# Macquarie Equities Research





# Incorporating FRK, the Global FIG Specialist

# **INDIA**

| Savings of | leposit | proportion |
|------------|---------|------------|
|------------|---------|------------|

| Private Banks           | Savings deposit proportion    |
|-------------------------|-------------------------------|
| Axis Bank               | 25%                           |
| HDFC Bank               | 32%                           |
| ICICI Bank              | 30%                           |
| Kotak Bank              | 12%                           |
| PSU banks               |                               |
| BOB                     | 28%                           |
| BOI                     | 26%                           |
| Canara                  | 22%                           |
| PNB                     | 31%                           |
| SBI                     | 38%                           |
| Union                   | 25%                           |
| Source: Company data, M | acquarie Research, March 2011 |

#### Earnings impact for savings rate=5.5%

| Imp  | act   |
|------|---|
| EPS  | BVPS  |
| -16% | -3%   |
| -17% | -3%   |
| -16% | -2%   |
| -3%  | 0%  |
|      |   |
| -21% | -5%   |
| -26% | -5%   |
| -25% | -6%   |
| -26% | -6%   |
| -36% | -4%   |
| -25% | -5%   |
|      | EPS -16% -17% -16% -3% -21% -26% -25% -26% -36% |

Source: Company data, Macquarie Research, March 2011

#### Inside

| Savings rate deregulation? – Be prepare | ed  |
|---|-----|
| for an all-out fight                    | 2   |
| PSU banks impacted the most, HDFC       |     |
| Bank amongst private banks              | 4   |
| Regional experience – Savings rate      |     |
| deregulation hampered stock performan   | се6 |
| Appendix I – Comments of various bank   | ing |
| industry personnel/experts              | 8   |
| Appendix 2 – Valuation and              |     |
| Recommendations                         | 10  |

Suresh Ganapathy, CFA

+91 22 6653 3042 suresh.ganapathy@macquarie.com Mudit Painuly

+91 22 6653 3044 mudit.painuly@macquarie.com

7 March 2011

# India Banks

# Savings rate deregulation? – Be prepared for an all-out fight

## Deregulation to compress margins in the near term

We believe the savings rate deregulation, if it happens, could result in banks' margins coming under severe pressure in the near term as some irrational competition could occur in the market and we could see banks, especially those with poor deposit franchises, trying to woo customers by offering attractive rates. The liquidity situation may not be the key factor determining savings rates in the near term in our view. There could also be some ALM mismatches in the near term due to savings deposits being switched from one bank to other as the banks start competing. Assuming all else remains constant, margins could come down on average by 25-30bps for every 100bps increase in savings rate, by our assumptions.

# High fragmentation, renewed focus of PSU banks on CASA the key culprits

The Indian banking industry is highly fragmented, and with new banking licenses also likely to be offered, we believe there could be increased competition. New entrants and those banks with weak funding franchises, in particular, could resort to desperate measures to attract savings deposits. PSU banks have also been given well-defined CASA targets by the government, which was not the case in the past, and having a high CASA ratio is an important performance metric for the PSU banks' top management. This is evident in the renewed focus of all the PSU banks on CASA over the past two years.

# Regional experience reveals that savings rate deregulation impacted bank market values negatively

A study on deregulation of the savings rate in Hong Kong reveals that deregulation wasn't taken well by the markets, and bank market values declined post announcement of the regulation. Larger banks were impacted more than smaller ones. The conclusion was that the regulated savings rate subsidised bank earnings at the expense of depositors. However interactions with our regional analysts suggest that over the longer term, offering higher interest rates acted as a poor hook to capture customers, and service levels and accessibility were more key in determining the ability to garner savings deposits.

## Large PSU banks impacted the most

Contrary to the popular perception that private banks, especially HDFC Bank, will be impacted the most by savings rate deregulation, it's likely to be the large PSU banks that are impacted the most. Firstly the savings deposit proportion across all banks is not materially different. HDFC Bank's exceptionally high CASA is mainly due to its higher current account balance. Secondly the contribution of NII (Net Interest Income) to overall income and profits for PSU banks is higher than for private banks. Private Banks have a large dependence on non-interest income. Hence the earnings impact on average for the large PSU banks is around 13% for every 100bps increase in savings rate compared to 8% for private banks. Amongst PSU banks, SBI is impacted the most due to its very high savings deposit proportion of 38%, followed by PNB at 31%. Among private banks, the earnings impact for the top 3 – HDFC Bank, ICICI Bank and Axis Bank – is more or less similar.

Please refer to the important disclosures and analyst certification on inside back cover of this document, or on our website www.macquarie.com.au/disclosures.

# Savings rate deregulation? – Be prepared for an all-out fight

# Margins to come down due to competition in the near term

We believe the savings rate deregulation, if it happens, could result in banks' margins coming under severe pressure in the near term as there could be some irrational competition in the market, and we could see banks, especially those with low CASA, trying to woo customers by offering attractive rates. Assuming all else remains constant, margins could come down on average by 25-30bps for every 100bps increase in savings rate by our assumptions.

Fig 1 Margin impact due to increase in savings rate

| •             |     | _   |      |                       |                        |
|---------------|-----|-----|------|-----------------------|------------------------|
| Private Banks | CA  | SA  | CASA | NIM Pressure: Case- I | NIM Pressure - Case II |
| Axis Bank     | 17% | 25% | 42%  | 0.25%                 | 0.50%                  |
| HDFC Bank     | 19% | 32% | 51%  | 0.32%                 | 0.64%                  |
| ICICI Bank    | 15% | 30% | 44%  | 0.30%                 | 0.59%                  |
| Kotak Bank    | 16% | 12% | 28%  | 0.12%                 | 0.24%                  |
| PSU banks     |     |     |      |                       |                        |
| BOB           | 7%  | 28% | 35%  | 0.28%                 | 0.56%                  |
| BOI           | 7%  | 26% | 33%  | 0.26%                 | 0.52%                  |
| Canara        | 8%  | 22% | 31%  | 0.22%                 | 0.44%                  |
| PNB           | 8%  | 31% | 39%  | 0.31%                 | 0.62%                  |
| SBI           | 10% | 38% | 48%  | 0.38%                 | 0.77%                  |
| Union         | 8%  | 25% | 33%  | 0.25%                 | 0.50%                  |
|               |     |     |      |                       |                        |

Source: Company data, Macquarie Research, March 2011

Note: Case I assumes savings rate at 4.5% and case – II assumes savings rate at 5.5%. Current savings rate is regulated and is fixed at 3.5%. Data is as of 3QFY11.

