risk that inflation may rise to 13% from current levels over the next three to four weeks, we expect it to start moderating gradually from those levels. We believe that RBI is now unlikely to hike policy rates further unless oil and other commodity prices rise significantly again from current levels.

The second risk to a "no further rate hike outlook" is a potential large global financial market shock that triggers major capital outflows in emerging markets and India. In such a case, we believe the RBI would need to hike the policy rate to prevent any major depreciation in the exchange rate and consequent adverse impact on inflation outlook.

Exhibit 1

### Trend in Inflation (WPI, Monthly Average)



Source: CEIC, Ministry of Commerce and Industry, Morgan Stanley Research

Exhibit 2

### Sector Breakdown of WPI

	Weight (%)	24-Nov-07	2-Aug-08	9-Aug-08	16-Aug-08	23-Aug-08	Contribution to Acceleration (%) #
<b>Manufactured Products</b>	<b>63.8%</b>	<b>3.53%</b>	<b>10.75%</b>	<b>10.91%</b>	<b>11.02%</b>	<b>11.28%</b>	<b>0.17%</b>
Textiles	9.8%	-3.62%	6.63%	8.45%	8.75%	8.34%	-0.04%
Basic Metals	8.3%	3.48%	22.59%	22.65%	22.78%	23.67%	0.07%
-- Iron and Steel	3.6%	7.24%	35.32%	35.32%	35.49%	36.30%	0.03%
--Pipes Wires Drawing	1.6%	1.84%	24.68%	24.68%	24.58%	27.80%	0.05%
--Foundries for Casting Forging & Structural	0.9%	4.17%	26.69%	26.69%	26.69%	26.69%	0.00%
Chemicals & Chemical Products	11.9%	5.62%	9.52%	9.53%	9.47%	10.06%	0.07%
Capital Goods	6.5%	7.71%	6.51%	5.77%	5.78%	5.78%	0.00%
Transport Eqpt	4.3%	2.03%	5.58%	5.58%	5.52%	5.76%	0.01%
Food Products	11.5%	1.70%	13.26%	13.19%	13.82%	13.90%	0.01%
Fertilisers	3.7%	1.35%	10.29%	10.29%	10.23%	10.23%	0.00%
Non Metallic Minerals	2.5%	9.30%	4.16%	4.19%	4.14%	3.94%	-0.01%
<b>Primary Articles</b>	<b>22.0%</b>	<b>4.97%</b>	<b>11.43%</b>	<b>11.83%</b>	<b>11.63%</b>	<b>10.79%</b>	<b>-0.18%</b>
-- Minerals	0.5%	0.59%	50.86%	50.86%	50.47%	50.47%	0.00%
-- Food products	15.4%	3.01%	7.20%	7.47%	7.28%	6.04%	-0.19%
<b>Fuel</b>	<b>14.2%</b>	<b>0.31%</b>	<b>17.99%</b>	<b>17.99%</b>	<b>16.76%</b>	<b>16.69%</b>	<b>-0.01%</b>
-- Mineral Oil	6.99%	1.49%	28.51%	28.51%	26.34%	26.24%	-0.01%
<b>All</b>	<b>100.0%</b>	<b>3.11%</b>	<b>12.44%</b>	<b>12.63%</b>	<b>12.40%</b>	<b>12.34%</b>	<b>-0.06%</b>

Note: # Inflation as of 23 August-08 less inflation as of 16 August-08; Source: CEIC, Bloomberg, Morgan Stanley Research

## FX Reserves Continue to Decline

August 1, 2008

**FX reserves continue to decline gradually:** Foreign exchange reserves have been declining gradually since the last week of May 2008, as RBI intervenes in the FX market to prevent a major depreciation in the rupee. The reserves declined by US\$0.5 billion during the week ended July 25, 2008. On a trailing three-month basis, FX reserves have declined US\$6.3 billion. This is the first time since February 2006 that FX reserves have declined by such a magnitude on a three-month trailing basis.

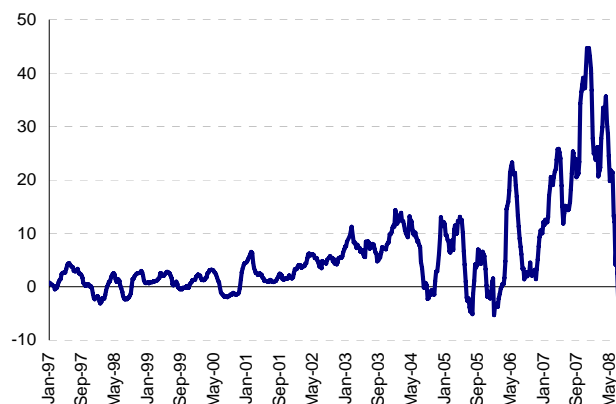
**Due to lower capital inflows:** The main reason for the decline in forex reserves has been a slowdown in capital inflows due to increased risk aversion in global financial markets. India received total capital inflows of US\$108 billion (9.2% of GDP) during the 12 months ended March 2008 (an average of US\$27 billion per quarter). Capital inflows slowed to US\$13-15 billion during the quarter ended June 2008, as per our estimates (based on trend in FX reserves data). We believe that total capital inflows could slow further from here.

**...And wider current account deficit:** Higher oil prices are resulting in a wider current account deficit. A roughly US\$10/bbl increase in crude oil prices results in higher imports, a trade deficit, and current account deficit of US\$7 billion (0.6% of GDP). According to data released by the Ministry of Commerce, the trade deficit widened to US\$30.4 billion during the quarter ended (QE) June 2008 from US\$20.5 billion as of QE March 2008. Based on this trend, it appears that the current account deficit would have further widened significantly during the QE June 2008.

**Liquidity conditions likely to remain tight:** We believe slowing reserves accretion at a time when the fiscal deficit is widening will mean further tightening of liquidity in the domestic economy.

Exhibit 1

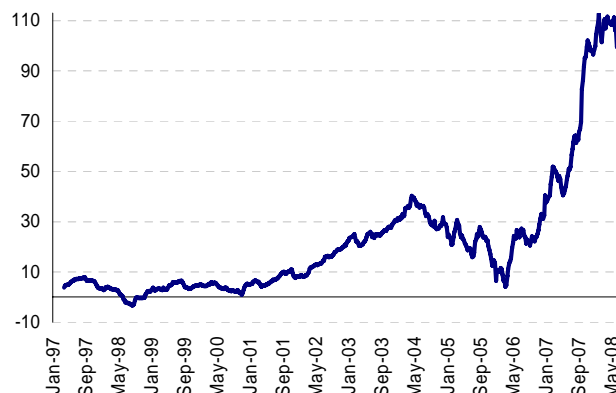
### Three-month Trailing FX Reserves (US\$ bn)



Source: RBI, Morgan Stanley Research

Exhibit 2

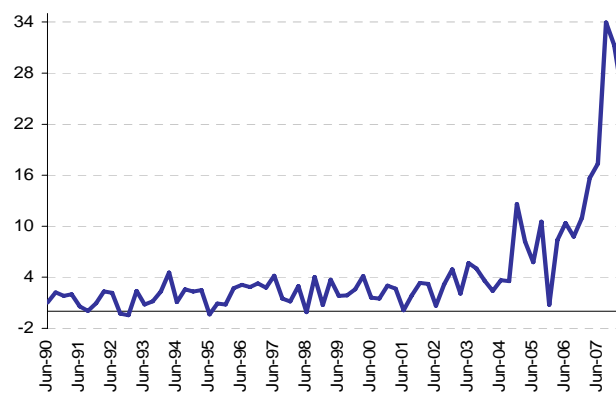
### 12-month Trailing FX Reserves (US\$ bn)



Source: RBI, Morgan Stanley Research

Exhibit 3

### Capital Flows (US\$ bn)



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

## India Monsoon Update: Summer Crop Output Likely to Be Below Normal

September 5, 2008

### Cumulative rainfall was 3% below normal up to

**September 3, as per IMD:** According to the India Meteorological Department (IMD), on an all-India area weighted basis, cumulative rainfall was 3% below normal up to September 3 compared with 1% below normal up to August 27. On an un-weighted basis, cumulative rainfall was 4% below normal up to September 3 compared with near-stable (0%) rainfall received up to August 20. Aggregate countrywide rainfall was 13% below normal during the week ended September 3, and 41% below normal during the week ended August 27.

