

FINANCE WORKING PAPER

# Basel III and Asia

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## Preface

There is growing concern that the world is entering into a period of prolonged slow growth, even as the European debt crisis remains unresolved. At the same time, a host of financial regulations has been promulgated to address various deficiencies in financial regulation that were exposed by the crisis. The most prominent of these is Basel III, which is being implemented in phases from 1 January 2013. Regulations on the shadow banking system have not yet been formulated as the leading authorities are still studying the scope and required regulations to address the associated risks.

Although there are various studies that examined the costs to the real sector and the banking industry on the implementation of Basel III and its implications on bank lending and regional economic growth, there has been no study to date to evaluate the combined effect of the implementation of diverse national and regional regulations. There was concern that Basel III may have unintended consequences on Asian economies and the Fung Global Institute (FGI), a research think tank based in Hong Kong, agreed to examine the regulatory impact of Basel III in more depth. With the assistance of Stamford Advisory, a Singapore-based consulting firm, the FGI has prepared this report to explore the complex issues involved.

## Major Findings

This report contains an investigation into how Asian banks differ from their Western counterparts, both on a quantitative and qualitative basis in terms of capital adequacy, liquidity and risk exposure. On all three fronts, the Asian banks emerge as having stronger financial positions than banks in the Europe, U.K. and Australia.

However, if regulations impose costs on the industry, potentially reducing the supply of credit (via minimum capital requirements and some deleveraging by banks to meet those requirements) or increasing the cost of such credit, regulators must seek the right balance between systemic risk reduction and the availability of credit to the economy that remains fundamental to growth and job creation. Three high-level scenarios were used to demonstrate this potential problem of regulation impacting growth by projecting loan growth needs across Asia over the medium term until 2017. The shortfall in Tier I Capital for Asian banks could range from US\$250 billion to US\$1 trillion by 2017, depending on whether the world will be in the Slow Growth scenario, New Normal or Global Recovery.

The report also identified that other than capital requirements that impact on leveraging, the more stringent requirements for liquid assets may also trigger unintended reallocation of funds at the sectoral level that penalize trade finance, SME lending and project financing of infrastructure.

The report offers some suggestions to better assure the effective functioning of the real economy and financial stability in Asia.

Essentially, Asian regulators should consider exercising discretion in the following areas:

**Timing of roll-out:** As of 12 August 2013, there are still 2 jurisdictions which have not been able to meet the effective start date of 1 January 2013, namely, Indonesia and Turkey<sup>2</sup>. Out of the 17 economies that have Basel III's capital rules in place, seven are in Asia-Pacific region.

The major economies are dragging their feet in implementing these new rules for all banks because they realize the serious implications of the rules on their economic growth and on their banking industry, which are not trivial considerations. It is therefore surprising that Asian economies are adopting medicine for their financial systems faster than the crisis economies themselves.

Whilst complying with the 1 January 2013 start date, Asian regulators should revisit their implementation phase-in schedule and use any additional time to study the potential impact of Basel III on loan growth and pricing of credit.

**Calibration of discretionary standards:** Given the huge disparities between different financial systems, domestic credit culture, understanding of complex financial technology and regulations, there can be one-size-fits-all principles, but never one-size-fits-all rules for the whole world. The recent financial crises have demonstrated that homogeneity generates its own systemic fragility. If everyone uses the same metric and regulatory standard, we will all be in the same wrong place if that metric or regulatory standard is flawed. In some sense, it is not meaningful from a global perspective to ask a small economy with a relatively less globalised banking system to adopt Basel III. The scarce resources should be used more appropriately for domestic development.

Basel III is designed essentially for global systemically important banks or national banks with nationally systemic international exposure. This picture does not fit the bulk of banks in emerging markets, particularly those in emerging Asia.

It is diversity of conditions and development objectives that enables domestic financial institutions to adapt to domestic needs that best fit domestic aspirations.

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<sup>2</sup> *BIS Report to G20 Leaders on monitoring implementation of Basel III regulatory reforms August 2013.*

<http://hb.betterregulation.com/external/Progress%20report%20on%20implementation%20of%20the%20Basel%20regulatory%20framework%20-%20Oct%202013.pdf>

For example, based on more recent experience with asset bubbles, Asian regulators are able to impose specific policy measures to counter potential bubbles, particularly in real estate. These include changes to the Loan-to-Value Ratio (LTV), equivalents to the cyclical capital buffer-add-ons and the additional Basel requirements for Systemically Important Banks (SIBs). Experience in East Asia with property bubbles give Asian policy-makers and regulators a different set of tools, including supply-side instruments, targeted demand management tools (such as restrictions on home-ownership beyond single unit), that represent additional tools to address cyclical and systemic issues not present and not used in the advanced economies. These are sufficient arguments for a different calibration of applicable discretionary standards under Basel III that are unrelated to capital.

## **National discretion in fine-tuning Basel parameters to promote growth and job creation**

Asian regulators need to strike an appropriate balance between reduction of risk and the availability of credit finance and to meet the long-term funding needs of SMEs, trade and infrastructure funding. Asia must decide on what should be its priority and the right path forward.

Going forward, Asian regulators can do more to balance financial regulation and real sector needs. The implementation of Basel III in Asia needs to be placed in a proper context to ensure that the new standards are calibrated so that they best fit domestic conditions. To achieve financial system stability, there is a need to look holistically at real sector imbalances, monetary and fiscal policies, and the interconnectivity and feedback mechanisms between the financial system (including shadow banks) and the real economy as a systemic whole.

There is a further feedback mechanism between the domestic and the external sector. The whole world cannot be synchronized on a same level playing field of regulation that is designed to deleverage the banking system. If the emerging markets were to slow down at the same time as advanced markets were to slow down due to the need to have safer banks, the globally synchronized recession would create a financial crisis despite the best financial regulation.

In a recent article in *Central Banking* magazine, former IMF Managing Director Jacques de Larosiere<sup>3</sup> highlighted the following important choices between regulation and growth:

- There is a need to reduce the impact of excessive deleveraging by banks, especially for SMEs. In this respect, the U.K. authorities have introduced a funding-for-lending scheme to encourage banks to provide additional lending whereby the Bank of England subsidizes bank

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<sup>3</sup>Jacques de Larosiere, *Regulation versus Growth*, *Central Banking Quarterly Journal*, Volume XXIII, Number 3, February 2013. <http://www.centralbanking.com/central-banking-journal/opinion/2251444/the-tradeoff-between-bank-regulation-and-economic-growth>

loans to households and SMEs in order to neutralize the impact of higher capital requirements.

- Although banks need to increase the resilience of their balance sheets and improve their risk assessment, they should not be discouraged from financing long-term investment.
- Regulators need not believe that regulatory effectiveness is a function of complex, detailed and too-numerous rules; they need to understand that higher and higher capital ratios are not a panacea and greater attention should be given to the quality of risks on banks' balance sheets.
- Supervisors need to improve their methods, learn from the private sector and stay 'on watch'.
- Insurance companies need to be allowed to play their role as financial stabilizers leveraging their long-term liabilities.
- Central banks need to address the macro-dimension of financial vulnerabilities, detecting asset and credit bubbles early on. Overseeing the financial system in its most comprehensive definition (including the shadow banks) is of the essence.
- Macro-prudential authorities have a major role in regulating the volume of credit through instructions to the supervisors, e.g., by acting on capital and loan-to-value ratios.
- A successful financial regulatory system is one that is able to allow and organize the orderly failure of a large institution without provoking chaos. As long as banks are seen as ultimately protected by taxpayers, they will be tempted to incur excessive risks.

In addition, Bank of England Executive Director, Andrew Haldane<sup>4</sup> has argued that complex regulations may give regulators and the public a sense of false security. Applying unnecessarily complex risk weights on capital requirements enable banks to “game” the rules. If the financial environment is uncertain, complex risk-weighting may only be sub-optimal. The risk-weighted models (on which Basel rules are based) themselves are technically flawed because they ignore uncertainties (non-quantifiable risks) and the fact that the risks measured on past credit history can dynamically converge when systemic risks rise. Haldane also suggested the need to reform the use of metrics to measure performance and set bonuses.