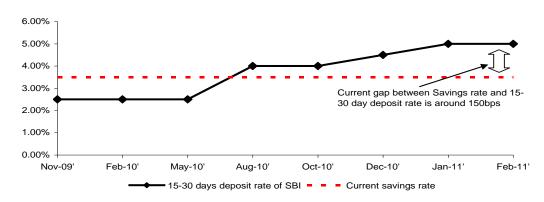
Some of the reasons why we believe, in the near term, that savings rate deregulation could push up interest rates are as follows:

- ⇒ The Indian banking system is very fragmented and we believe deregulation could result in banks, especially those with weaker deposit franchises, trying to jack up rates
- ⇒ With more banking licenses likely to be awarded, the new entrants could be desperate and could resort to irrational behaviour in the near term
- ⇒ Over the past few years PSU banks have become aggressive with respect to their CASA mobilisation. They have been given explicit targets by the Government, unlike 2-3 years ago. This is also reflected in their rapid scale-up of liabilities franchises over the past few years.
- ⇒ The CASA ratio is also an important performance metric for the PSU banks' top management.
- ⇒ Though corporate deposits with less than a 30day maturity are available at 4-5%, we don't believe that a bank can replace its entire savings account proportion with corporate deposits. Moreover, it would further result in significant ALM mismatches as savings accounts are sticky and banks can quite often prove the longer term nature of such liabilities.
- Though liquidity conditions would eventually determine rates at the shorter end of the curve, we believe there could be a tendency by banks in the near term to keep rates at irrational levels in order to attract savings deposits even if there is plenty of liquidity. Acquisition of savings deposits by offering higher rates could be perceived as a good customer acquisition strategy that banks can resort to so that they can eventually cross-sell other products.

# Free market pricing could result in savings rate going up by 150bps

In an ideal scenario assuming there is no irrational competition the savings rate should mirror short term rates i.e. rates at the lower end of the yield curve. If we take SBI's 15-30 day deposit rate as the reference point for free market pricing of savings deposits, then interest on savings deposits is currently around 150bps lower than SBI's 15-30 day deposit rate of 5%.

Fig 2 Savings rate vs. 15-30 day deposit rate of SBI

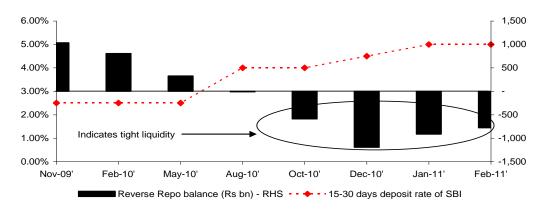


Source: Company data, Macquarie Research, March 2011

## Longer term profitability would not be impacted much in our view

Over the longer term, we believe profitability is unlikely to be impacted structurally for banks as we believe the deregulation will result in more product innovation and would also enable banks to price their savings products appropriately. Service levels and accessibility would be other key factors that we expect would eventually determine banks' ability to attract savings deposits. Higher rates alone cannot be the hook to attract customers as savings accounts are mainly transactional. Banks could also eventually fix hidden charges to protect their margins. Eventually, as discussed above, the savings rate would be a function of liquidity in the market and free market pricing would then price these deposits in accordance with the liquidity situation prevailing. For example, if we take 15-30 deposits as the closest proxy to free market pricing of the savings deposit rate, we see that the rates were exceptionally low when liquidity was abundant and the current tight liquidity has resulted in a sharp 250bps upward movement in this bucket. The chart below reflects the liquidity situation (bank borrowings from RBI) vs. SBI's 15-30 day deposit rate observed over the period. However as discussed above, in the interim there could be an upward bias on rates irrespective of the liquidity dynamics.

Fig 3 SBI 15-30 day deposit rate vs. liquidity conditions



Source: Company data, Macquarie Research, March 2011

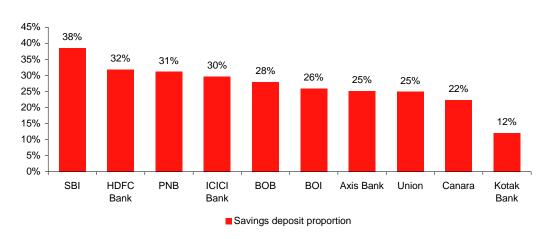
Note: The reverse repo balance indicates net balance of banks with RBI. A negative balance indicates banks are borrowing from RBI and reflects a tight liquidity situation

# PSU banks impacted the most, HDFC Bank amongst private banks

# PSU banks affected more than private sector banks

Contrary to the popular perception that private banks, especially HDFC Bank, will be impacted the most by savings rate deregulation, we believe it's actually the large PSU banks that would be impacted the most. Firstly, the savings deposit proportion among banks is not materially different. HDFC Bank's exceptionally high CASA is mainly due to its higher current account balance. Secondly, the contribution of NII (Net Interest Income) to overall income and profits for PSU banks is higher than for private banks. Private banks have a large dependence on non-interest income. Hence the earnings impact on average for the large PSU banks is higher than private sector banks due to margin compression arising out of deregulation of the savings rate.

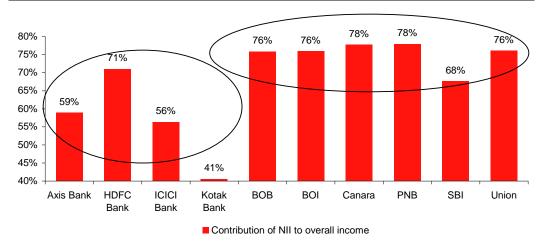
Fig 4 Savings deposit proportion of various banks



Source: Company data, Macquarie Research, March 2011

Note: Data is as of 3QFY11

Fig 5 PSU banks have higher contribution from NII to overall income



Source: Company data, Macquarie Research, March 2011

# Earnings impact: PSUs around 13% on average and private banks around 8% for every 100bps increase

For PSU banks, the earnings impact is around 13% for every 100bps increase in savings rate compared to 8% for private banks. Amongst PSU banks, SBI is impacted the most due to its very high savings deposit proportion of 38%, followed by PNB. Among private banks, the earnings impact for the top 3 – HDFC Bank, ICICI Bank and Axis Bank – is more or less similar.

Fig 6 Impact on banks due to higher savings rate

| FY12E                      | Case- I: 4.5% Savi          | Case- I: 4.5% Savings rate |      |      |  |  |
|----------------------------|-----------------------------|----------------------------|------|------|--|--|
| Private Banks              | EPS                         | BVPS                       | EPS  | BVPS |  |  |
| Axis Bank                  | -8%                         | -1%                        | -16% | -3%  |  |  |
| HDFC Bank                  | -9%                         | -2%                        | -17% | -3%  |  |  |
| ICICI Bank                 | -8%                         | -1%                        | -16% | -2%  |  |  |
| Kotak Bank                 | -1%                         | 0%                         | -3%  | 0%   |  |  |
| PSU banks                  |                             |                            |      |      |  |  |
| BOB                        | -11%                        | -2%                        | -21% | -5%  |  |  |
| BOI                        | -13%                        | -3%                        | -26% | -5%  |  |  |
| Canara                     | -13%                        | -3%                        | -25% | -6%  |  |  |
| PNB                        | -13%                        | -3%                        | -26% | -6%  |  |  |
| SBI                        | -18%                        | -2%                        | -36% | -4%  |  |  |
| Union                      | -13%                        | -3%                        | -25% | -5%  |  |  |
| Source: Company data, Maco | quarie Research, March 2011 |                            |      |      |  |  |

# Regional experience – Savings rate deregulation hampered stock performance

# HK savings rate deregulation study suggests bank stocks reacted negatively

#### Background - Savings rate deregulation happened in two stages

The following table provides the key event dates associated with the deregulation of deposit interest rate ceilings in Hong Kong which span a six-year period. It can be described as a two-stage process that is neatly separated by the 1997 takeover of Hong Kong by China. Stage one of the deregulation occurred between 1994 and 1995 when Hong Kong was still a British territory. The second stage took place between 1998 and 2000 after the sovereignty of Hong Kong was returned to China.