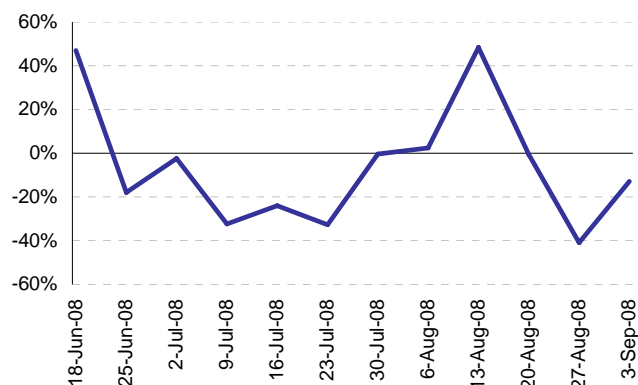
**All regions except the eastern region received below-normal rainfall:** Average rainfalls for the weeks ended August 27 and September 3 were 63%, 57%, and 6% below normal in the western, northern, and southern regions, respectively. The eastern region, however, received 2% above-normal rainfall during the same period. Overall, the temporal distribution has not been good with below-normal rainfall in eight out of the last 12 weeks of monsoon season so far.

### Cropped area affected by below-normal rainfall at 17.1%:

The cropped area affected by below-normal rainfall was 17.1% as of the week ended September 3 compared to 8.8% as of the week ended August 27.

**Crop area under cultivation remains weak:** Sowing for the summer crop is almost completed. Overall crop area under cultivation was 2.7% lower YoY as of September 4 compared to 2.9% lower YoY as of August 28. Moreover, the recent floods in Bihar will likely further affect the crop yield in the region. We believe the summer crop (which accounts for about 51% of the fiscal year's agricultural production) output growth will be below normal in this fiscal year.

### Rainfall: Weekly Deviation from Long Period Average



Source: IMD, Morgan Stanley Research



## Monsoon Outlook: Three Key Measures

Exhibit 1

### Measure 1: Total Quantum of Rainfall in the Season (Variation from Normal %)

Deviation from Long Period Average			
1995	0	2002	-19
1996	3	2003	-2
1997	2	2004	-12
1998	6	2005	-1
1999	-4	2006	-4
2000	-8	2007	41
2001	-7	2008*	-4

\* As on 3 September 2008

Exhibit 2

### Measure 2: Temporal Distribution: Weekly Trend (Variation from Normal %)

From	To	North	West	South	East	All India
31-Jul-08	6-Aug-08	-3%	27%	3%	-18%	2%
7-Aug-08	13-Aug-08	-7%	79%	92%	14%	48%
14-Aug-08	20-Aug-08	48%	-48%	-18%	28%	-1%
21-Aug-08	27-Aug-08	-38%	-63%	-39%	-29%	-41%
28-Aug-08	3-Sep-08	-76%	-63%	26%	33%	-13%
<b>1-Jun-08</b>	<b>3-Sep-08</b>	<b>10%</b>	<b>-12%</b>	<b>-8%</b>	<b>0%</b>	<b>-4%</b>

Exhibit 3

### Measure 3 (a): Spatial Distribution Yearly Comparison – Rainfall Deviation from Normal Average\*

Major States	Share of Kharif Output (%)	Rainfall 2008	Rainfall 2007	Rainfall 2006	Rainfall 2005	Rainfall 2004
Uttar Pradesh	15.9	N	D	D	N	D
Punjab	10.5	N	D	N	N	D
West Bengal	9.0	N	N	N	N	N
Madhya Pradesh	8.8	N	D	N	N	N
Andhra Pradesh	8.6	N	N	N	N	N
Bihar	8.0	N	N	N	D	N
Maharashtra	7.9	N	N	N	N	N
Karnataka	6.6	N	N	N	N	N
Tamil Nadu & Pondicherry	6.4	N	N	D	N	N
Orissa	4.4	N	N	E	N	N
Haryana, Chandigarh & Delhi	3.1	N	D	D	N	D
Rajasthan	2.8	N	N	N	N	N
Gujarat	2.8	N	N	E	N	N
<b>Cropped area with deficient rainfall (%)</b>		<b>17.1</b>	<b>25.4</b>	<b>24.2</b>	<b>8.3</b>	<b>38.9</b>
<b>Summer (Kharif)** Food Grain Output (% YoY)</b>			<b>9.4%</b>	<b>0.6%</b>	<b>6.4%</b>	<b>-11.7%</b>

\* N = Normal Rainfall, D= Deficient Rainfall

\*\* This rain dependent crop accounts for approximately 51% of the total crop output.

Exhibit 4

### Measure 3 (b): Spatial Distribution Regional Trend: Crop Area Affected (%)

As on	North	West	South	East	All India
Cropped Area	22.5	36.0	18.5	23.1	100.0
<b>Cumulative Rainfall Position Affected as on</b>					
Up to 23 July	0.0	17.9	14.7	2.4	35.0
Up to 30 July	0.0	14.2	7.9	2.4	24.5
Up to 6 August	0.0	7.9	5.3	2.4	15.6
Up to 13 August	0.0	3.2	1.6	2.4	7.2
Up to 20 August	0.0	3.2	5.1	2.4	10.7
Up to 27 August	0.0	3.2	5.1	0.5	8.8
Up to 3 September	0.0	14.8	1.8	0.5	17.1

Exhibit 5

### Crop Area under Cultivation (as of September 4, 2008)

Mn Hectares	Area Covered For Full Season	2007	2008	YoY
Rice	39.9	34.6	36.2	4.6%
Coarse cereals	19.5	20.8	19.3	-7.4%
Pulses	10.2	12.0	10.0	-16.7%
<b>Sub Total: Food Grains</b>	<b>69.7</b>	<b>67.4</b>	<b>65.4</b>	<b>-2.9%</b>
Oilseeds	15.0	17.1	17.5	2.3%
Sugarcane	4.3	5.3	4.4	-16.8%
Cotton	8.7	9.1	8.9	-2.0%
<b>Grand Total</b>	<b>97.7</b>	<b>98.8</b>	<b>96.2</b>	<b>-2.7%</b>

Sources for Exhibits 1-5: Indian Meteorological Department, Ministry of Agriculture, CMIE, Press Information Bureau, Morgan Stanley Research

## June IP Growth Recovers from Six Year Low

August 12, 2008

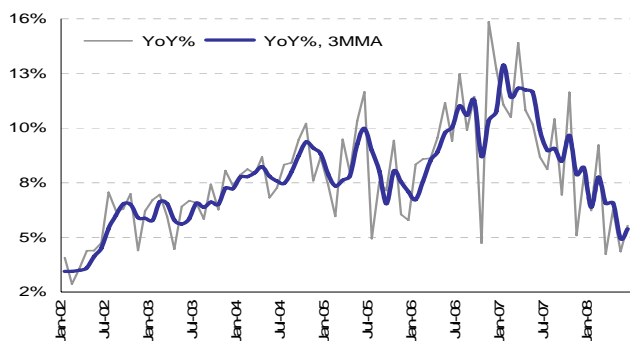
**Industrial production grew at 5.4% YoY in June 2008:** This compares with 4.1% growth in May (revised upward from 3.8%) and 6.2% in April. The growth in June was in line with our (5-6%) and market expectations (5.4% as per Bloomberg survey).

**Growth in manufacturing and electricity accelerated, weakened in the mining segment:** Growth in the manufacturing segment accelerated to 5.9% in June compared with 4.2% in the previous month. The key contributors to this acceleration were wood and wood products, rubber, plastic, petroleum and coal products, machinery and equipment, and basic chemicals and chemical products. Mining growth slowed to 2.9% (vs. 5.1% earlier) while the electricity segment's growth rebounded slightly to 2.6% (vs. 2% growth in May).