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<sup>4</sup> Andrew Haldane, *BoE's Haldane says U.K. could redefine global banking rules.*

<http://www.centralbanking.com/central-banking/news/2237837/boes-haldane-says-uk-could-redefine-global-banking-rules>

On financial regulation, LSE Professor Charles Goodhart<sup>5</sup>, the historian of the Basel Committee, has argued that new financial regulations bring with them a range of unintended consequences, some of which may make the financial system less stable than it was already.

The application of globally established Basel III rules for national regulators hinges on the question of **subsidiarity**. To what extent does the Basel Committee (not a globally elected entity but a consensus-based standard setter) impose specific rules on national economies? It is legitimate for the global standard setter to comment and use peer pressure and surveillance when the behavior of a domestic banking system has globally systemically important implications.

However, just as domestic regulators must trust (but verify) domestic banks to serve the domestic interest, the Basel Committee must trust (but verify) that national regulators and banking systems that implement the rules at the domestic level do not create risks to global financial stability. There is therefore a complex but important dialogue between the national regulators and the Basel Committee looking at domestic tradeoffs with global risks. Most Asian banking systems are not in the “globally systemically important” category. The fundamental risk is that if the national and global economies do not grow, the best regulations cannot prevent financial failure. Considerable element of discretion and judgment is therefore called for to enable that trade-off to be appropriately calibrated.

In other words, implementation of Basel III is not an end itself, but a means to stronger economies with healthier banking systems.

## Key Messages

We need to be aware that Basel III is but one set of rules that took on prominence in response to the global financial crisis.

Our study showed that Asian banks are being unduly constrained and challenged with an uneven playing field.

While Asian banks are not capital-constrained in the short-term, their ability to support growth and credit demand is significantly impaired in the medium term.

Asian regulators should consider tailoring Basel III implementation through the appropriate exercise of national discretion, uniformly applied to all banks operating in their jurisdiction.

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<sup>5</sup> Charles Goodhart, *Goodhart argues bail-outs are better than bail-ins*, <http://www.centralbanking.com/central-banking/news/2254255/goodhart-argues-bailouts-are-better-than-bailins>

Asian regulators should also have a dialogue with the relevant regulatory authorities to ensure that advanced country application of national discretion and exemption are exercised in a transparent manner, so that all national regulators have the opportunity to assess how these national discretions affect competitiveness and global systemic risks.

There is a host of other complex financial regulations (with cross-border implications) such as Dodd-Frank, FATCA, IOSCO and Solvency II that have to be considered, as well as those (yet-to-be-defined) rules intended to regulate shadow banking activities. The combined effect of all these regulations, complex, undefined and wide-ranging in coverage, will surely weigh down the banking system. The full consequences of adopting numerous global financial regulations, intended for globally systemic institutions will have huge implications, especially for Asian economies which have different national priorities due to different stages of development. Many issues have yet to be thought through thoroughly.

When implementing Basel III, there is a need for a clear distinction between national discretion standards and global rules. If every national authority, especially the advanced economies, were to set out complex exceptions to Basel III, then there is a risk that Basel III is implemented only in name but not in practice. These national exceptions are going to make comparability across jurisdictions very complex.

Therefore, Asian regulators and banks need to look beyond Basel III. Financial stability and soundness of the banking system depends very much on growth of the economy. The Asian economies are already struggling to grow amidst managing the repercussions of quantitative easing and decline in external demand on the domestic economy. Growth is challenged because Asian economies are struggling with the change in the domestic business model from exports towards creating internal demand, which requires a different set of funding, including the phasing out of excess-capacity industries. There is today greater emphasis on financial inclusivity (especially financing the SMEs) to ensure greater social justice and job creation. Different jurisdictions will have different priorities, apart from implementing complex Basel III risk-models (and a host of new, undefined regulations), in changing the systems to manage new risks and promote new growth opportunities.

Philosophically, risk comes together with growth and we cannot concentrate on risk minimization without understanding that risk transformation is the function of the banking industry.

To sum up, Basel III is only the first of a whole host of regulations that will impact on the banking industry in Asia. A major consideration is whether different implementation phases by the advanced economies, including different interpretation, risk-weights and treatments by national regulators will create a level playing field for emerging markets.

In trying to implement Basel III, national regulators need to take into consideration not only national bank competitiveness on a level playing field, but also national growth and job creation issues. Hence, there is need for greater transparency on how the Basel Committee deals with national treatment and interpretation, so that all players are assured that there is a level playing field.

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May 2013

## Executive Summary

The Basel Committee on Banking Supervision (BCBS) developed Basel III to further strengthen the resilience of the international banking system. Much of the tightened standards were in reaction to the Global Financial Crisis (GFC) of 2008, a crisis that started in the Western economies and illuminated weaknesses specifically in many Western banks. In contrast, during the GFC, both the Asian economies and Asian banks fared comparatively well, with not a single major Asian bank requiring rescue by the state.

While Basel III has been embraced by regulators globally, as of 12 August 2013, only 17 jurisdictions<sup>6</sup> have final Basel III capital rules in force, of which seven are in the Asia-Pacific region. Indonesia and Turkey missed the implementation deadline of 1 January 2013<sup>7</sup> but have draft rules in place. In these two countries and elsewhere, intense consultations and discussions continue to be held on the scope of application of the Basel III regulations, exercise of national discretions, and potential exemptions of key banking activities and customer segments from these rules. There is a growing awareness that full and rapid compliance with the Basel III regulations could come at a substantial cost, with many consequences perhaps unanticipated when the rules were first drafted.

Roll-out of Basel III and the response of both Asian and international banks to new capital standards can have a major impact on Asia and, in turn, the global economy. The need for an appropriate balance to be struck between the preservation of Asia's growth momentum and the continued strength of its financial system is of paramount importance. At this juncture, it does appear that the critical role played by banks in supporting the Asian economies could be at risk from the current regulatory surge; moreover, considering Asia's greater reliance on bank financing rather than capital markets, this could create significant headwinds for the real economy.

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<sup>6</sup> Argentina, Australia, Brazil, Canada, China, Hong Kong SAR, India, Japan, Korea, Mexico, Russia, Saudi Arabia, Singapore, South Africa, Switzerland, United States & the European Union.

<sup>7</sup> BIS (2013) Report to G-20 Ministers of Finance and Central Bank Governors on monitoring implementation of Basel III regulatory reform. <http://www.bis.org/publ/bcbs249.pdf>

The key themes that we are seeking to highlight in this paper are as follows:

### **Asian banks are being unduly constrained and challenged with an uneven playing field:**

- Asian banks are structurally sound, with high quality capital structures and strong capital ratios. As their internal risk modeling is very conservative relative to banks in some parts of the world, their Risk-Weighted Assets (RWA) are correspondingly higher; consequently, their capital position is even stronger comparing like for like. While global bodies have taken note of the impact arising from differences in risk modeling in recent months, it has not been made apparent that the most conservative outcomes are to be found in Asia;
- Adoption of the Basel III minimum standards, upon which Asian regulators have discretion to impose further add-ons, further entrenches the current capital composition and levels maintained by Asian banks. Capital management flexibility is reduced in the process with the erosion of what were hitherto capital buffers, and as RWA increases due to the asset value correlation (AVC) multiplier and CVA (credit valuation adjustment) requirements; and
- Taken together, Asian banks will effectively be setting aside more capital against an enlarged and already conservative RWA base. Reduced competitiveness aside, the downward pressure on return on equity (ROE) and profitability lowers overall internal capital generation and retention capacities – this has significant implications from a capital supply angle, forcing banks towards an increased reliance on external financing sources.

### **While Asian banks are not capital-constrained in the short-term, their ability to support growth and credit demand is significantly impaired in the medium term:**

- Credit demand in Asia will remain robust, underpinned by ongoing economic development and infrastructure financing needs. Each Asian jurisdiction needs to study and understand the loan/credit demand over the medium term, determine how this would be financed, and then assess whether the new regulatory environment would pose additional hurdles;
- We present three separate medium term scenarios: a pessimistic “Slow Growth” scenario where loan demand grows at a slower rate than it has historically; a baseline “New Normal” scenario where loan growth maintains its historical trajectory of the past decade; and a “Global Recovery” scenario, where loan growth surpasses its historical growth rates. In each of these scenarios, we find that although Asian banks are structurally sound and will be able to meet the new Basel III regulations easily in the near-term, the projected negative effects of Basel III on bank profitability and the pricing and availability of credit could lead to Asian banks being unable to meet the growing demand for credit in Asia in the medium term, thereby stifling growth.