#### Stage one - Partial deregulation

During the first stage of deregulation, the HKMA deregulated time deposits of greater than 7 days maturity but didn't touch demand and savings deposits and time deposits with less than 7 days' maturity.

### Stage two - complete deregulation

On May 30, 2000, the HKMA announced the deregulation of the remaining time deposits with a maturity of less than 7 days. More significantly, it also announced that the interest rate caps on demand and savings deposits would be removed in July 2001. Successful implementation of these two phases of interest rate deregulation completely abolished the 36-year-old IRRs (Interest rate rules). This was a significant announcement because, as of 1999, total HK\$ demand and savings deposits accounted for 32% of total HK\$ deposits held by licensed banks.

Back in 1994 when time deposits were partially deregulated, HK\$ time deposits subject to the IRRs constituted only 4% of HK\$ deposits. Thus, compared to the deregulation of time deposits, the deregulation of demand and savings deposit rates represented a much more important economic event.

Fig 7 Savings rate deregulation in HK: Event descriptions

Source: Journal of banking and finance, Macquarie Research, March 2011

| Date                     | Stage one of the IRRs deregulation   |
|--------------------------|--|
| 28/02/1994               | The Consumer Council released the report "An evaluation of the banking policies and practices in Hong Kong"  |
| 04/07/1994               | The HKMA released the "Study on the Consumer Council Report: Are Hong Kong depositors fairly treated?"   |
| 26/07/1994               | The Hong Kong government officially adopted HKMA's study in response to Consumer Council's Report on the IRRs  |
| 26/08/1994               | The HKAB announced a program for the removal of time deposits from the IRRs starting from October 1, 1994  |
| 14/03/1995               | The HKMA postponed the third phase of deregulation of time deposits  |
| 26/09/1995               | In announcing the removal of interest rate cap on time deposits fixed for 7 days, the government decided that there should be no further   |
|                          | move below 7 days and that the current program of deregulation should come to an end   |
| Date                     | Stage two of the IRRs deregulation   |
| 18/12/1998               | The HKMA released the commissioned study, "Hong Kong banking into the new millennium," which recommended the phased deregulation of the remaining IRRs   |
| 14/07/1999<br>30/05/2000 | The HKMA issued a policy initiative to adopt a two-phase approach to deregulate the remaining IRRs The HKMA announced the deregulation of the remaining IRRs on time deposits with maturity of less than 7 days, savings deposits, and |
|                          | demand deposits  |

### Striking similarity of HK market with Indian market in terms of competition

While there were 156 licensed banks in Hong Kong at the end of 1999, 97 of them were single-office, wholesale financial institutions that did not engage in retail deposit taking. Almost all of these wholesale institutions were branches or representative offices of foreign banks that established a presence in this Asian financial centre. Of the remaining 59 multi-branch banks, 46 were wholly owned subsidiaries of foreign financial institutions. This left only 13 locally incorporated commercial banks whose revenues derived largely from their Hong Kong operations. All of the 13 Hong Kong banks were publicly held and their common stocks were traded on the stock exchange. These 13 listed banks, including some of the largest institutions in Hong Kong, together accounted for 48% of all deposits held by licensed banks in 1999.

This clearly shows that the HK market was as fragmented as the Indian market, which also has around close to 40+ domestic banks and 60+ foreign banks (with their branch offices).

# Study done by Simon Kwan revealed negative impact on bank market values post deregulation

The study done by Mr. Kwan from the Federal Bank of San Francisco revealed that on average the total abnormal return (of stock prices of listed banks) due to interest rate deregulation was around negative 4%. There is some evidence that large banks and banks with high deposit-to-asset ratios suffered a bigger drop in value, suggesting that these banks enjoyed a bigger subsidy under the IRRs. The key conclusions in this study are summarised below

- ⇒ In the first stage, though only a small fraction of the total deposit base was freed from the IRRs (interest rate rules), all the evidence suggests that banks earned rents under the IRRs and news about potential relaxation of the rules lowered bank values.
- ⇒ After the sovereignty of Hong Kong was returned to China, a series of events led the new Hong Kong government to abolish the 36-year-old IRRs completely. Compared to the first stage, these were more significant economic events as the IRRs on the more important demand and savings deposits would be removed. On average, bank stocks were found to suffer a total AR (abnormal return) of around negative 4%. The significant decline in bank market values due to the interest rate deregulation confirms that the IRRs subsidized bank earnings at the expense of depositors. Removal of deposit rate restrictions lowered bank profits and hence bank shareholders' wealth.
- ⇒ Finally, there is some evidence that the effects of the interest rates deregulation on bank stock returns were proportional to bank size and the deposit-to-asset ratio. The results suggest that large banks and banks with high deposit-to-asset ratios earned a larger subsidy under the IRRs than small banks and banks with relatively less deposits.

Fig 8 Abnormal returns for sample of 13 publicly traded HK commercial banks

| Events  | Abnormal returns (AR) |        |  |  |
|---|-----------------------|--------|--|--|
|   | Mean                  | Median |  |  |
| (1) 18-12-1998 HKMA released commissioned study on HK banking | -2.0%                 | -2.1%  |  |  |
| (2) 14-07-1999: HKMA responded to commissioned study          | 1.3%                  | 1.1%   |  |  |
| (3) 30-05-2000: HKMA announced deregulation of remaining IRRs | -3.3%                 | -3.6%  |  |  |
| Total   | -4.0%                 | -3.6%  |  |  |

Source: Journal of Banking and Finance, Macquarie Research, March 2011

Note: Abnormal return is a term used to describe the returns generated by a given security or portfolio over a period of time that is different from the expected rate of return. The expected rate of return is the estimated return based on an asset pricing model, using a long run historical average or multiple valuation

# Experience in other markets – US and UK

The deregulation of deposit interest rates in the US has been studied extensively in banking literature. For example, Dann and James (1982) found that stockholder-owned savings and loan associations (S&Ls) experienced statistically significant declines in equity market values at the announcement of the removal of rate ceilings on certain consumer certificate accounts and the introduction of short-term variable rate money market certificates, suggesting that S&Ls had earned economic rents from interest rate restrictions.

As far as the UK is concerned, our UK colleague Edward Firth indicates that in broad terms current accounts do not compete on interest rates. Banks have tried offering higher rates but generally it proves to be a poor hook with which to attract customers. Service quality, availability of overdraft and fee charges are the key drivers in this market, with customers generally only moving when their existing bank messes something up rather than when they are attracted by better rates. This dynamic changed a little during the internet boom, but most customers either didn't move or have returned to one of the high street providers.

# Appendix I – Comments of various banking industry personnel/experts

In this section we present below comments from various experts from the banking industry.

### Dr D Subbarao, RBI Governor

All interest rates except those on export credit, NRI deposits and savings bank (SB) accounts have been deregulated. There are several pros and cons of the deregulation and these needs to be discussed at length in order to arrive at a consensus. SB accounts comprise almost 25% of banks' total liabilities and this is still regulated and has remained constant at 3.5% for the last seven years since March 2003. Despite the change in monetary policy rates, this 25% remains unchanged. It is therefore difficult to assess the extent of impact of monetary policy changes. While deregulation would give more flexibility to banks, lead to product innovation and allow banks to have access to a larger base of savings thereby enabling them to handle asset liability issues, it might, however, discourage banks to open accounts with low balance thereby working against the principle of financial inclusion and a possible decline in interest rates might also have an adverse impact on the vulnerable sections of society. (Source: Hindubusiness Line)

# Mr Aditya Puri, MD, HDFC Bank

Excerpts from interview with a news channel (Source: Moneycontrol)

# Q: Very soon perhaps we are going to have the savings rate deregulated. How much will it hurt HDFC Bank? How much do you think your margins can be affected, even if temporarily?