**Capital and consumer goods growth rebounded:** Growth in capital goods picked up to 5.6% in June compared with 3.4% in the previous month. Consumer goods growth accelerated to 10% in June from 7.2% in May. Within consumer goods, the growth picked up sharply in the non-durables (12.2% vs. 8.7% in May) and durables (3.5% vs. 2.6% in May) segments. Growth decelerated marginally in basic goods (2.9% vs. 3% in May) but accelerated in intermediate goods (2.9% vs. 1.6% in May).

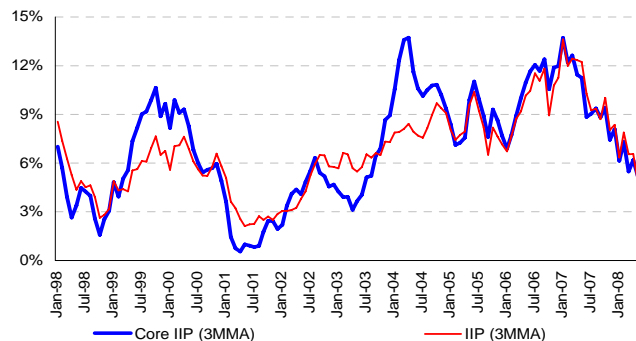
**Early indicators point to 6-7% IP growth in July:** The early indicators (commercial vehicle sales, cement dispatches growth and two-wheeler sales) accelerated in July compared to the previous month.

Exhibit 1  
**IIP Growth (YoY% and YoY%, 3MMA)**



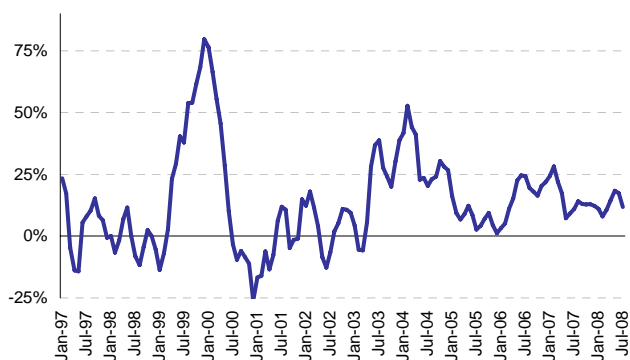
Source: CSO, Morgan Stanley Research

Exhibit 2  
**IIP vs. Core IIP\* (YoY%, 3MMA)**



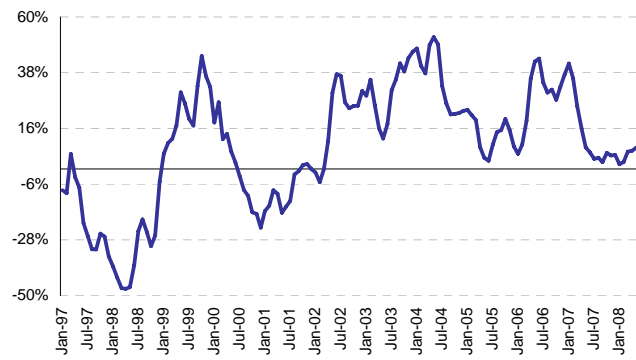
\* Core IIP includes chemicals, non-metallic mineral products, basic metals & alloys, metal products, machinery & equipment, transport equipment, cotton textiles, mining and electricity. The sectors we have excluded from this index are food products; beverages; products made of wool, silk, jute, rubber, leather and wood; and other manufacturing industries

Exhibit 3  
**Passenger Car Sales (YoY%, 3MMA)**



Source: SIAM, Bloomberg, Morgan Stanley Research

Exhibit 4  
**Commercial Vehicle Sales (YoY%, 3MMA)**



Source: SIAM, Bloomberg, Morgan Stanley Research

## July Trade Deficit Widens to an All-time High

September 1, 2008

**Exports (in dollar terms) accelerated 31.2% in July:** This compared with 23.5% in June. In rupee terms, export growth picked up to 39.1% (highest since July 2006) vs. 29.7% in June. In other Asian countries, export growth (in dollar terms) accelerated 25.5% in July compared with 17.5% in June.

**Import growth (in dollar terms) picked up sharply to 48.1% in July:** This compared with 25.9% in June. In rupee terms, import growth accelerated to close to a 12.5-year high of 56.9% from 32.2% in June. The key driver of this acceleration was continued strong growth in oil imports (in dollar terms) at 69.3% compared with 53.4% in June. Also, non-oil imports growth accelerated 38.7% in July from 13.9% in the previous month.

**Monthly trade deficit widened to a record US\$10.8 billion (10.7% of GDP, annualized) in July:** This compares with a US\$9.8 billion deficit in the previous month. YoY growth in monthly trade deficit stood at 83.7% in July compared with average growth of 49.5% in the previous 12 months. On a trailing 12-month basis, trade deficit widened to 7.7% of GDP in July compared with 7.4% in the previous month.

**Is strong non oil import growth reflective of a pick-up in aggregate demand pressures?** We believe that the monthly numbers for non-oil imports are quite volatile. While non-oil imports growth picked up sharply in July, it was comparatively low at 13.9% and 17.4% in the previous two months. On a three-month moving average, non-oil imports growth was relatively stable at 23.4% in July. In addition, there appears to have been an increase in non-oil imports for exports. Moreover, other growth data points indicate a continued slowdown in growth in July. Hence, we would not conclude this acceleration in imports reflects a revival of aggregate demand pressures in the economy.

Exhibit 1

### India: Trade Data Trend

	Jul-07	May-08	Jun-08	Jul-08
Exports (US\$ mn)	12454	13782	14664	16345
---YoY Growth	18%	13%	24%	31%
Imports (US\$ mn)	18333	24548	24452	27143
---YoY Growth	26%	27%	26%	48%
<b>Trade Balance (US\$ mn)</b>	<b>-5879</b>	<b>-10766</b>	<b>-9788</b>	<b>-10798</b>
---YoY Growth	47%	52%	30%	84%

Source: Ministry of Commerce, Morgan Stanley Research

Exhibit 2

### Trade Deficit vs. IP Growth

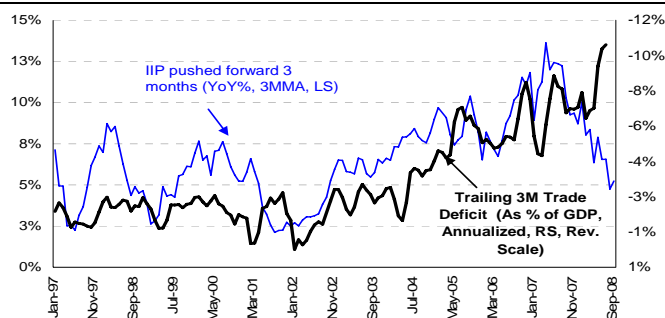


Exhibit 3

### India's Exports vs. US ISM New Orders Index

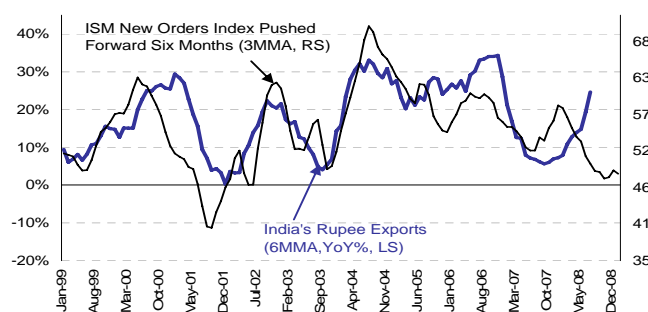


Exhibit 4

### Export Growth

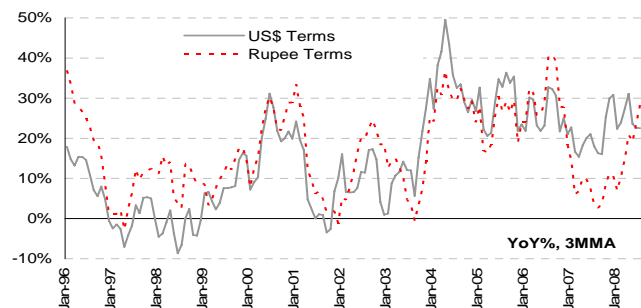
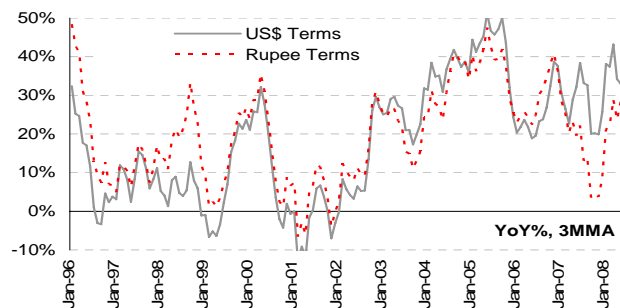