## **Other unintended micro level, sector-specific effects are particularly relevant to Asia, given the structure of Asian economies and the stage of development of Asian financial infrastructure:**

- We should also be cognizant that Basel III rule changes could have unintended repercussions on sectors/assets critical to Asia's growth, and particular attention should be focused on trade finance, small & medium enterprises (SME) lending and project finance;
- Other important issues include those posed by the AVC multiplier, which makes bank-backed trade finance more expensive, as well as the overall regulatory developments on central clearing initiatives (since Asia lacks a unified central clearing party (CCP), exposure management for Asian banks will be more expensive, which could impact the pricing of derivatives transactions provided to customers including those undertaking long-term financing like project finance).

## **Asian regulators should consider tailoring Basel III implementation through the appropriate exercise of national discretion:**

- Given the continued uncertainties over the timing of global implementation, and particularly the impact on bank lending in Asia, we believe Asian regulators should consider tailoring the implementation of Basel III to accommodate the specific needs of their countries;
- These may focus on the timing of implementation; the need for any supplemental capital buffers; and the introduction of asset class or sector-specific capital treatment, rather than on changes to any core provisions of Basel III;
- Banks in Asia are generally in stronger financial positions than their peers in the West, thus permitting Asian regulators more leeway in implementing Basel III — there is very little near-term concern about strengthening bank solvency. Arguably, this also suggests that greater priority could be accorded to the economic growth agenda and maintaining the competitiveness of Asian banks, and;
- The Asian regulatory philosophy has always been characterized by a dynamic and adaptive approach to supervision. It will not be a departure from the norm if this were to be extended to Basel III implementation. Asia's specific features and concerns warrant a departure from the rule book where the growth momentum can be better preserved, and where a stronger consistency in regulatory outcomes creates a more level playing field for Asian banks.

**The remainder of this paper is structured in three parts. Our focus throughout is on Asia ex-Japan, because the economic and regulatory considerations of Japan, as a developed country, are different from the rest of Asia:**

- Section 2 reviews recent data to show how banks in Asia are in a stronger financial position than their Western peers. It also explains how Basel III generates an added burden on Asian banks that may not be presently warranted, particularly where there are other more critical imperatives;
- Section 3 investigates the importance of bank lending in supporting Asia's rapid economic growth and focuses, in particular, on the potential impact of Basel III on loan growth in Asia. A key takeaway is that, if Asian banks were to continue to maintain their capital ratios as they grow, the external capital financing required to meet the demand for credit is of a considerable magnitude; and
- Finally, Section 4 discusses what Asian regulators should do in response to these issues. Particular consideration should be given to the Basel III rollout timing, given the uncertainty of its impact on growth in Asia and to what, if any, discretionary capital add-ons the regulator should impose beyond the Basel III minimum. On a broader level, we venture that a strict, rules-based implementation of Basel III is inappropriate in light of Asia's growth agenda and Asian banks' competitive positioning.

# 1. What makes Asia different? Managing the added burden of Basel III

The starting point of our investigations is that Asia and Asian banks are different from their Western counterparts, both on a qualitative and quantitative basis. This necessitates a thorough review of whether the near-term implementation of the Basel III regulations is beneficial to strengthening the Asian economies, or if there are as yet unknown and unintended consequences which need to be first understood prior to implementation.

Basel III has in part been a reaction to the 2008 GFC. The drivers of bank collapses during this period have commonly been identified as some combination of excessive retention of risks of structured products, insufficient capital buffers, and inadequate liquidity to survive a crisis of confidence<sup>8</sup>. Large Asian banks did not and do not suffer from these problems. Structured asset-backed securities are not well developed in Asian markets, and so Asian banks have little such holdings. Therefore, Asian banks are structurally in a better position than their Western peers.

Asian banks also differ from their Western peers in that in many countries, such as China, India, Korea and Indonesia, the state owns a significant share of the equity of the banking sector for various strategic and economic reasons (what we shall term here as “state capitalism”). While such an ownership structure does not mean that Asian banks will not suffer losses or require state intervention, it does mean that the distinction between the shareholders and taxpayers is somewhat artificial - there is considerably more flexibility for how state support could be given to the banking sector, and with it the possibility that many of the problems recently encountered elsewhere could be nipped in the bud early enough to prevent substantive damage to the economy. In fact, it can be argued that the barriers to timely state intervention would be removed, as the failure of a bank under state capitalism will essentially mean that the taxpayers, being shareholders, will suffer a loss irrespective of whether there is intervention or not.

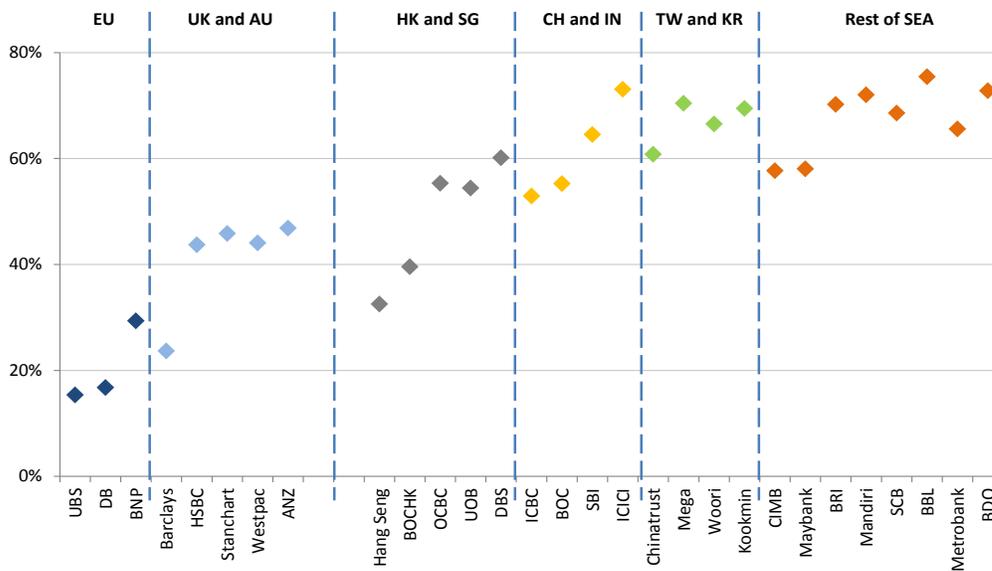
Regardless of ownership structure or recent experience, Asian banks are currently amply capitalized relative to Western banks. To compare banks across regions, we selected a few banks from each of the Asian markets under consideration—typically the three largest—and several of the largest European and Australian banks<sup>9</sup>. Figure 1 shows that Asian banks consistently have higher ratios of RWA/Total assets.

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<sup>8</sup> For example, see the Bank of England findings, [www.bankofengland.co.uk/publications/Pages/fsr/2008/fsr24.aspx](http://www.bankofengland.co.uk/publications/Pages/fsr/2008/fsr24.aspx)

<sup>9</sup> Data underlying these comparisons are from the most recent annual report or quarterly report available from that institution's web site. U.S. banks were excluded due to the absence of Pillar 3 reports that would enable apples to apples comparison with the European and Asian banks.