A: If the savings rate is freed in a normal environment, the rate of interest on savings will go down. After the initial flurry of everybody trying to take market share, the rate will go down because at 3.5% it becomes an overnight deposit with a 2.5% servicing cost. One can get a 30-day deposit at 4%.

### Q: If that was the case, why is the entire banking industry lobbying against it?

A: Banking industry is not lobbying against it. To break even on a savings account, one needs a balance in that account of somewhere between Rs.7, 500-10,000. Add a 3% interest rate, you make it to 5%—to break even you will need Rs.12, 500. What will happen is that the charges that they charge for cheques, the charges that they charge in terms of giving you free ATM (automatic teller machine), the balance requirements, transfers etc will all go up. Number two, I have an option saying that I will just take a 30-day fixed deposit rather than the savings account. There is no free lunch for the banks but there is no free lunch for you as well as the market and forces have to be realistic. On behalf of the banking industry, I would like to say that we are always for a fair deal for the customer. We are not against savings rate deregulation. Deregulation has to be under normal circumstances. If you do it under tight liquidity, that's what we are all saying is an issue. We want a clear understanding that if you deregulate then you will have to deregulate charges as well.

# Q: You would say don't do a savings rate deregulation unless the inter-bank rate is operating at the reverse repo window?

A: That's one way of putting it. I am just saying don't do it in an atmosphere of scarcity. If it is done in an atmosphere of scarcity, it could always be Rs400bn. A 1% net demand and time liabilities shortage could always be there, that is steady state.

#### Q: But you won't get more balances in the savings account.

A: What you will also do is, you will make saving accounts volatile for the banks, among the system and you will completely stop any term lending by banks.

#### Q: Term lending would stop?

A: Naturally. If I don't want an asset liability mismatch and I can't prove that savings have got stability with me, then it will have to be classified in the overnight bucket.

# Mr O P Bhatt, Chairman, SBI

Within the savings bank product, there could be a range of sub-products offering different facilities to the customer depending upon what kind of business they have with the bank. So, while it would be very good for the customer, for the bank it would be challenging to retain their share of CASA. (Source: Moneycontrol)

# Ms Shikha Sharma, MD and CEO, Axis Bank

Deregulation is unlikely to impact margins in a big way. It will give greater flexibility in product design. The savings account is the operating account for the customer and to the extent that the customer is interest sensitive on what he does with the deposits, the seven day deposit allows him to reflect that any way today. The seven day deposit is a deregulated rate. (Source: Moneycontrol)

## Mr Rana Kapoor, MD, Yes Bank (YES IN, CMP Rs273, Unrated)

Deregulating savings rates will benefit the consumer most of all. After the recent change in moving towards a daily interest rate computation, the consumer is effectively gaining 1%. From an average cost of 2.5% on a savings account, the banks are now paying 3.5% and its sticky, stable money and long-term money. Banks should be permitted to actually free up these rates and offer more market based savings rate. (Source: Moneycontrol)

# Appendix 2 – Valuation and Recommendations

Fig 9 Recommendations and TP

|                      | Ticker     | Target     | Price I | Upside/Downside | Reco         |
|----------------------|------------|------------|---------|-----------------|--------------|
| Axis Bank            | AXSB IN    | Restricted | 1,285   | NA              | Restricted   |
| Bank of Baroda       | BOB IN     | 1,100      | 892     | 23%             | Outperform   |
| Bank of India        | BOI IN     | 530        | 463     | 14%             | Outperform   |
| Canara Bank          | CBK IN     | 650        | 621     | 5%              | Neutral      |
| HDFC                 | HDFC IN    | 775        | 651     | 19%             | Outperform   |
| HDFC Bank            | HDFCB IN   | 2,570      | 2,139   | 20%             | Outperform   |
| ICICI Bank           | ICICIBC IN | 1,400      | 1,026   | 36%             | Outperform   |
| IDBI                 | IDBI IN    | 120        | 137     | -13%            | Underperform |
| IDFC                 | IDFC IN    | 170        | 154     | 11%             | Outperform   |
| Kotak Mahindra Bank  | KMB IN     | 515        | 414     | 24%             | Outperform   |
| PFC                  | POWF IN    | 362        | 255     | 42%             | Outperform   |
| Punjab National Bank | PNB IN     | 1,300      | 1,094   | 19%             | Outperform   |
| Reliance Capital     | RCFT IN    | 600        | 480     | 25%             | Outperform   |
| REC                  | RECL IN    | 309        | 250     | 24%             | Outperform   |
| State Bank of India  | SBIN IN    | 2,750      | 2,705   | 2%              | Neutral      |
| Union Bank of India  | UNBK IN    | 405        | 325     | 25%             | Outperform   |

Source: Company data, Bloomberg, Macquarie Research, March 2011 Note: Prices as of  $3^{\rm rd}$  March 2011