Exhibit 5

### Import Growth



Source for Exhibits 2-5: Central Bank Websites, Ministry of Commerce, CSO, RBI, CMIE, CEIC, Morgan Stanley Research

## July Fiscal Deficit Remains Higher than Budgeted

August 29, 2007

**Tax collections grew at a healthy pace:** The central government's aggregate tax collections grew 20.3% in the month of July 2008 compared with 28.4% in QE June-08. Fiscal year to date (FYTD), tax collections have grown 26.2%, ahead of the full fiscal year government budget estimate (BE) of 17%. Direct tax collection was up 41.8% in April-July 08, ahead of BE of 20%, driven by strong growth in corporate tax (+41.6%) and personal income tax (+42%) collection. Tax collection on domestic production, i.e., excise duties, grew 4% FYTD, but remained behind the BE of 8%. Customs duty collections rose 19.3% in April-July 08 compared with BE of 18%. Other tax collections (primarily service taxes) grew 28.5% in April-July 08. Total revenue receipts (including tax and non-tax revenues) grew 15.2% in July and 23.7% FYTD (compared with BE of 15%).

### Revenue expenditure outweighs revenue receipts:

Revenue expenditure grew 32.7% in the month of July after registering 19.4% growth in the QE June-08. This compares with the budget expectation of 12% for the full year. Consequently, the revenue deficit grew by 72% in July, ahead of the BE of a decline of 13%. On FYTD basis, revenue deficit was up 21.6%.

**Fiscal deficit growth remains well ahead of BE:** Fiscal deficit was up by 75.6% in July. On FYTD basis, fiscal deficit

was down 10.4%, but after adjusting for the State Bank of India transaction last year, the fiscal deficit grew 23.5% (compared with BE of a decline of 7%). For the period April-July 08, the fiscal deficit has reached 87% of the F2009 BE.

Exhibit 1

### Government Finances: Summary

(% Change YoY)	Fiscal Year to Date (April - July 2008)	F2009BE*
Corporate Profits	42%	22%
Personal income	42%	17%
<b>Total Direct Taxes</b>	<b>42%</b>	<b>20%</b>
Excise Duties	4%	8%
Customs Duties	19%	18%
<b>Total Indirect Taxes</b>	<b>12%</b>	<b>12%</b>
Other Taxes	29%	27%
<b>Total Tax Collections</b>	<b>26%</b>	<b>17%</b>
Total Revenue Receipts	24%	15%
Total Revenue Expenditure	23%	12%
<b>Revenue Deficit</b>	<b>22%</b>	<b>-13%</b>
<b>Fiscal Deficit</b>	<b>-10%</b>	<b>-7%</b>
<b>Fiscal Deficit Adjusted*</b>	<b>24%</b>	<b>-7%</b>

\*BE = Government Budget Estimates, \*\*Adjusted for SBI stake transaction Source: Ministry of Finance, Morgan Stanley Research

Exhibit 2

### India: Gross Tax Collection (YoY%)

YoY%	Monthly				Fiscal Year to date				BE	Required Growth in rest of the yr
	Jul-08	Jun-08	May-08	Apr-08	Jul-08	Jun-08	May-08	Apr-08	F2009	
Direct Taxes on company profits	32.8%	38.6%	60.1%	55.0%	41.6%	43.4%	58.2%	55.0%	22%	18%
Direct Taxes on personal incomes	23.1%	11.5%	36.0%	127.7%	42.0%	50.0%	76.0%	127.7%	17%	12%
<b>Total Direct Taxes</b>	<b>27.7%</b>	<b>32.5%</b>	<b>46.9%</b>	<b>98.5%</b>	<b>41.8%</b>	<b>45.7%</b>	<b>68.3%</b>	<b>98.5%</b>	<b>20%</b>	<b>16%</b>
Excise Duties	13.4%	-2.7%	4.9%	-28.3%	4.0%	-0.9%	1.4%	-28.3%	8%	9%
Customs Duties	17.5%	11.8%	23.4%	25.0%	19.3%	19.9%	24.2%	25.0%	18%	17%
<b>Total Indirect Taxes</b>	<b>15.4%</b>	<b>3.9%</b>	<b>15.2%</b>	<b>19.8%</b>	<b>12.4%</b>	<b>11.2%</b>	<b>16.8%</b>	<b>19.8%</b>	<b>12%</b>	<b>12%</b>
Other Taxes	21.5%	24.9%	33.1%	45.4%	28.5%	32.0%	37.5%	45.4%	27%	26%
<b>Total</b>	<b>20.3%</b>	<b>20.9%</b>	<b>27.4%</b>	<b>52.2%</b>	<b>26.2%</b>	<b>28.4%</b>	<b>36.6%</b>	<b>52.2%</b>	<b>17%</b>	<b>15%</b>

NM=Not Meaningful; RE= Revised government estimates, BE= Government budget estimates Source: Ministry of Finance, Morgan Stanley Research

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**Chart-Scan**

## Interest Rate Scenario

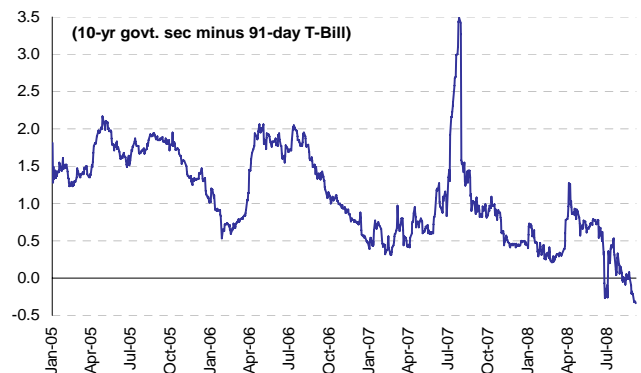
Exhibit 1  
**Nominal 10-year Government Bond Yield Movement**



Source: Bloomberg, Morgan Stanley Research

Over the past month, the yield on the nominal 10-year government bond has declined 82bp and is currently trading at 8.5%, underpinned by temporary improvement in inter-bank liquidity and the recent softening in oil prices reducing inflation concerns.

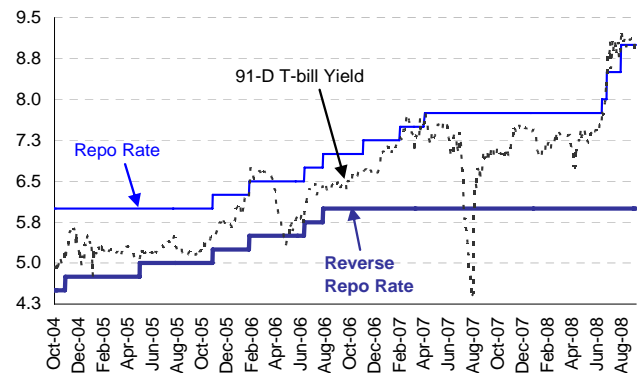
Exhibit 3  
**Government Bond Yield Curve**



Source: Morgan Stanley Research

The spread between 10-year bond yields and 91-day T-bill yields has inverted to -34bp from -22bp as of end August 2008 and positive 11bp as of end July. The yield curve has flattened with the yields on the long end of the curve falling faster than that on the short end.