**Figure 1: RWA / Total Assets**



Source: Bank earnings releases 2012

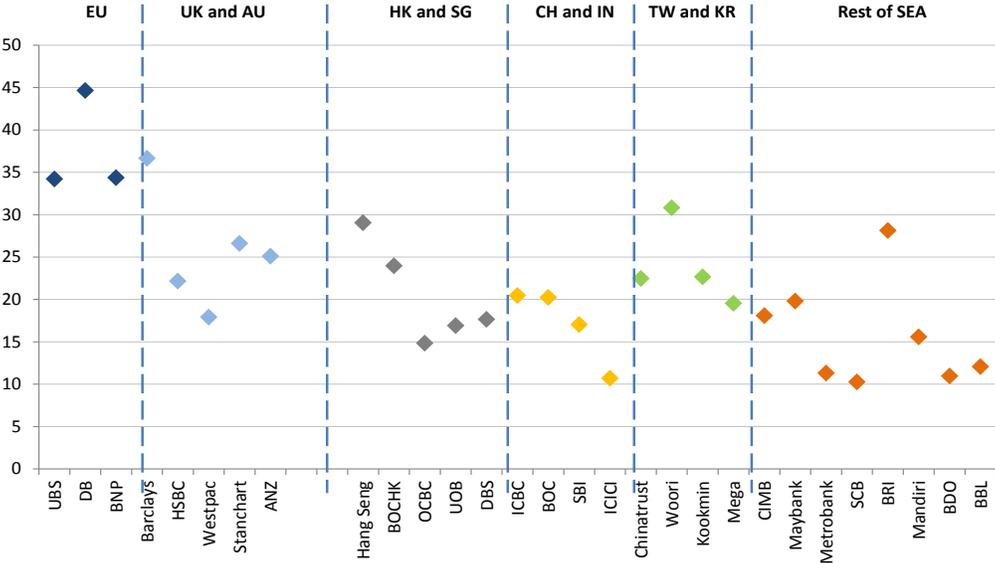
While a degree of the observed ratios is attributable to differences in balance sheet composition and the risk profile of certain Asian asset classes, the regulatory approaches adopted are also of significant considerations:

- A sizeable proportion of Asian banks remain on the Standardized approaches for credit, market and operational risks;
- The Standardized approach for credit risk references external credit ratings; these are, in general, lower for Asian sovereigns<sup>10</sup>, thus making RWA more conservative; and
- While some of the larger Asian banks are on the Foundation Internal Ratings Based Approach for credit risk, the scope for RWA arbitrage through model abuse is very limited as only one parameter is internally estimated, and often there is model conservatism in this regard. Moreover, the Basel I floors continue to operate and could be binding in many instances.

<sup>10</sup> It is interesting to note that Sovereign ratings for certain economies like Spain are still higher than those of many of the Asian countries.

Figure 2 shows a similar finding when assessing the ratio of total on- and off-balance sheet commitments relative to Tier 1 capital, which is an approximation of the inverse of the leverage ratio in Basel III. The lower ratios found in Asia suggest that Asian banks are less likely to run into problems of a sudden need to both finance and bear the increased risks of off-balance sheet commitments, as some Western banks had experienced during the GFC.

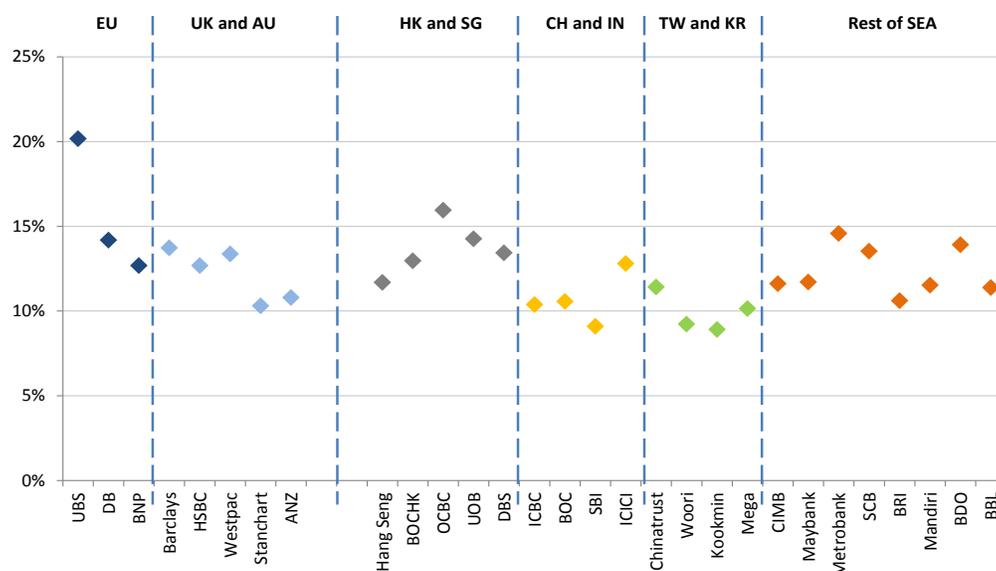
**Figure 2: Ratio of Total Assets + Commitments + Guarantees to Tier 1 Capital**



Source: Bank earnings releases 2012

Looking at the Tier 1 capital adequacy ratios in Figure 3, Asian and Western banks have similar Tier 1 ratios<sup>11</sup>. However, the Tier 1 ratios of Asian banks are backed by a higher absolute level of capital, given their higher RWA to Total Assets ratios as shown in Figure 1.

**Figure 3: Tier 1 Capital Adequacy Ratio**



Source: Bank earnings releases 2012

In view of the three measures just discussed, it is clear that Asian banks' balance sheets are as well or better capitalized than typical large Western banks. Therefore, there is a much smaller risk of Asian banks understating their true RWAs by misestimating risks, as was found in some of the Western banks that failed.

Indeed, having achieved broad agreement on the numerator of the capital adequacy ratio, regulatory attention has now turned to RWA, a measure where differences in modeling assumptions can lead to a wide divergence in outcomes. In January 2013, in an analysis undertaken as part of its Regulatory Consistency Assessment Program, the BCBS noted that, for a similar hypothetical test portfolio, "there can be a substantial difference between the bank reporting the lowest market risk RWAs and the bank reporting the highest." On a similar note, in February 2013, the European Banking Authority (EBA) reported similar variations in the credit RWA of European banks. Looking specifically at RWA versus total assets in the banking books of 89 banks in 16 European Union countries, the EBA found that some banks were using risk models that required them to hold 70 per cent less capital than their peers. This variation, while smaller than that identified by the BCBS for market risk, is more significant as credit risk accounts

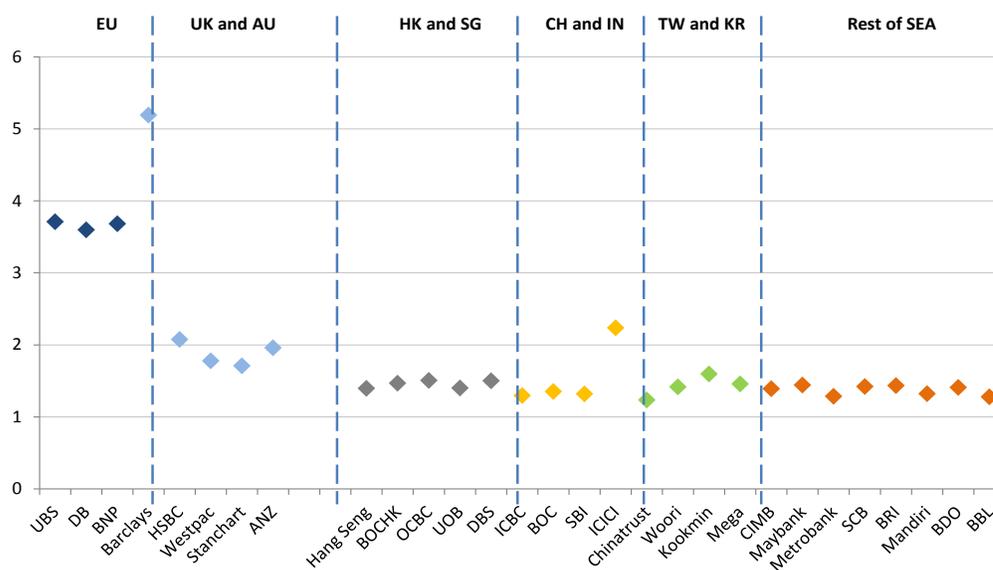
<sup>11</sup> UBS's Tier 1 ratio is comparatively high due to loans being a small proportion of their assets, and well-rated securities a relatively large proportion.

for 77 per cent of the risk-weighted assets of European Union banks, compared with 10 per cent for market risk.