Fig 10 Valuation matrix of our coverage universe

|                      | EPS growth         |                    |             | P/E        |        |       | P/BV |       |       | RoE (%) |       |       |
|----------------------|--------------------|--------------------|-------------|------------|--------|-------|------|-------|-------|---------|-------|-------|
|                      | FY10               | FY11E              | FY12E       | FY10       | FY11E  | FY12E | FY10 | FY11E | FY12E | FY10    | FY11E | FY12E |
| Private banks        |                    |                    |             |            |        |       |      |       |       |         |       |       |
| Axis Bank            | 30.0               | 25.3               | 20.0        | 19.7       | 15.7   | 13.1  | 3.3  | 2.8   | 2.4   | 19.2    | 19.2  | 19.8  |
| HDFC Bank            | 28.7               | 25.6               | 30.3        | 31.6       | 25.2   | 19.3  | 4.5  | 4.0   | 3.4   | 16.1    | 16.9  | 18.9  |
| ICICI Bank           | 7.1                | 31.9               | 28.3        | 28.4       | 21.5   | 16.8  | 2.2  | 2.1   | 1.9   | 8.0     | 9.9   | 11.8  |
| Kotak Bank           | 99.4               | 10.3               | 18.7        | 22.3       | 20.2   | 17.1  | 3.7  | 2.8   | 2.4   | 18.3    | 16.0  | 15.7  |
| Avg Private banks    | 23.8               | 27.3               | 27.1        | 27.4       | 21.5   | 16.9  | 3.3  | 2.9   | 2.5   | 13.5    | 14.5  | 15.4  |
| PSU banks            |                    |                    |             |            |        |       |      |       |       |         |       |       |
| BOB                  | 37.3               | 32.6               | 13.9        | 10.7       | 8.0    | 7.1   | 2.4  | 1.9   | 1.6   | 21.9    | 24.3  | 22.8  |
| Bank of India        | (44.4)             | 56.0               | 32.0        | 14.6       | 9.3    | 7.1   | 1.9  | 1.7   | 1.4   | 12.1    | 17.0  | 19.3  |
| Canara               | `45.8 <sup>´</sup> | 36.1               | 8.0         | 8.4        | 6.2    | 5.7   | 2.0  | 1.6   | 1.3   | 22.5    | 24.9  | 21.9  |
| IDBI Bank            | 20.1               | (13.3)             | 22.1        | 9.6        | 9.0    | 9.1   | 1.2  | 1.1   | 1.0   | 13.2    | 14.4  | 14.2  |
| PNB                  | 26.3               | `10.5 <sup>´</sup> | 21.5        | 8.8        | 8.0    | 6.6   | 2.1  | 1.7   | 1.4   | 24.1    | 22.1  | 22.3  |
| SBI                  | 6.8                | 5.7                | 20.7        | 14.6       | 13.8   | 11.4  | 2.1  | 1.9   | 1.6   | 15.6    | 14.6  | 15.0  |
| Union Bank           | 20.2               | 2.1                | 29.3        | 7.9        | 7.7    | 6.0   | 1.9  | 1.6   | 1.3   | 21.7    | 18.7  | 20.3  |
| Avg PSU banks        | 12.4               | 14.6               | 20.4        | 12.6       | 11.1   | 9.3   | 2.1  | 1.8   | 1.5   | 17.7    | 17.6  | 17.7  |
| Non banks            |                    |                    |             |            |        |       |      |       |       |         |       |       |
| HDFC Ltd             | 22.9               | 14.0               | 18.5        | 33.0       | 28.9   | 24.4  | 6.1  | 5.5   | 4.8   | 19.9    | 20.0  | 21.0  |
| IDFC Ltd             | 41.4               | 15.2               | 11.0        | 18.8       | 16.3   | 14.7  | 2.8  | 2.1   | 1.8   | 16.1    | 14.7  | 13.3  |
| PFC                  | 20.2               | 12.2               | 13.5        | 12.4       | 11.1   | 9.8   | 2.2  | 1.9   | 1.5   | 19.0    | 18.6  | 18.3  |
| REC                  | 46.2               | 17.4               | 25.5        | 11.5       | 9.8    | 7.8   | 2.2  | 1.9   | 1.6   | 23.2    | 21.0  | 22.5  |
| Reliance Capital     | (57.2)             | 28.1               | 24.5        | 27.2       | 21.2   | 17.0  | 1.5  | 1.5   | 1.4   | 5.7     | 7.1   | 8.3   |
| Average non banks    | 24.4               | 16.2               | 18.7        | 18.1       | 15.5   | 13.1  | 2.9  | 2.5   | 2.1   | 18.6    | 17.7  | 18.1  |
| Source: Company data | a. Bloomb          | era. Macai         | uarie Resea | arch March | h 2011 |       |      |       |       |         |       |       |

Source: Company data, Bloomberg, Macquarie Research, March 2011 Note: Valuations priced as of  $3^{\rm rd}$  March 2011

7 March 2011 10

#### Important disclosures:

#### Recommendation definitions

#### Macquarie - Australia/New Zealand

Outperform – return >3% in excess of benchmark return Neutral – return within 3% of benchmark return Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

#### Macquarie - Asia/Europe

Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%

#### **Macquarie First South - South Africa**

Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%

#### Macquarie - Canada

Outperform – return >5% in excess of benchmark return Neutral – return within 5% of benchmark return Underperform – return >5% below benchmark return

#### Macquarie - USA

Outperform (Buy) – return >5% in excess of Russell 3000 index return

Neutral (Hold) – return within 5% of Russell 3000 index

Underperform (Sell)- return >5% below Russell 3000 index return

#### Volatility index definition\*

This is calculated from the volatility of historical price movements.

Very high-highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

**High** – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

**Medium** – stock should be expected to move up or down at least 30–40% in a year.

**Low-medium** – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.

\* Applicable to Australian/NZ/Canada stocks only

Recommendations – 12 months

Note: Quant recommendations may differ from

**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

#### Financial definitions

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa\*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit /average total assets

ROE = adjusted net profit / average shareholders funds Gross cashflow = adjusted net profit + depreciation \*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

#### Recommendation proportions - For quarter ending 31 December 2010

|              | AU/NZ  | Asia   | RSA    | USA    | CA     | EUR    |   |
|--------------|--------|--------|--------|--------|--------|--------|---|
| Outperform   | 46.38% | 62.62% | 52.17% | 44.99% | 67.57% | 50.90% | (for US coverage by MCUSA, 13.59% of stocks covered are investment banking clients) |
| Neutral      | 37.68% | 18.58% | 34.78% | 50.61% | 28.83% | 35.48% | (for US coverage by MCUSA, 15.22% of stocks covered are investment banking clients) |
| Underperform | 15.94% | 18.80% | 13.04% | 4.40%  | 3.60%  | 13.62% | (for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients)  |

#### **Company Specific Disclosures:**

Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/disclosures.

#### **Analyst Certification:**

The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research receives compensation based on overall revenues of Macquarie Group Ltd ABN 94 122 169 279 (AFSL No. 318062) (MGL) and its related entities (the Macquarie Group) and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

#### **General Disclaimers:**

Macquarie Securities (Australia) Ltd; Macquarie Capital (Europe) Ltd; Macquarie Capital Markets Canada Ltd; Macquarie Capital Markets North America Ltd; Macquarie Capital (USA) Inc; Macquarie Capital Securities Ltd and its Taiwan branch; Macquarie Capital Securities (Singapore) Pte Ltd; Macquarie Securities (NZ) Ltd; Macquarie First South Securities (Pty) Limited; Macquarie Capital Securities (India) Pvt Ltd; Macquarie Capital Securities (Malaysia) Sdn Bhd; Macquarie Securities Korea Limited and Macquarie Securities (Thailand) Ltd are not authorized deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia), and their obligations do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542 (MBL) or MGL. MBL does not guarantee or otherwise provide assurance in respect of the obligations of any of the above mentioned entities. MGL provides a guarantee to the Monetary Authority of Singapore in respect of the obligations and liabilities of Macquarie Capital Securities (Singapore) Pte Ltd for up to SGD 35 million. This research has been prepared for the general use of the wholesale clients of the Macquarie Group and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this research in any way. If you received it in error, please tell us immediately by return e-mail and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. MGL has established and implemented a conflicts policy at group level (which may be revised and updated from time to time) (the "Conflicts Policy") pursuant to regulatory requirements (including the FSA Rules) which sets out how we must seek to identify and manage all material conflicts of interest. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction. In preparing this research, we did not take into account your investment objectives, financial situation or particular needs. Before making an investment decision on the basis of this research, you need to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of your particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. This research is based on information obtained from sources believed to be reliable but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in it. Opinions expressed are subject to change without notice. No member of the Macquarie Group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research. Clients should contact analysts at, and execute transactions through, a Macquarie Group entity in their home jurisdiction unless governing law permits otherwise.