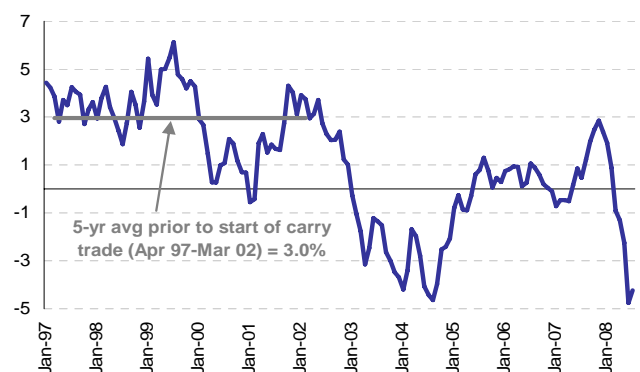
Exhibit 2  
**Short Rate Movement**



Source: RBI, Bloomberg, Morgan Stanley Research

An improvement in domestic liquidity conditions resulted in a 54bp decrease in the 91-day T-bill yield over the past month and is currently trading at 8.7%.

Exhibit 4  
**Real Spread Between Indian and US 10-year Govt Bonds**

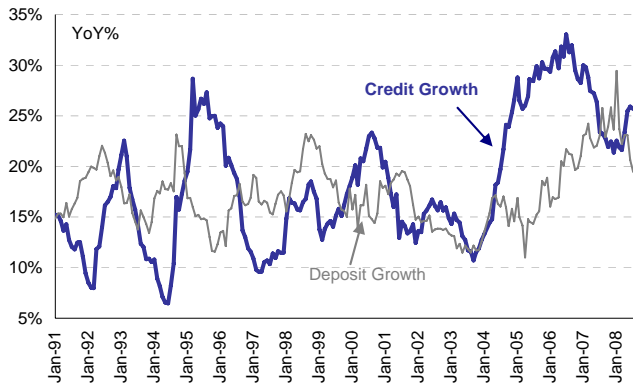


Note: Computed using WPI for India and core CPI for US. Source: Morgan Stanley Research

The real spread between Indian and US 10-year government bond yields stood at -423bp in July vs. -476bp in June and 225bp in May, underpinned by higher domestic inflation.

## Monetary Indicators

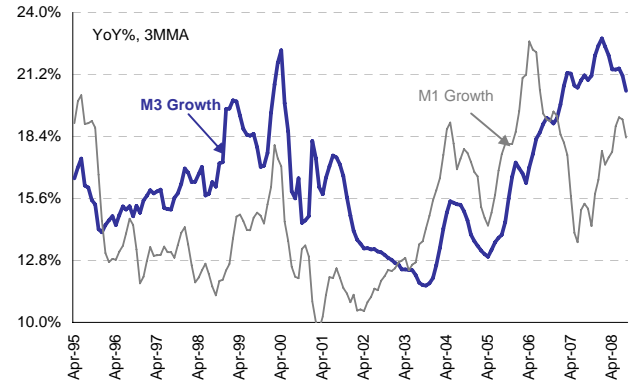
Exhibit 5  
**Credit and Deposit Growth**



Source: RBI, Morgan Stanley Research

Credit growth accelerated slightly to 25.9% during the fortnight ended August 15 from 25.7% in July and 25.9% in June. Overall deposit growth accelerated to 21.6% during the fortnight ending August 15 from 19.5% in July and 20.6% in June.

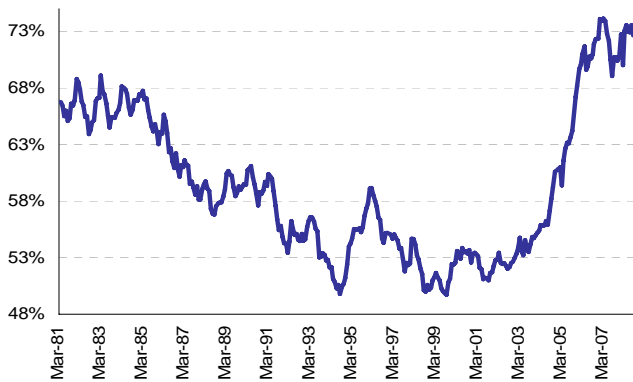
Exhibit 6  
**Money Supply Growth**



Source: RBI, Morgan Stanley Research

M3 (broad) money supply growth accelerated slightly to 20.6% during the fortnight ending August 15 from 20.2% in July, however it decelerated from 21% in June. M1 (narrow) money supply decelerated to 17.9% during the fortnight ended August 15 compared with 18.3% in July and 18.9% in June.

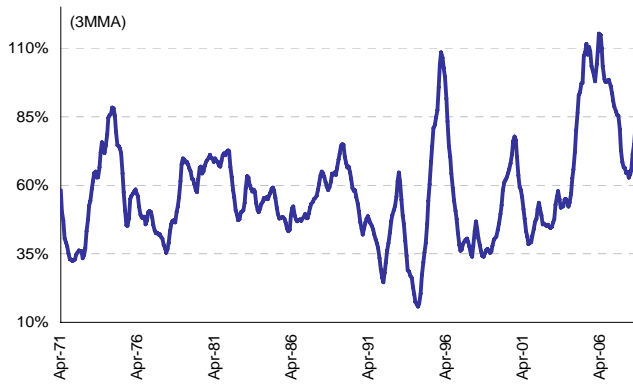
Exhibit 7  
**Credit-Deposit Ratio**



Source: RBI, Morgan Stanley Research

The credit-deposit ratio increased to 73.1% during the fortnight ended August 15 compared with 72.6% in July. However, it decreased from 73.6% in June.

Exhibit 8  
**Incremental Credit-Deposit Ratio**



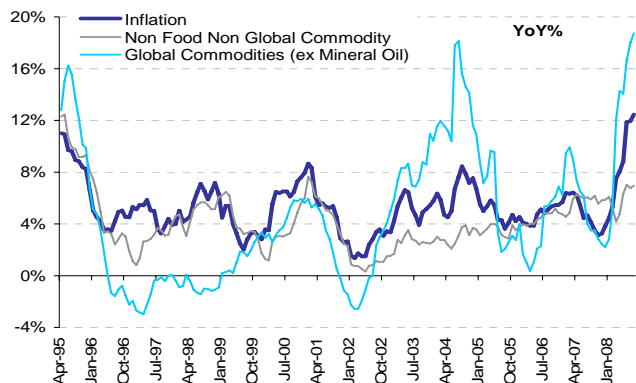
Source: RBI, Morgan Stanley Research

The 12-month trailing incremental credit ratio decreased to 84.5% during the fortnight ended August 15 compared with 91.1% in July and 88.6% in June.

## Inflation Scenario

Exhibit 9

### Wholesale Price Inflation (YoY %)

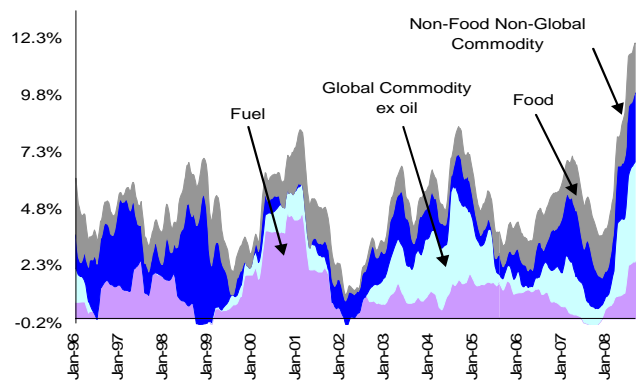


Source: RBI, Morgan Stanley Research

Headline inflation accelerated to 12.45% in August (average to date) from 11.95% in July (average) from 11.85% in June 2008 (average). On weekly basis, headline inflation actually decelerated to 12.34% during the week ended August 23 from 12.40% and 12.63% during the week ended August 16 and 9, respectively.