A related point of significance, considering the marked potential for model-driven variations of RWA, is that high headline requirements expressed in terms of capital adequacy ratios do not convey the full picture. For example, the Swedish standard requires the four major Swedish banking groups to maintain common equity Tier 1 of 10 per cent from January 2013, stepping up to 12 per cent from 2015. However, the RWA/Total Assets of Nordea Bank, for example, is 32 per cent. Compared to an Asian bank with a RWA/Total Assets ratio of 60 per cent, the equivalent capitalization could technically be achieved by the latter on a headline capital adequacy ratio requirement of 6 per cent.

Finally, a key addition in Basel III is the emphasis on the maintenance of funding liquidity in banks. Asian banks also fare well in terms of overall funding liquidity. Due to the high savings rates and more limited development of money market funds in most Asian markets, Asian banks have comfortable assets-deposits ratios<sup>12</sup>, which estimate the adequacy of banks' funding liquidity, as shown in Figure 4.

**Figure 4: Ratio of Total Assets to Customer Deposits**



Source: Bank earnings releases 2012

<sup>12</sup> The Assets-Deposits ratio is a better comparative measure across countries than the Loans-Deposits as in many Western countries, banks have substantial securities portfolios. The GFC showed that some securities are not easily liquidated in a crisis, so inclusion in a liquidity ratio can provide another indication of ability to survive funding challenges.

These quantitative comparisons across peer banks show that generally, Asian banks are in sound financial shape, and typically stronger than most European banks. Compared to those in the West, Asian banks seem to pose less near-term systemic risk.

One might believe that rapid implementation of Basel III is better when a healthy banking sector can absorb the costs. However, we must also be mindful that:

- RWA under Basel III is going to increase as a result of the AVC multiplier and CVA requirements, thus enlarging what is already a conservative base for Asian banks. The Basel III compliance burden will be further exacerbated when a higher than average capital ratio requirement is applied to a RWA base that is also comparatively larger;
- These developments have negative implications on profitability and competitiveness: compared to major banks operating in jurisdictions where there is continued uncertainty and debate on the pace of Basel III implementation, Asian banks will be disadvantaged as the as-yet unrealized objective of a level playing field becomes even more remote; and
- Given the health of the Asian banking sectors, it is less important to impose the new Basel III standards in haste. Instead, the preservation of the critical credit intermediation role that Asian banks continue to play could be accorded greater impetus. We explore this important issue in greater depth in the next section.

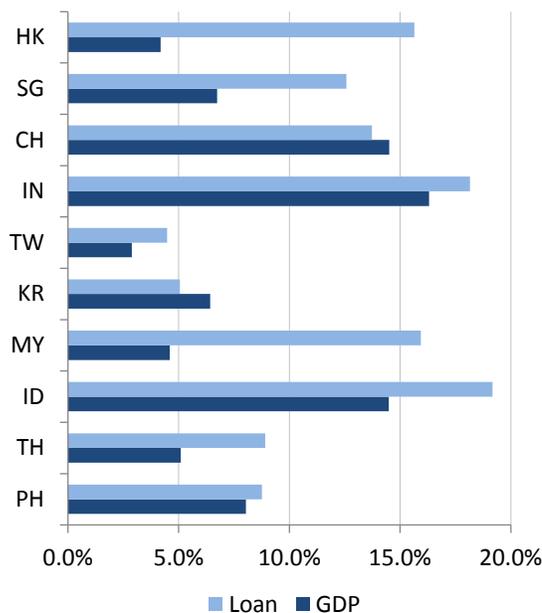
## 2. Dark clouds on the horizon – Possible constraints to economic growth in Asia

### The role of bank credit in Asian

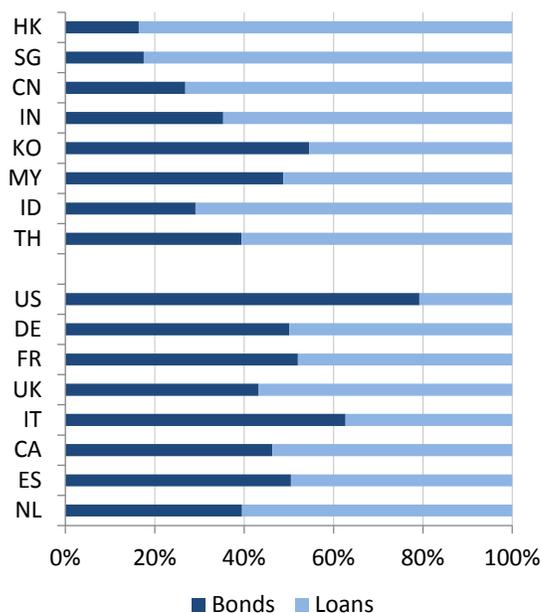
The GFC clearly demonstrated that banking crises can precipitate economic crises, and so systemic risk in banking needs to be well-contained through effective prudential regulation and oversight. But as many regulations impose costs on the industry, potentially reducing the supply of credit (via minimum capital requirements and some banks' desire to deleverage to meet those requirements), or increasing the cost of such credit (by raising margins to provide the financial returns required by shareholders for supplying equity to banks), regulators must seek the right balance between systemic risk reduction and the availability of credit to the economy.

This is particularly critical in Asia where the demand for credit has remained healthy, growing several percentage points faster than nominal GDP even during the past few years, as shown in Figure 5. Due to less liquid local capital markets, Asian corporates tend to rely much more on bank lending than those in the Western economies, as illustrated in Figure 6. With the emergence of Asia as one of the main growth engines driving the global economy, any reduction in the growth of the supply of bank credit to Asian corporates would have consequences on growth in Asia as well as the rest of the world. Commentators have cautioned that slowing Asian growth may trigger an unintended descent of the global economy into recession.

**Figure 5: Loan vs Nom. GDP growth (2008~11)**



**Figure 6: Bonds vs Loans (FY2011)**



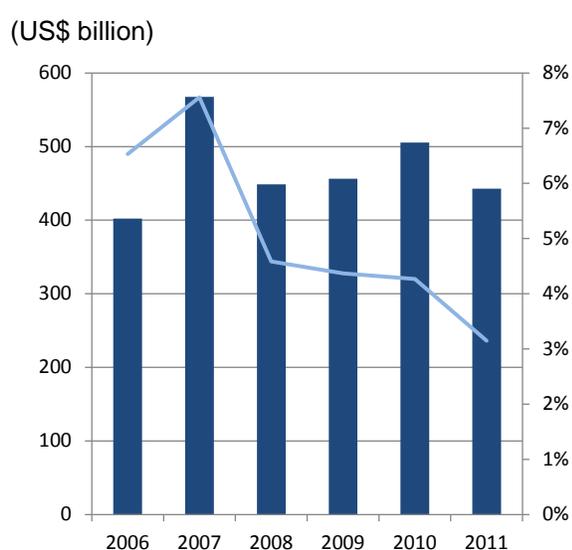
Source: Bank for International Settlements

## Asia at the crossroads

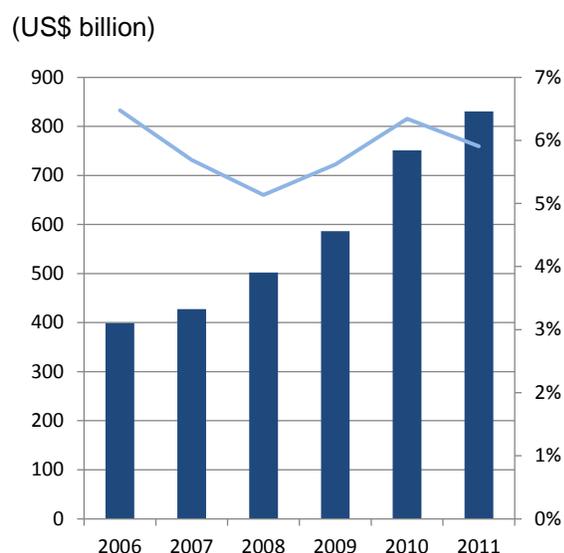
After the GFC, the mix of banks supplying credit in Asia has changed. Continental European banks have been forced to deleverage their balance sheets, partly by reducing their loan exposures across international markets, particularly in developing markets such as Asia, as shown in Figure 7. In turn, the U.K. banks have picked up much of the slack created by the withdrawing banks, as shown in Figure 8, doubling their balance sheets over a relatively short period of time.