## **Country-Specific Disclaimers:**

Australia: İn Australia, research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947), a participating organisation of the Australian Securities Exchange. New Zealand: In New Zealand, research is issued and distributed by Macquarie Securities (NZ) Ltd, a NZX Firm. Canada: In Canada, research is prepared, approved and distributed by Macquarie Capital Markets Canada Ltd, a participating organisation of the Toronto Stock Exchange, TSX Venture Exchange & Montréal Exchange. Macquarie Capital Markets North America Ltd., which is a registered broker-dealer and member of FINRA, accepts responsibility for the contents of reports issued by Macquarie Capital Markets Canada Ltd in the United States and sent to US persons. Any person wishing to effect transactions in the securities described in the reports issued by Macquarie Capital Markets Canada Ltd is should do so with Macquarie Capital Markets North America Ltd. The Research Distribution Policy of Macquarie Capital Markets Canada Ltd is to allow all clients that are entitled to have equal access to our research. United Kingdom: In the United Kingdom, research is issued and distributed by Macquarie Capital (Europe) Ltd, which is authorised and regulated by the Financial Services Authority (No. 193905). Germany: In Germany, research is issued and distributed by Macquarie Capital (Europe) Ltd, Niederlassung Deutschland, which is authorised and regulated in the United Kingdom by the Financial Services Authority (No. 193905). Hong Kong: In Hong Kong, research is issued and distributed by Macquarie Capital Securities Ltd, which is licensed and regulated by the Securities and Futures Commission. Japan: In

Japan, research is issued and distributed by Macquarie Capital Securities (Japan) Limited, a member of the Tokyo Stock Exchange, Inc. and Osaka Securities Exchange Co. Ltd (Financial Instruments Firm, Kanto Financial Bureau (kin-sho) No. 231, a member of Japan Securities Dealers Association and Financial Futures Association of Japan). India: In India, research is issued and distributed by Macquarie Capital Securities (India) Pvt Ltd. Level 3, Mafatlal Centre, Nariman Point, Mumbai 400029, INDIA, which is a SEBI registered Stock Broker having membership with National Stock Exchange of India Limited (INB231246738) and Bombay Stock Exchange Limited (INB011246734). Malaysia: In Malaysia, research is issued and distributed by Macquarie Capital Securities (Malaysia) Sdn. Bhd. (Company registration number: 463469-W) which is a Participating Organisation of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission. Taiwan: Information on securities/instruments that are traded in Taiwan is distributed by Macquarie Capital Securities Ltd. Taiwan Branch, which is licensed and regulated by the Financial Supervisory Commission. No portion of the report may be reproduced or quoted by the press or any other person without authorisation from Macquarie. Nothing in this research shall be construed as a solicitation to buy or sell any security or product. Thailand: In Thailand, research is issued and distributed by Macquarie Securities (Thailand) Ltd, a licensed securities company that is authorized by the Ministry of Finance, regulated by the Securities and Exchange Commission of Thailand and is an exchange member no. 28 of the Stock Exchange of Thailand. The Thai Institute of Directors Association has disclosed the Corporate Governance Report of Thai Listed Companies made pursuant to the policy of the Securities and Exchange Commission of Thailand. Macquarie Securities (Thailand) Ltd does not endorse the result of the Corporate Governance Report of Thai Listed Companies but this Report can be accessed at: <a href="http://www.thai-iod.com/en/publications.asp?type=4">http://www.thai-iod.com/en/publications.asp?type=4</a>. South Korea: In South Korea, unless otherwise stated, research is prepared, issued and distributed by Macquarie Securities Korea Limited, which is regulated by the Financial Supervisory Services. Information on analysts in MSKL is disclosed at http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03053&pageDiv=02. South Africa: In South Africa, research is issued and distributed by Macquarie First South Securities (Pty) Limited, a member of the JSE Limited. Singapore: In Singapore, research is issued and distributed by Macquarie Capital Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services license holder under the Securities and Futures Act to deal in securities and provide custodial services in Singapore. Pursuant to the Financial Advisers (Amendment) Regulations 2005, Macquarie Capital Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. All Singapore-based recipients of research produced by Macquarie Capital (Europe) Limited, Macquarie Capital Markets Canada Ltd, Macquarie First South Securities (Pty) Limited and Macquarie Capital (USA) Inc. represent and warrant that they are institutional investors as defined in the Securities and Futures Act. United States: In the United States, research is issued and distributed by Macquarie Capital (USA) Inc., which is a registered broker-dealer and member of FINRA. Macquarie Capital (USA) Inc, accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in the United States by Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc.'s affiliate's analysts are not registered as research analysts with FINRA, may not be associated persons of Macquarie Capital (USA) Inc., and therefore may not be subject to FINRA rule restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account. Any persons receiving this report directly from Macquarie Capital (USA) Inc. and wishing to effect a transaction in any security described herein should do so with Macquarie Capital (USA) Inc. Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/research/disclosures, or contact your registered representative at 1-888-MAC-STOCK, or write to the Supervisory Analysts, Research Department, Macquarie Securities, 125 W.55th Street, New York, NY 10019. © Macquarie Group

| <b>Auckland</b> Tel: (649) 377 6433     | <b>Bangkok</b><br>Tel: (662) 694 7999 | <b>Calgary</b><br>Tel: (1 403) 218 6650      | <b>Denver</b><br>Tel: (303) 952 2800    | Frankfurt<br>Tel: (069) 509 578 000   | <b>Geneva</b><br>Tel: (41) 22 818 7777   | Hong Kong<br>Tel: (852) 2823 3588         |
|---|---------------------------------------|--|---|---------------------------------------|--|---|
| <b>Jakarta</b><br>Tel: (62 21) 515 1818 | Johannesburg<br>Tel: (2711) 583 2000  | <b>Kuala Lumpur</b><br>Tel: (60 3) 2059 8833 | <b>London</b><br>Tel: (44 20) 3037 4400 | <b>Manila</b><br>Tel: (63 2) 857 0888 | <b>Melbourne</b><br>Tel: (613) 9635 8139 | Montreal<br>Tel: (1 514) 925 2850         |
| <b>Mumbai</b><br>Tel: (91 22) 6653 3000 | <b>Munich</b> Tel: (089) 2444 31800   | New York<br>Tel: (1 212) 231 2500            | <b>Paris</b> Tel: (33 1) 7842 3823      | <b>Perth</b> Tel: (618) 9224 0888     | <b>Seoul</b><br>Tel: (82 2) 3705 8500    | <b>Shanghai</b><br>Tel: (86 21) 6841 3355 |
| Singapore                               | Sydney                                | Taipei                                       | Tokyo                                   | Toronto                               |  |   |
| Tel: (65) 6231 1111                     | Tel: (612) 8232 9555                  | Tel: (886 2) 2734 7500                       | Tel: (81 3) 3512 7900                   | Tel: (1 416) 848 3500                 |  |   |

Available to clients on the world wide web at www.macquarieresearch.com and through Thomson Financial, FactSet, Reuters, Bloomberg, CapitallQ and TheMarkets.com.