Exhibit 11

### Wholesale Price Inflation – Key Contributors

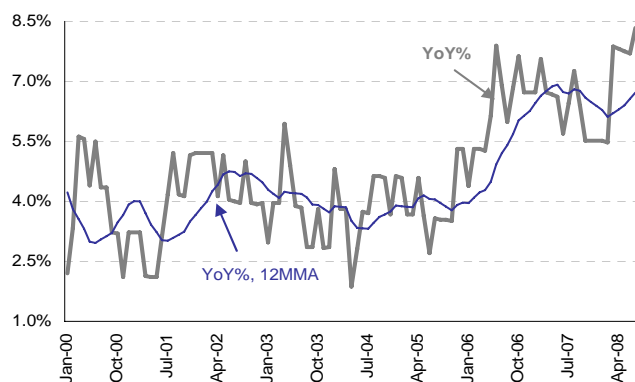


Source: CEIC, Morgan Stanley Research

Global commodity (excluding oil) linked inflation accelerated to 18.7% in August (average to date) from 18% in July (average) and 16.6% in June (average). Food-linked inflation picked up to 9.8% in August (average to date) from 9.1% in July (average). However, it decelerated slightly from 9.9% in June (average). Fuel linked inflation accelerated to 17.4% in August (average to date) from 17% in July (average) and 16.3% in June (average).

Exhibit 10

### Consumer Price Inflation – Industrial Workers (YoY %)

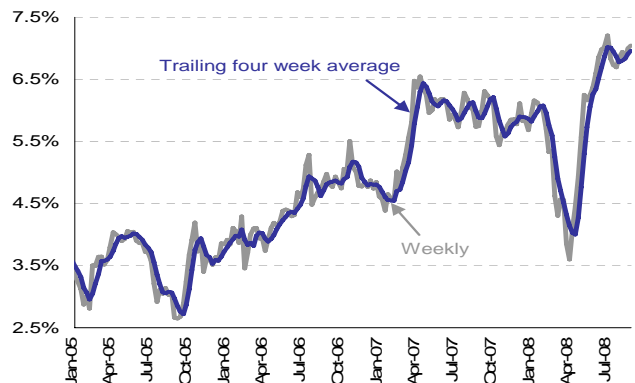


Source: CEIC, Morgan Stanley Research

The CPI for industrial workers accelerated to 8.3% in July (last available data point) after remaining stable in the 7.7-7.8% range in the previous three months.

Exhibit 12

### Non-food and Non-global Commodity-linked Inflation



Source: CEIC, Morgan Stanley Research

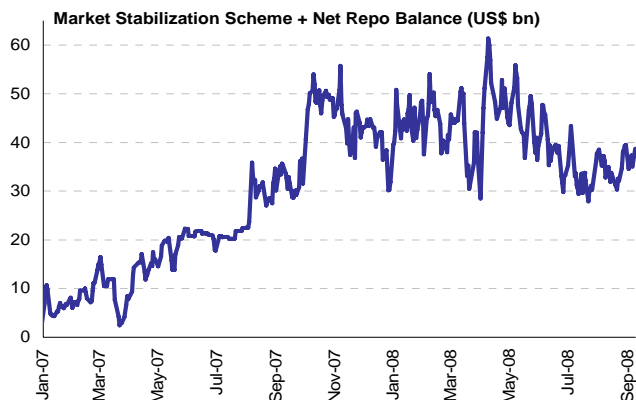
Inflation excluding food and global commodity-linked products (a proxy for core inflation) accelerated to 7% in August (average to date) from 6.8% in July (average). However, it remained stable compared to June (average).



## Liquidity and Capital Flows

Exhibit 13

### Trend in Excess Liquidity Balance

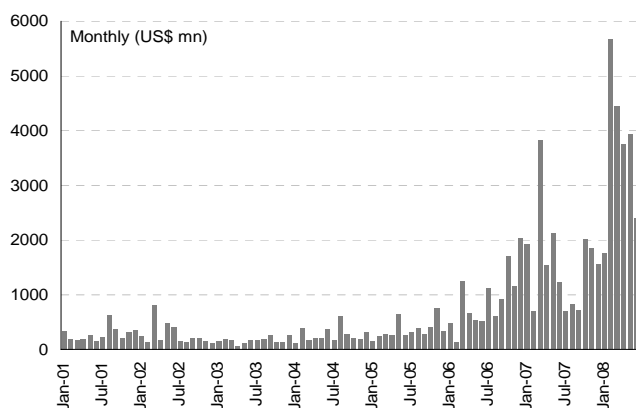


Source: RBI, Bloomberg, Morgan Stanley Research Note: Data till 8 September, 2008 only

Sterilized liquidity (excess liquidity) stock, including reverse repo less repo balances and funds absorbed under the market stabilization scheme, decreased to US\$38.7 billion from US\$39.5 billion as of end August. However, it increased from US\$37.7 billion as of end July.

Exhibit 15

### Foreign Direct Investment Flows

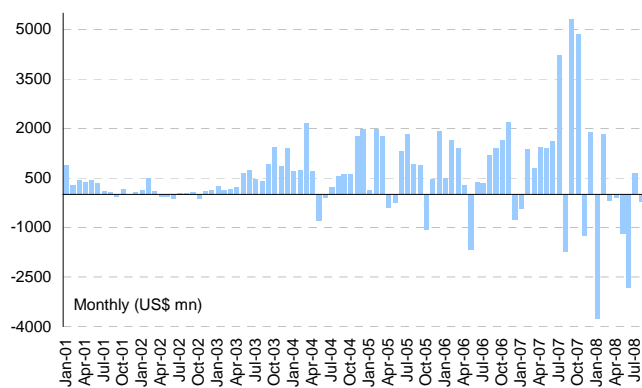


Source: RBI, Morgan Stanley Research

Monthly FDI inflows stood at US\$2.4 billion in June (last data point available) compared with US\$3.9 billion in May and US\$3.7 billion in April.

Exhibit 14

### Portfolio Investment Flows

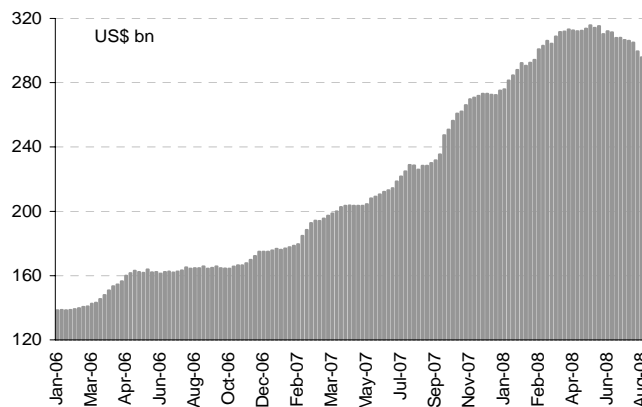


Source: CEIC, Bloomberg, Morgan Stanley Research

Net portfolio flows (equity and debt) decreased to -US\$0.2 billion in August. This compares with +US\$0.6 bn in July and -US\$2.8 bn in June.

Exhibit 16

### Forex Reserves Trend



Source: RBI, Morgan Stanley Research

FX reserves have been declining gradually since the last week of May 2008. The reserves declined by US\$2 billion during the week ended August 29, 2008. On a trailing three-month basis, FX reserves have declined US\$19.3 billion.

## Currency Movement

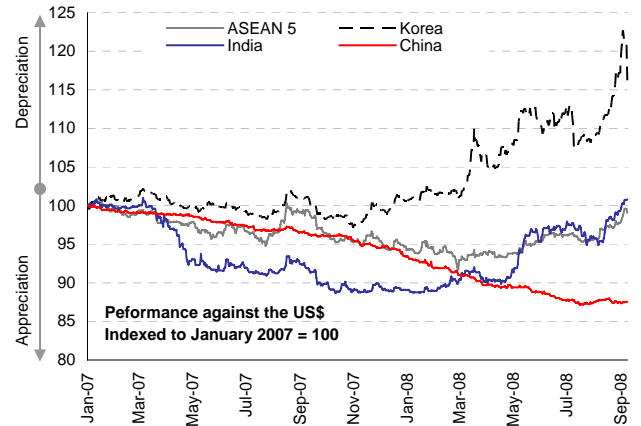
Exhibit 17  
**Indian Rupee Movement vs. USD**



Note: September data is till date; Source: Morgan Stanley Research

The Indian rupee has depreciated 1.6% in September (to date) and 3.7% in August and is currently trading at around 44.8 to the US dollar.