Other foreign banks from Australia, Japan, and the U.S. have also expanded significantly in this period. However, the share of loans provided by foreign banks remains relatively small in Asia, especially in the largest economies of China and India, and continued strong loan growth needs to be met by the domestic banks in each of the Asian economies to sustain continued economic growth. Hence, we turn next to the state of the domestic banks in each Asian country.

**Figure 7: Loans supplied to Asia by continental European banks (per cent of total)**



**Figure 8: Loans supplied to Asia by U.K. banks (per cent of total)**



Source: Bank for International Settlements

## Looking to the future

To better understand this potential problem, we have developed 3 high-level scenarios projecting loan growth needs across Asia, namely:

- A pessimistic “Slow Growth” scenario, where economic growth outside of Asia slows and the rate of loan growth in Asia also slows;

- A base case “New Normal” scenario, where economic and loan growth in Asia continues on the current trajectory, but with economic growth rates in the rest of the world lagging behind Asia;
- An optimistic “Global Recovery” scenario, where global economic growth returns, and loan growth rates in Asia surpass historical trends as Asia continues to drive the growth of the global economy.

A summary of these scenarios and the outcomes in terms of credit demand and supply in Asia is shown in the following table<sup>13</sup>. Linking these loan growth projections to bank capital requirements and local banks' historical retained earnings, we can assess the extent to which local banks have sufficient capital to support balance sheet growth commensurate with forecast GDP growth. Where projected retained earnings are insufficient, additional capital (Capital Shortfall in the table) may be obtained by some mix of reducing dividend payouts from historical norms and new equity issuance. To the extent that those two sources are inadequate, then either Asia’s bond markets must take up the slack, or some of the forecast loan demand cannot be met.

US\$ TN	Credit Demand	Credit Supply	Credit Shortfall	Capital Shortfall	Key drivers
Scenario 1: Slow Growth	24.9	23.6	1.3	0.25	Muted growth in loan demand due to economic malaise globally Domestic banks growth unable to make up for slower or zero loan supply growth by foreign lenders
Scenario 2: The ‘New’ Normal	30.5	27.1	3.4	0.5	Credit demand increases significantly due to sustained economic recovery in Asia Even increased loan supply from foreign banks insufficient to meet loan demand
Scenario 3: Global Recovery	33.6	25.9	7.7	1.0	Credit demand grows rapidly due to recovery globally Foreign loan supply matches growth in loan demand in Asia, but domestic banks are still unable to meet shortfall in supply

<sup>13</sup> See the Appendix for more details on our assumptions of loan supply growth rates.

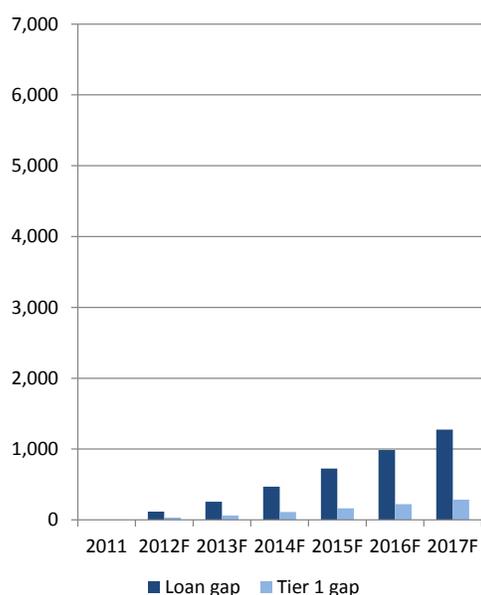
The three scenarios are considered in more detail in the following paragraphs:

### **Scenario 1: Slow Growth**

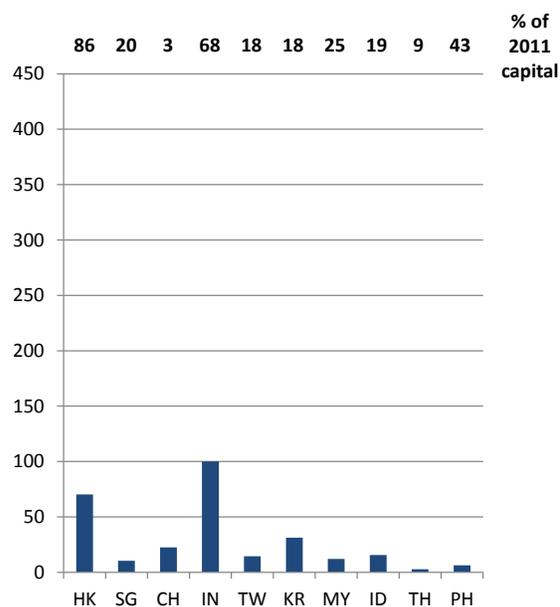
In this pessimistic scenario, loan growth in Asia slows from its historical trend above the growth of nominal GDP, to just keeping pace with nominal GDP growth, growing at a rate of 10.2 per cent per annum in aggregate across Asia. Given these lower rates of growth, Continental European banks will continue deleveraging globally and further reduce their loan exposures to Asia. The burden of ensuring credit supply meets credit demand falls on the domestic banks and, to a lesser extent, the U.K., U.S., Australian and Japanese banks. However, all banks are affected by the implementation of Basel III, which leads to a drop in ROE of 20 per cent (i.e. a bank with a current ROE of 10 per cent in 2011 will find its ROE reduced to 8 per cent in each of the years between 2012-2017 as a result), slowing the rate of internal capital generation. This scenario projects a gloomier future, where both Asia and the rest of the world are shackled to some extent by the longer-term effects of the GFC.

These projections indicate that given current economic forecasts, plus the impact of Basel III both directly on Asian banks and indirectly through the impact on global banks, Asian banks will, by 2017, need to generate US\$250 billion of additional Tier 1 capital as illustrated in Figure 9. The largest capital gap, of US\$100 billion (or 68 per cent of the book capital in the banking system as of 2011) is in India, as shown in Figure 10. The large capital shortfall predicted here is due to the high double-digit GDP and loan growth forecasts for India (14–15 per cent), while the Indian banks on average do not have sufficiently high ROEs (projected at 13.9 per cent after the increased capital due to Basel III) to generate enough retained earnings.

**Figure 9: Loan and Tier 1 capital gap**  
(US\$ Billion)



**Figure 10: Tier 1 capital gap in 2017**  
(US\$ Billion)



Source: Stamford Advisory

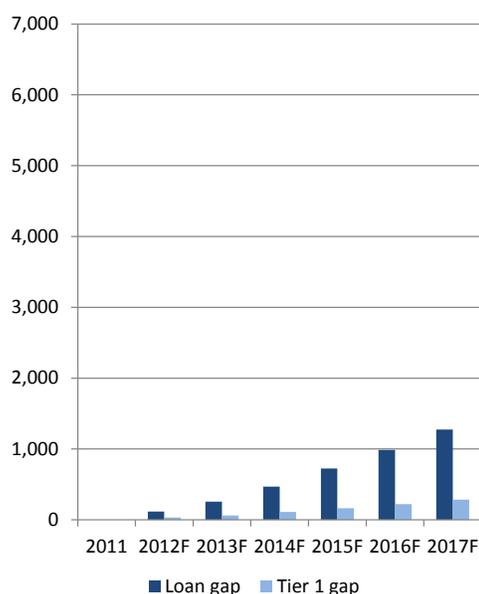
Elsewhere in Asia, Hong Kong SAR also has a large capital gap, both in absolute and relative (to 2011 capital) terms, as the Hong Kong economy has traditionally been reliant on foreign bank credit supply. This is also true, although to a lesser extent, in countries such as the Philippines, Malaysia, and Chinese Taipei, where foreign banks have traditionally had a strong presence in the local banking sector. In these four countries, the size of the Tier 1 capital gap ranges from 18 per cent of the capital base in 2011 in Chinese Taipei to a high of 86 per cent in Hong Kong SAR.