# Macquarie **Equities Research**





# **Asia Research**

| Head | of | Ea | uitv | Res | earch |
|------|----|----|------|-----|-------|
|------|----|----|------|-----|-------|

| John O'Connell (Global Co – Head) | (612) 8232 7544   |
|-----------------------------------|-------------------|
| David Rickards (Global Co - Head) | (44 20) 3037 4399 |
| Chris Hunt (Asia – Head)          | (852) 3922 1119   |
| Tim Smart (Asia – Deputy Head)    | (852) 3922 3565   |
|                                   |                   |

#### **Automobiles/Auto Parts**

| Leah Jiang (China)      | (8621) 2412 9020 |
|-------------------------|------------------|
| Linda Huang (Hong Kong) | (852) 3922 4068  |
| Clive Wiggins (Japan)   | (813) 3512 7856  |
| Dan Lucas (Japan)       | (813) 3512 6050  |
| Michael Sohn (Korea)    | (82 2) 3705 8644 |

#### **Banks and Non-Bank Financials**

| Ismael Pili (Asia, Hong Kong)       | (852) 3922 4774  |
|-------------------------------------|------------------|
| Victor Wang (China)                 | (852) 3922 1479  |
| Alastair Macdonald (Japan)          | (813) 3512 7476  |
| Mudit Painuly (India)               | (9122) 6653 3044 |
| Suresh Ganapathy (India)            | (9122) 6653 3042 |
| Ferry Wong (Indonesia)              | (6221) 515 7335  |
| Chan Hwang (Korea)                  | (822) 3705 8643  |
| Alex Pomento (Philippines)          | (632) 857 0899   |
| Matthew Smith (Malaysia, Singapore) | (65) 6231 2981   |
| Jemmy Huang (Taiwan)                | (8862) 2734 7530 |
| Passakorn Linmaneechote (Thailand)  | (662) 694 7728   |
| Apichet Kiatworakun (Thailand)      | (662) 694 7724   |
|                                     |                  |

#### Conglomerates

| Leah Jiang (China)         | (8621) 2412 9020 |
|----------------------------|------------------|
| Alex Pomento (Philippines) | (632) 857 0899   |

#### **Consumer and Gaming**

| Gary Pinge (Asia)          | (852) 3922 3557   |
|----------------------------|-------------------|
| Linda Huang (Hong Kong)    | (852) 3922 4068   |
| Toby Williams (Japan)      | (813) 3512 7392   |
| Lyall Taylor (Indonesia)   | (6221) 2598 8489  |
| HongSuk Na (Korea)         | (822) 3705 8678   |
| Alex Pomento (Philippines) | (632) 857 0899    |
| Amit Mishra (India)        | (91) 22 6653 3051 |
| Best Waiyanont (Thailand)  | (662) 694 7993    |
|                            |                   |

#### **Emerging Leaders**

| Jake Lynch (China, Asia)        | (8621) 2412 9007 |
|---------------------------------|------------------|
| Jonathan Hsu (China, Hong Kong) | (852) 3922 4625  |
| Saiyi He (Hong Kong)            | (852) 3922 3585  |
| Robert Burghart (Japan)         | (813) 3512 7853  |
|                                 |                  |

#### Industrials

| Inderjeetsingh Bhatia (India) | (9122) 6653 3166 |
|-------------------------------|------------------|
| Linda Huang (Hong Kong)       | (852) 3922 4068  |
| Janet Lewis (Japan)           | (813) 3512 7475  |
| Yuki Soga (Japan)             | (813) 3512 7859  |
| Chang Han Joo (Korea)         | (822) 3705 8511  |
| Juwon Lee (Korea)             | (822) 3705 8661  |
| Sunaina Dhanuka (Malaysia)    | (603) 2059 8993  |
| David Gambrill (Thailand)     | (662) 694 7753   |
|                               |                  |

#### Insurance

| Scott Russell (Asia)  | (852) 3922 3567 |
|-----------------------|-----------------|
| Chung Jun Yun (Korea) | (822) 2095 7222 |

#### **Media and Internet**

| Jiong Shao (China, Hong Kong)  | (852) 3922 3500 |
|--------------------------------|-----------------|
| Steve Zhang (China, Hong Kong) | (852) 3922 3578 |
| Prem Jearajasingam (Malaysia)  | (603) 2059 8989 |
| Alex Pomento (Philippines)     | (632) 857 0899  |
|                                |                 |

#### Oil, Gas and Petrochemicals

| Linda Huang (Hong Kong)     | (852) 3922 4068  |
|-----------------------------|------------------|
| Jal Irani (India)           | (9122) 6653 3040 |
| Polina Diyachkina (Japan)   | (813) 3512 7886  |
| Shawn Park (Korea)          | (822) 3705 8669  |
| Sunaina Dhanuka (Malaysia)  | (603) 2059 8993  |
| Trevor Buchinski (Thailand) | (662) 694 7829   |

#### Pharmaceuticals and Healthcare

| Jonathan Hsu (Hong Kong) | (852) 3922 4625  |
|--------------------------|------------------|
| Abhishek Singhal (India) | (9122) 6653 3052 |
| Christina Lee (Korea)    | (852) 3922 3571  |

#### **Property**

| Callum Bramah (Asia)           | (852) 3922 4731  |
|--------------------------------|------------------|
| Eva Lee (China, Hong Kong)     | (852) 3922 3573  |
| Eugene Cheung (Hong Kong)      | (852) 3922 4627  |
| Unmesh Sharma (India)          | (9122) 6653 3170 |
| Felicia Barus (Indonesia)      | (6221) 2598 8480 |
| Hiroshi Okubo (Japan)          | (813) 3512 7433  |
| Chang Han Joo (Korea)          | (822) 3705 8511  |
| Sunaina Dhanuka (Malaysia)     | (603) 2059 8993  |
| Alex Pomento (Philippines)     | (632) 857 0899   |
| Tuck Yin Soong (Singapore)     | (65) 6231 2838   |
| Elaine Cheong (Singapore)      | (65) 6231 2839   |
| Corinne Jian (Taiwan)          | (8862) 2734 7522 |
| Patti Tomaitrichitr (Thailand) | (662) 694 7727   |
|                                |                  |

#### Resources / Metals and Mining

| Andrew Dale (Asia)            | (852) 3922 3587  |
|-------------------------------|------------------|
| Graeme Train (China)          | (8621) 2412 9035 |
| Carol Cao (China, Hong Kong)  | (852) 3922 4075  |
| Pelen Ji (China, Hong Kong)   | (852) 3922 4741  |
| Christina Lee (Hong Kong)     | (852) 3922 3571  |
| Rakesh Arora (India)          | (9122) 6653 3054 |
| Adam Worthington (Indonesia)  | (852) 3922 4626  |
| Albert Saputro (Indonesia)    | (6221) 515 7340  |
| Polina Diyachkina (Japan)     | (813) 3512 7886  |
| Chak Reungsinpinya (Thailand) | (662) 694 7982   |
|                               |                  |

#### Technology

| roomiology                      |                  |
|---------------------------------|------------------|
| Jeffrey Su (Asia)               | (8862) 2734 7512 |
| Stephen Chow (China, Hong Kong) | (852) 3922 3634  |
| Lisa Soh (China)                | (852) 3922 1401  |
| Nitin Mohta (India)             | (9122) 6653 3050 |
| Damian Thong (Japan)            | (813) 3512 7877  |
| David Gibson (Japan)            | (813) 3512 7880  |
| George Chang (Japan)            | (813) 3512 7854  |
| Michiko Kakiya (Japan)          | (813) 3512 7868  |
| Yukihiro Goto (Japan)           | (813) 3512 5984  |
| Daniel Kim (Korea)              | (822) 3705 8641  |
| Benjamin Ban (Korea)            | (822) 3705 8659  |
| Andrew Chang (Taiwan)           | (8862) 2734 7526 |
| Daniel Chang (Taiwan)           | (8862) 2734 7516 |
| Jimmy Hsu (Taiwan)              | (8862) 2734 7533 |
| Kylie Huang (Taiwan)            | (8862) 2734 7528 |
|                                 |                  |