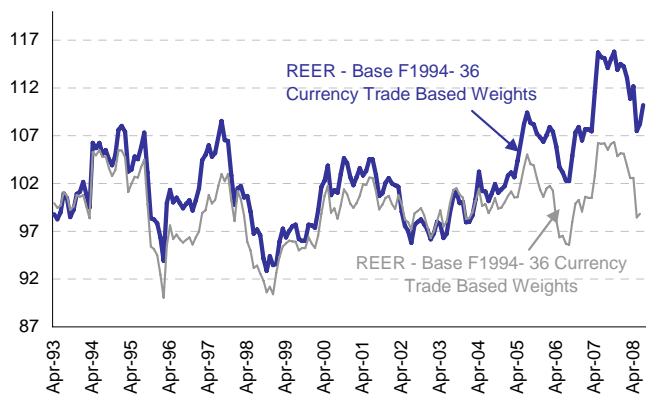
Exhibit 18  
**Performance of Major Asian Currencies vs. USD**



Source: Bloomberg, IMF, Morgan Stanley Research

For the calendar year to date, the Indian rupee has depreciated a cumulative 13.2% against the US dollar compared to the Taiwan dollar (appreciation of 2%), the Korean won (depreciation of 15.5%), the Chinese renminbi (appreciation of 6.2%), and the ASEAN 5 (depreciation of 5.1%).

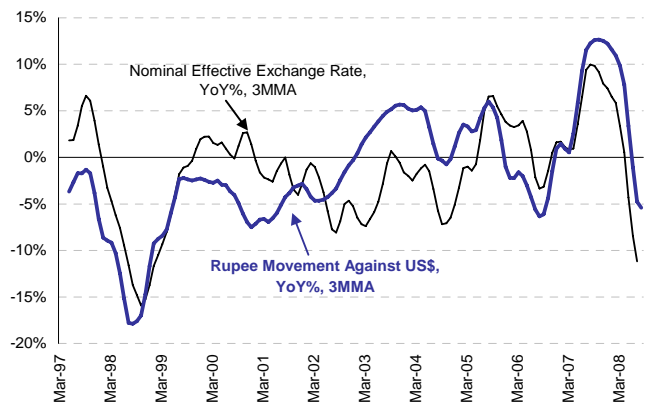
Exhibit 19  
**Rupee: Real Effective Exchange Rate (REER)**



Source: RBI, Morgan Stanley Research

On a REER basis (six-currency trade-weighted exchange rate adjusted for inflation differentials with trade partners), the rupee has moved to 7.3% above the 10-year mean as of the last week of July.

Exhibit 20  
**Rupee: Nominal Effective Exchange Rate (NEER)**



Source: RBI, Morgan Stanley Research

On a trailing 12-month basis, the rupee had depreciated 11% against major trading partners (NEER) as of the last week of July while it had depreciated 5.2% against the US dollar as of August 2008.

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## Monthly Indicators

	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08
<b>Interest Rates</b>														
10-Year Govt Bond	7.9%	7.9%	7.9%	7.9%	7.9%	7.9%	7.6%	7.6%	7.7%	8.1%	8.0%	8.4%	9.2%	9.0%
91 Day T-Bill	5.4%	6.7%	7.0%	7.0%	7.4%	7.5%	7.1%	7.3%	7.3%	7.2%	7.3%	7.9%	9.0%	9.1%
Government Bond Yield Curve	2.5%	1.3%	0.9%	0.9%	0.5%	0.5%	0.5%	0.3%	0.4%	0.9%	0.7%	0.5%	0.2%	0.0%
1 Yr AAA Corporate Bond	8.5%	9.1%	9.1%	8.4%	8.8%	9.2%	8.9%	9.4%	10.2%	8.5%	8.7%	9.8%	10.9%	11.2%
1 Yr Bank Deposit Rate	8.3%	8.0%	8.0%	8.0%	8.0%	8.3%	8.8%	8.8%	8.8%	8.8%	8.8%	9.5%	9.5%	10.0%
<b>Monetary Aggregates</b>														
Forex Reserves (US\$bn)	224.9	228.4	247.3	262.0	273.1	275.1	287.9	300.8	308.7	312.4	314.1	311.3	306.1	294.8
Money Supply, M3 (YoY)	21.6%	20.6%	20.7%	22.1%	23.3%	22.1%	23.1%	22.2%	20.9%	21.2%	22.2%	21.0%	20.2%	20.1%
Money Supply, M1 (YoY)	16.3%	14.3%	14.8%	13.9%	18.7%	16.7%	17.9%	16.8%	17.6%	18.6%	20.3%	18.9%	18.3%	17.9%
Credit Growth (YoY)	23.2%	22.8%	21.9%	22.5%	22.3%	21.4%	22.6%	21.9%	21.6%	23.4%	25.5%	25.9%	25.7%	25.9%
Deposit Growth (YoY)	25.8%	22.9%	23.9%	25.8%	25.0%	23.6%	29.5%	23.7%	22.2%	23.1%	23.1%	20.6%	19.5%	21.6%
Credit Deposit Ratio	69.0%	70.7%	70.7%	70.4%	70.8%	72.8%	70.0%	73.1%	73.6%	73.0%	72.9%	73.6%	72.6%	73.1%
Incremental Credit Deposit Ratio	63.6%	70.5%	65.9%	62.9%	64.6%	67.0%	56.6%	68.5%	71.9%	73.7%	78.9%	88.6%	91.1%	84.5%
<b>Inflation</b>														
WPI YoY	4.7%	4.1%	3.5%	3.1%	3.3%	3.8%	4.5%	5.3%	7.5%	8.0%	8.8%	11.9%	11.9%	12.5%
-- Food (Wt. 30.9%)	8.8%	7.7%	5.7%	4.6%	3.8%	3.7%	4.5%	5.6%	8.1%	7.6%	8.4%	9.9%	9.1%	9.8%
-- Global Commodity (Wt 30.5%)	0.8%	0.3%	0.8%	1.1%	1.9%	3.3%	3.9%	5.9%	11.0%	12.5%	12.9%	20.0%	21.3%	22.0%
-- Non-food Non-global Commodity (Wt. 31.4%)	6.0%	5.9%	6.2%	5.6%	5.8%	5.9%	6.1%	5.3%	4.2%	4.8%	6.3%	7.0%	6.8%	7.0%
CPI (Industrial Workers) YoY	6.5%	7.3%	6.4%	5.5%	5.5%	5.5%	5.5%	5.5%	7.9%	7.8%	7.8%	7.7%	8.3%	-
<b>Foreign Trade</b>														
Trade Balance (US\$bn)	-5.9	-7.3	-4.8	-6.8	-7.6	-5.4	-9.4	-4.2	-6.9	-9.9	-10.8	-9.8	-10.8	-
Exports YoY	18.2%	16.5%	13.4%	45.9%	30.6%	16.0%	20.5%	35.3%	26.6%	31.5%	12.9%	23.5%	31.2%	-
Imports YoY	26.1%	33.6%	0.5%	26.4%	32.8%	18.1%	63.6%	30.5%	35.2%	36.6%	27.1%	25.9%	48.1%	-
Port Traffic YoY	16.4%	11.5%	11.3%	14.7%	8.9%	7.6%	7.1%	15.0%	9.9%	14.7%	7.5%	6.1%	-	-
<b>Growth Indicators</b>														
IIP (YoY)	8.3%	10.9%	7.0%	12.2%	4.9%	8.0%	6.2%	9.5%	3.9%	6.2%	4.1%	5.4%	-	-
-- Manufacturing	8.8%	10.7%	7.4%	13.8%	4.7%	8.6%	6.7%	9.6%	3.9%	6.7%	4.2%	5.9%	-	-
-- Mining	3.2%	14.7%	4.9%	5.1%	6.3%	5.0%	2.9%	7.9%	4.9%	6.0%	5.1%	2.9%	-	-
-- Electricity	7.5%	9.2%	4.5%	4.2%	5.8%	3.8%	3.7%	9.8%	3.7%	1.4%	2.0%	2.6%	-	-
Passenger Cars (YoY)	14.5%	15.7%	8.7%	13.9%	16.0%	6.6%	10.8%	6.3%	14.7%	22.5%	18.0%	11.6%	5.7%	-
Commercial Vehicles (YoY)	2.0%	4.1%	1.9%	13.1%	0.9%	2.9%	1.8%	3.6%	15.1%	2.9%	7.1%	10.3%	3.5%	-
Two-wheelers (YoY)	-7.2%	-1.3%	-11.3%	-1.7%	-0.3%	-4.9%	-7.7%	-8.1%	3.0%	11.7%	4.8%	8.7%	19.0%	-
Cement Dispatches (YoY)	14.5%	18.6%	7.3%	10.9%	4.0%	5.5%	7.6%	14.8%	10.0%	6.7%	4.5%	7.9%	8.2%	-
Steel Production (YoY)	6.6%	8.5%	8.6%	4.9%	3.7%	0.6%	1.1%	4.3%	1.2%	3.9%	5.2%	-	-	-
<b>Government Finances</b>														
Revenue Receipts (YoY)	23.7%	135.5%	-38.2%	38.6%	13.6%	35.6%	33.2%	21.3%	15.4%	64.1%	27.8%	20.1%	15.2%	-
-- Tax Collections	19.9%	18.1%	25.4%	32.6%	20.9%	33.9%	18.4%	33.5%	18.3%	52.2%	27.4%	20.9%	20.3%	-
Revenue Expenditure (YoY)	37.3%	31.3%	-7.3%	36.1%	-3.3%	19.6%	28.0%	13.5%	18.7%	28.5%	17.3%	15.2%	32.7%	-
Total Receipts (YoY)	20.1%	130.6%	23.2%	36.2%	8.7%	34.8%	32.3%	42.5%	15.2%	59.1%	13.3%	19.7%	15.3%	-
Total Expenditure (YoY)	39.2%	26.0%	-9.7%	36.7%	-10.1%	33.3%	26.1%	26.1%	15.4%	27.9%	15.8%	-33.3%	36.6%	-
Revenue Deficit (YoY)	82.5%	-2531.4%	-175.2%	80.1%	-27.8%	73.7%	14.9%	-125.0%	-128.4%	17.4%	11.7%	-5.2%	72.0%	-
Fiscal Deficit (YoY)	96.3%	-710.0%	425.0%	65.3%	-33.6%	40.1%	12.6%	-10.9%	16.4%	18.4%	17.3%	-74.3%	75.6%	-