## Scenario 2: The “New Normal”

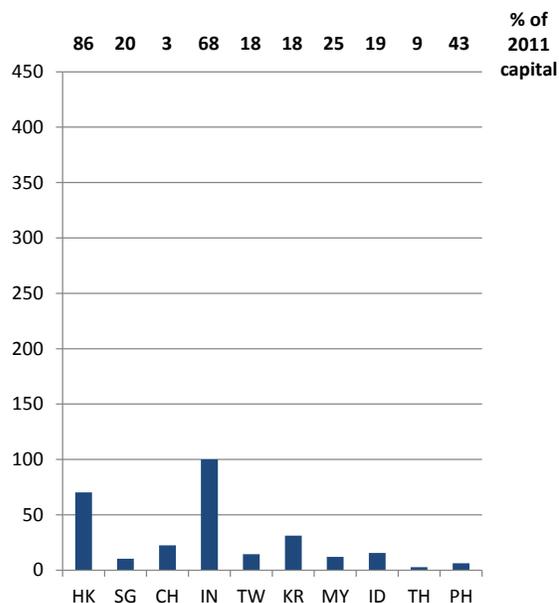
In this base case scenario, we project that loan growth in Asia will be maintained at a rate higher than nominal GDP growth, growing at an aggregate rate of 14 per cent per annum across Asia. This is consistent with the growth observed over the past decade. Foreign banks continue to grow in Asia instead of deleveraging, growing loans in line with their historical growth rates since the GFC (2008-11). Even so, the main bulk of the demand for credit will still need to be met by domestic banks, all of which continue to be affected by a drop of 20 per cent in ROEs as a result of the implementation of Basel III. Basically, this scenario projects a full recovery in Asia from the GFC, but a less than full recovery in other parts of the world.

Under this base case scenario, by 2017, we note that the markets where foreign banks have traditionally been present, e.g. Hong Kong SAR, Chinese Taipei, Malaysia, and the Philippines will have little or no capital shortfall as the higher levels of loan growth are fully met by a combination of domestic banks and foreign banks. However, Asian banks will still need to generate close to US\$500 billion of additional Tier 1 capital, as illustrated in Figure 11, with the largest gaps being in China, Korea, India and Indonesia, where a combination of strong economic growth and small foreign bank presence mean that domestic banks will have difficulty meeting loan demand, as shown in Figure 12. While domestic banks will remain profitable, the high double-digit GDP and loan growth forecasted will still surpass the ability of the banking sectors to generate enough retained earnings to meet projected loan growth. Note that in this scenario, regardless of the growth rates of foreign banks in the largest economies in Asia, a substantive Tier 1 capital shortfall would still be present.

**Figure 11: Loan and Tier 1 capital gap**  
(US\$ Billion)



**Figure 12: Tier 1 capital gap in 2017**  
(US\$ Billion)



Source: Stamford Advisory

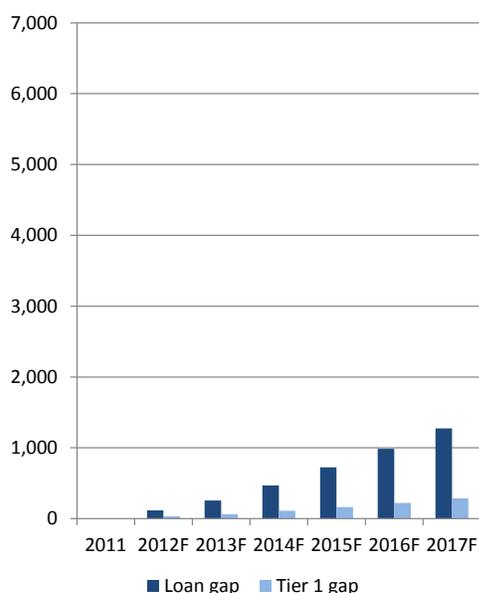
To get an understanding of how challenging it may be to raise the additional required capital in each country, we also look at the forecast capital gap in 2017 as compared to current bank capital in each country as of 2011, which is shown at the top of Figure 12. Apart from the four countries of Hong Kong SAR, Chinese Taipei, Malaysia and the Philippines, this shortfall ranges from between 25 per cent of the current capital base in China to a high of 83 per cent in South Korea. Countries such as China, India and Indonesia, where the state is the largest shareholder in the banks, would face a stark choice between investing in national development versus investing in the banking system. These nations may consequently face a higher risk of slower economic growth due to constrained bank lending.

### Scenario 3: Global Recovery

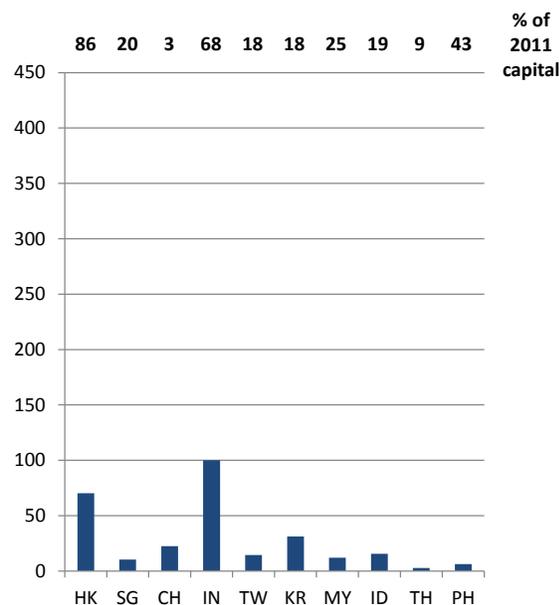
This final, optimistic scenario is based on a strong broad-based global recovery in credit demand and supply. Here, we project that the loan growth in Asia will exceed historical rates above the growth of nominal GDP, increasing at an aggregate rate of 15.9 per cent per annum across Asia. Similar to the previous scenario, we expect that foreign banks operating in Asia will continue to increase their loan exposures in line with the growth of the market demand for loans, but the largest burden of supplying the credit to keep the Asian economies growing will continue to fall on the shoulders of the domestic banks.

Under this scenario, by 2017, loan growth again outstrips the capacity of Asian banks, which will need to generate more than US\$1,000 billion of additional Tier 1 capital as illustrated in Figure 13. Again, these large capital shortfalls arise due to the high double-digit GDP and loan growth forecasts, which surpass the ability of the banking sector to generate enough retained earnings for the projected loan growth.

**Figure 13: Loan and Tier 1 capital gap**  
(US\$ Billion)



**Figure 14: Tier 1 capital gap in 2017**  
(US\$ Billion)



Source: Stamford Advisory

Under this scenario, the demand for credit in every Asian country far exceeds the potential supply of credit that the domestic banks can provide without going to the market or the state for a massive round of capital raising – as shown at the top of Figure 14, the capital gap ranges from 28 per cent of the capital base in Hong Kong SAR as of 2011, to a high of 137 per cent in India. In China, where the largest capital gap of more than US\$500 billion is projected, this amount of capital is equal to 63 per cent of the total capital in the banking system in 2011. While it is conceivable that this gap can be largely met in China, given the vast resources of the Chinese government, this may not be true in other Asian countries where the fiscal position is less optimal and may become a brake on economic growth.

As the loan supply from foreign banks is projected to be lower in this scenario compared to Scenario 2 due to slower advanced country growth, this manifests itself in observed increases in the capital gaps of Hong Kong SAR, Chinese Taipei, Malaysia and the Philippines, where foreign loan supply has been an important component of the banking system. However, regardless of the growth rates of foreign banks in the largest economies in Asia, a substantive Tier 1 capital shortfall would still be present in every country.

As strong loan growth drives the possible capital shortfalls, how plausible are these projections? After all, there has been bank balance sheet deleveraging in the West.

To answer this, note that in the base case scenario, loan growth across Asia will be roughly 14 per cent a year, averaging 1.5 times the growth in nominal GDP, which has been the average for Asia over the past decade. This seems reasonable as trade flows, which is a mainstay of many of the export-oriented economies in Asia and which forms a key component of many bank's balance sheets, grew at a compounded rate of 12 per cent on an inter-regional basis, and 15 per cent on an intra-regional basis in Asia between 1990 and 2007. Asia's infrastructure growth also supports faster loan growth projections. The Asian Development Bank projects a need of US\$8 trillion of infrastructure investment in Asia between 2010 and 2020, or an average of US\$730 million per year<sup>14</sup>. Even assuming that half of this amount is not commercially viable or fundable, and accounting for equity financing of a significant portion of the remaining amount, it is clear that loan growth in Asia has the potential to significantly surpass the base case and reach levels shown in the most optimistic scenario projected here.