#### Telecoms

| Keith Neruda (Asia)           | (65) 6231 2830   |
|-------------------------------|------------------|
| Tim Smart (China)             | (852) 3922 3565  |
| Lisa Soh (China, Hong Kong)   | (852) 3922 1401  |
| Riaz Hyder (Indonesia)        | (6221) 2598 8486 |
| Nathan Ramler (Japan)         | (813) 3512 7875  |
| Prem Jearajasingam (Malaysia) | (603) 2059 8989  |
| Joseph Quinn (Taiwan)         | (8862) 2734 7519 |
| Best Waiyanont (Thailand)     | (662) 694 7993   |
|                               |                  |

#### **Transport & Infrastructure**

| Utilities                   |                 |
|-----------------------------|-----------------|
| Sunaina Dhanuka (Malaysia)  | (603) 2059 8993 |
| Chang Han Joo (Korea)       | (822) 3705 8511 |
| Wei Sim (China, Hong Kong)  | (852) 3922 3598 |
| Janet Lewis (Asia, Japan)   | (813) 3512 7475 |
| Anderson Chow (China, Asia) | (852) 3922 4773 |

| Adam Worthington (Asia)       | (852) 3922 4626  |
|-------------------------------|------------------|
| Carol Cao (China, Hong Kong)  | (852) 3922 4075  |
| Jeff Evans (India)            | (9122) 3356 3053 |
| Ayako Mitsui Boston (Japan)   | (813) 3512 7885  |
| Prem Jearajasingam (Malaysia) | (603) 2059 8989  |
| Alex Pomento (Philippines)    | (632) 857 0899   |

#### Commodities

| Jim Lennon   | (4420) 3037 4271 |
|--------------|------------------|
| Max Layton   | (4420) 3037 4273 |
| Jan Stuart   | (1 212) 231 2485 |
| Duncan Hobbs | (4420) 3037 4497 |
| Bonnie Liu   | (8621) 2412 9008 |
| Graeme Train | (8621) 2412 9035 |
| Rakesh Arora | (9122) 6653 3054 |
|              |                  |

#### **Data Services**

| Andrea Dailly (Asia) | (852) 3922 4076 |
|----------------------|-----------------|
| Eric Yeung           | (852) 3922 4077 |

#### **Economics**

| Richard Jerram (Asia, Japan)   | (65) 6231 2842  |
|--------------------------------|-----------------|
| Philip McNicholas (ASEAN)      | (65) 6231 2982  |
| Richard Gibbs (Australia)      | (612) 8232 3935 |
| Paul Cavey (China)             | (852) 3922 3570 |
| Renee Chen (Hong Kong, Taiwan) | (852) 3922 3597 |

#### Quantitative / CPG

| Martin Emery (Asia)      | (852) 3922 3582 |
|--------------------------|-----------------|
| Viking Kwok (Asia)       | (852) 3922 4735 |
| Burke Lau (Asia)         | (852) 3922 5494 |
| George Platt (Australia) | (612) 8232 6539 |
| Patrick Hansen (Japan)   | (813) 3512 7876 |
| Ayumu Kuroda (Japan)     | (813) 3512 7569 |
| Simon Rigney (Janan)     | (813) 3512 7872 |

#### Strategy/Country

| Michael Kurtz (Asia)            | (852) 3922 1403    |
|---------------------------------|--------------------|
| John Woods (Asia)               | (852) 3922 4636    |
| Mark Matthews (Asia)            | (65) 6231 2841     |
| Peter Eadon-Clarke (Asia, Japar | n) (813) 3512 7850 |
| Jiong Shao (China, Hong Kong)   | (852) 3922 3566    |
| Rakesh Arora (India)            | (9122) 6653 3054   |
| Ferry Wong (Indonesia)          | (6221) 515 7335    |
| David Gibson (Japan)            | (813) 3512 7880    |
| Chan Hwang (Korea)              | (822) 3705 8643    |
| Kieran Calder (Malaysia)        | (603) 2059 8992    |
| Yeonzon Yeow (Malaysia)         | (603) 2059 8982    |
| Alex Pomento (Philippines)      | (632) 857 0899     |
| Daniel Chang (Taiwan)           | (8862) 2734 7516   |
| David Gambrill (Thailand)       | (662) 694 7753     |

#### Find our research at

| riilu oui lesealcii at |                                  |  |
|------------------------|----------------------------------|--|
| Macquarie:             | www.macquarie.com.au/research    |  |
| Thomson:               | www.thomson.com/financial        |  |
| Reuters:               | www.knowledge.reuters.com        |  |
| Bloomberg:             | MAC GO                           |  |
| Factset:               | http://www.factset.com/home.aspx |  |
| CapitalIQ              | www.capitaliq.com                |  |
| TheMarkets.com         | www.themarkets.com               |  |
| Email macresearch      | @macquarie.com for access        |  |
|                        |                                  |  |

# **Asia Sales**

## **Regional Heads of Sales**

| (852) 3922 2074  |
|------------------|
| (65) 6231 2888   |
| (1 617) 598 2502 |
| (852) 3922 2061  |
| (41) 22 818 7712 |
| (9122) 6653 3200 |
| (6221) 515 1555  |
| (822) 3705 8799  |
| (603) 2059 8888  |
| (603) 2059 8888  |
| (632) 857 0761   |
| (1 212) 231 2527 |
| (1 212) 231 2507 |
| (1 212) 231 2559 |
| (1 415) 762 5001 |
|                  |

## Regional Heads of Sales cont'd

| Miki Edelman (Taiwan)       | (8862) 2734 7580  |
|-----------------------------|-------------------|
| Angus Kent (Thailand)       | (662) 694 7601    |
| Michael Newman (Tokyo)      | (813) 3512 7920   |
| Angus Innes (UK/Europe)     | (44) 20 3037 4841 |
| Rob Fabbro (UK/Europe)      | (44) 20 3037 4865 |
| Sean Alexander (Generalist) | (852) 3922 2101   |

#### **Regional Head of Distribution**

Justin Crawford (Asia) (852) 3922 2065

### Sales Trading

| Adam Zaki (Asia)         | (852) 3922 2002   |
|--------------------------|-------------------|
| Yat Quan Tan (Hong Kong) | (852) 3922 2028   |
| Phil Sellaroli (Japan)   | (813) 3512 7837   |
| Matthew Ryan (Singapore) | (65) 6231 2888    |
| Mike Keen (Europe)       | (44) 20 3037 4905 |

### Sales Trading cont'd

| Chris Reale (New York)       | (1 212) 231 2555 |
|------------------------------|------------------|
| Marc Rosa (New York)         | (1 212) 231 2555 |
| Stanley Dunda (Indonesia)    | (6221) 515 1555  |
| James Aitchison (Korea)      | (822) 3705 9990  |
| Kenneth Cheung (Malaysia)    | (603) 2059 8888  |
| Michael Santos (Philippines) | (632) 857 0813   |
| Isaac Huang (Taiwan)         | (8862) 2734 7582 |
| Dominic Shore (Thailand)     | (662) 694 7707   |
|                              |                  |

#### Alternative Strategies

| Convertibles - Roland Sharman        | (852) 3922 2095 |
|--------------------------------------|-----------------|
| Depository Receipts - Seung-Jin Lee  | (65) 6231 1150  |
| Derivatives – Mark Holland           | (852) 3922 2081 |
| Futures - Tim Smith                  | (852) 3922 2113 |
| Structured Products - Andrew Terlich | (852) 3922 2013 |