Source: RBI, Ministry of Commerce, CEIC, CSO, SIAM, CMA, Bloomberg, Ministry of Finance, Morgan Stanley Research

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India Economics

## Macro Forecast Summary

Years Ending March 31	F2003	F2004	F2005	F2006	F2007	F2008	F2009E	F2010E
<b>National Income</b>								
GDP at Factor cost Rs bn	20,483	22,228	23,884	26,128	28,643	31,229	33,452	35,791
GDP (at current mkt prices) Rs bn	24,546	27,546	31,494	35,803	41,458	47,131	56,765	64,262
GDP (US\$bn)	507	600	700	809	916	1,171	1,292	1,373
<b>Growth rates</b>								
Gross domestic product	3.8%	8.5%	7.5%	9.4%	9.6%	9.0%	7.1%	7.0%
Agriculture and Allied activities (incl. mining)	-5.9%	9.3%	0.7%	5.8%	4.0%	4.6%	2.8%	3.1%
Manufacturing, Constn, Electricity	6.9%	7.8%	10.5%	10.6%	11.5%	8.9%	6.3%	6.5%
Services	7.5%	8.5%	9.1%	10.3%	11.1%	10.8%	9.0%	8.5%
<b>Money and Banking</b>								
Money Supply (M3) growth (avg)	12.9%	12.6%	14.3%	15.4%	19.5%	21.5%	18.5%	17.0%
Bank non-food credit (avg y-y increase)	16.3%	16.2%	25.0%	30.8%	31.5%	22.0%	20.0%	20.0%
<b>Interest rates</b>								
91-Day T-Bill Yield (year-end)	5.8%	4.3%	5.2%	6.1%	7.6%	7.1%	9.0%	8.8%
Bank Rate (year-end)	6.3%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
<b>Prices</b>								
Wholesale price index (avg y-y increase)	3.4%	5.4%	6.4%	4.4%	5.4%	4.7%	10.5%	5.5%
Consumer price index (avg y-y increase)	4.0%	3.9%	3.8%	4.4%	6.8%	6.2%	8.6%	7.0%
<b>External sector</b>								
<b>Current account</b>								
Exports (US\$bn)	53.8	66	85	105	128	158	186	223
Imports (US\$bn)	64.5	80	119	157	191	249	311	363
Trade balance (US\$bn)	-10.7	-14	-34	-52	-63	-90	-125	-140
Exports as % of Imports	83.4%	82.9%	71.7%	67.0%	67.0%	63.8%	59.8%	61.4%
Invisibles, net (US\$bn)	17.0	28	31	42	53	73	90	112
Current account balance (US\$bn)	6.3	14.1	(2.5)	(9.9)	(9.8)	(17.4)	(35.2)	(27.9)
Current account Balance as a % of GDP	1.3%	2.3%	(0.4%)	(1.2%)	(1.1%)	(1.5%)	(2.7%)	(2.0%)
<b>Capital account</b>								
Debt creating capital inflows (US\$bn)	-1.8	-2	6	7	22	24	26	36
Foreign investment (US\$bn)	6.0	16	15	21	29	62	30	37
Total capital -net (US\$bn)	10.8	17	28	25	46	108	57	60
Capital inflow as a % of GDP	2.1%	2.8%	4.0%	3.1%	5.0%	9.2%	4.4%	4.3%
<b>Reserves</b>								
Foreign currency reserves (US\$bn)	75.4	112	140	151	199	309	330	361
Foreign currency reserves as no. of months imports	13.2	15.9	14.1	11.5	12.5	14.9	12.7	12.0
<b>Exchange rate</b>								
Average exchange rate (USD/INR)	48.4	45.9	45.0	44.3	45.2	40.3	43.9	46.8
Year end exchange rate (USD/INR)	47.6	45.0	43.7	44.5	44.0	40.4	46.0	47.0
<b>External debt</b>								
External debt (US\$bn)	105.0	112	123	138	170	221	247	272
External debt as a percentage of GDP	20.4%	18.2%	17.1%	17.2%	18.0%	18.9%	20.0%	19.9%
Short term debt as a proportion of total	4.4%	4.0%	6.1%	14.1%	15.5%	20.0%	18.6%	17.4%
Debt service ratio (Payments over currents receipts)	16.4%	16.5%	6.1%	9.9%	4.8%	4.1%	5.1%	4.9%
<b>Public Finance</b>								
Fiscal deficit (Rs bn)								
-----Central government	1451	1233	1258	1464	1426	1437	1646	1992
-----State government	1021	1231	1093	898	1145	1099	1419	1933
-----Consolidated Deficit **	2350	2345	2347	2393	2548	2488	3122	3856
Fiscal deficit (As % of GDP)								
-----Central government	5.9%	4.5%	4.0%	4.1%	3.4%	3.0%	2.9%	3.1%
-----State government	4.2%	4.5%	3.5%	2.5%	2.8%	2.3%	2.5%	3.0%
-----Consolidated Deficit **	9.6%	8.5%	7.5%	6.7%	6.1%	5.3%	5.5%	6.0%

\*\* Individual Central and State deficits may not aggregate to Consolidated Deficit due to adjustments relating to inter-government transfers.

E = Morgan Stanley Research estimates Source: RBI, CSO, Budget Documents, Morgan Stanley Research

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