Across all three scenarios, we see that the current well-capitalized state of the Asian banking industry may be temporary, and capital constraints will start to bite again in the near future, especially if Asia continues to be a growth engine of the world economy. While the implementation of Basel III is not the only reason for this, the impact of Basel III on bank profitability does play a significant role.

### **Other unintended micro-level, sector-specific effects**

While the analysis above has focused on the potential effects of Basel III with regards to bank capital and credit supply, there are other factors that could further exacerbate the credit supply issues we have noted here, putting the growth trajectory in Asia further at risk. For instance, even though Asian banks are liquid and well-funded at the moment, Basel III requirements for liquid assets may trigger an industry-wide reallocation away from illiquid bank loans into more liquid securities. Furthermore, the ongoing global tightness in funding liquidity, especially for cross-border transactions, could also limit funding of Asian loans.

In addition to these macro-level effects of Basel III, we foresee potential micro-level effects in terms of the allocation of the supply of credit amongst the different Asian countries, and the economic sectors within each economy.

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<sup>14</sup> *Asia Development Bank (2009) Infrastructure for a Seamless Asia.*

**Trade finance**, which is of disproportionate importance to Asia, may be significantly affected by Basel III through the imposition of the AVC multiplier for exposures to large financial institutions, as well as the application of a 100 per cent credit conversion factor (CCF) for off-balance sheet trade exposures for the computation of the leverage ratio. Trade finance is inherently of a low-risk nature, in view of the following features:

- Trade finance exposure is diverse in nature and smaller in value. It is also short-term lending, being a “temporal seniority” to other debt of the same obligor;
- Trade finance is self-liquidating, and is repaid from an identifiable revenue source. As a lender, one is not completely reliant on the strength of the obligor’s balance sheet to repay the debt, but is also looking at its ability to convert and on-sell;
- Trade finance is often fully or partially collateralized either through explicit legal title to goods achieved through documentation, or else with implied constructive possession over the goods being transacted; and
- In October 2011, the International Chamber of Commerce (ICC) published a report on trade finance which included a reference to a trade register on the performance of trade finance transactions from 14 contributing international banks. The data covers over 11 million transactions for the 3-year period from 2008 to 2010, capturing the worst of the GFC. Loss rates experienced on trade obligations ranged between 0.0007 per cent and 0.07 per cent, levels that are much lower compared to other corporate exposures. Loss rates for bank-intermediated corporate exposures ranged from 0.013 per cent to 0.05 per cent.

The AVC multiplier was introduced in Basel III in recognition that the tight linkages between financial institutions, especially through derivative credit risk exposures, was one of the triggers for the GFC. However, many financial institutions in Asia have significant credit exposures to other financial institutions not through derivatives, but through trade finance.

As a result of the AVC multiplier, trade finance exposures where the counterparty is a financial institution would see an increase in regulatory capital requirements of between 32—36 per cent, in addition to any increase due to the higher levels of regulatory capital ratios required under Basel III, which may lead banks to allocate capital to other operations instead of trade finance. The higher capital requirements would also imply that the pricing of trade finance credit would need to increase by 10—30 bps – when trade finance margins are at a cyclical low level at this point in time due to weak demand. This is likely to be absorbed by the banks, again prompting the reallocation of capital away from trade finance. At the extreme, given the lower margins in trade finance, which in Asia historically has post provision operating margins of between 0 bps in markets like Chinese Taipei and 250 bps in markets like Indonesia, absorption of these increased costs may lead banks to exit certain markets such as Chinese Taipei, Korea and to a certain extent, even Singapore and Hong Kong SAR.

We would also contend that the 100 per cent CCF is excessive, on the grounds that trade finance would not engender the kind of leverage that would threaten the real economy.

**SME lending** is a particular concern for market participants globally. SMEs, which typically accounts for 80 per cent to 90 per cent of job creation in an economy, are especially reliant upon bank financing as they have very limited access to capital markets debt financing. While the anticipated impact of Basel III in terms of capital requirements for SMEs does not disadvantage SME lending relative to the existing rules specifically, the combination of the potential fall in the supply of credit, and the reallocation of capital away from the areas of higher capital consumption may result in an overall reduction in the supply of credit to this critical sector. At the inter-country level, this may further disadvantage markets, such as Chinese Taipei and India, where the margins on SME financing have been weaker historically. We would also point out that the impact on trade finance, as discussed earlier, has spill-over effects because trade finance constitutes 30 per cent - 40 per cent of SME credit.

**Project finance**, especially in financing roads, railways, power plants, water and sanitation facilities, has been identified by the Asian Development Bank as a critical factor driving growth in Asia. Out of the identified US\$8 trillion required in infrastructure investments over 2010—2020 in Asia<sup>15</sup>, there already is a current shortfall in financing, with the largest need relative to supply of infrastructure project financing being in India, where our projections have shown the largest capital gap exists. A tighter supply of credit in Asia as a result of the implementation of Basel III will certainly have further deleterious impact on the current situation, considering that the securitization alternative is set to become more prohibitive as well as the BCBS looks to further revise the securitization framework. Furthermore, the long-term and lumpy cash flows associated with project finance often requires the use of interest rate swaps to enable the borrowers to hedge their interest rate repayment risk – under the Basel III rules for CVA, the provision of such swaps by the lending banks would also be affected, potentially leading to further sub-optimal provision of solutions for infrastructure financing.

To a certain extent, the further development of domestic debt capital markets may alleviate some of this shortfall in the supply of credit to meet corporate and household demand. However, empirical and anecdotal evidence points to a possible shortfall in the areas of SME financing (traditionally funded by domestic banks) and long-term infrastructure financing (due to the lack of a project finance bond market), areas where the domestic debt capital markets in Asia have not been overly successful in the provision of credit.

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<sup>15</sup> *Asia Development Bank (2009) Infrastructure for a Seamless Asia.*

These issues have been recognized, to a degree, by the Financial Stability Board (FSB). In its February 2013 report on regulatory factors affecting the availability of long-term investment finance, the FSB opined that, while Basel III “neither introduces higher risk- weights nor requires matched funding on bank exposures with maturities of over one year, the reforms do alter the incentives of different types of financial institutions to participate in this market as well as the costs of different types of transactions”.

Corroborating with our comment earlier, the FSB also recognized that the ability of institutional investors to assume a greater role in the long-term finance market will take time and will not happen in a uniform manner across different financial market segments or regions.

Issues posed by the ***CVA capital charge, along with the overall regulatory developments on central clearing initiatives***, will require closer scrutiny. The issues here are inter-related. The CVA charge will apply to non centrally-cleared trades, while a low risk-weight of 2 per cent will apply to those cleared by qualifying CCPs. Margining requirements are also different.

Avenues to manage the CVA charge are limited in Asia. Asian CCPs, which are often of a smaller scale, are at a nascent stage of offering clearing services for OTC derivatives, and Asian banks may not be readily admitted into existing ones. Asian OTC derivative contracts are also less standardized compared to the U.S. and E.U. The Asian credit default swap (CDS) market is under-developed, and banks are not able to reduce the CVA charge by buying protection in the CDS market.

For transactions between banks, uncollateralized trades will require more capital, and more stringent collateralization requirements. Increased pricing is thus a likely outcome. The vast majority of Asian corporates deal on an uncollateralized basis – those with a lower credit rating or that deal in high-value or long-dated derivatives, will be most impacted. If corporates find the increased pricing unpalatable and do not/are unable to collateralize their deals, hedging activity could be reduced. There are spillover effects into debt financing; companies typically choose to raise funds in deeper markets and swap proceeds into local currencies. More costly cross-currency swaps may compel these companies to rely on domestic markets, but possible constraints could include inadequate demand, and undue consequential concentration in markets/currencies of funding.

An uncoordinated implementation of local central clearing initiatives introduces frictional inefficiencies, with transaction costs increasing as a result of liquidity fragmentation; a reduced scope for netting and risk reduction; as well as more complexity associated with collateral management. More importantly, as most Asian CCPs would not have complied with the principles and responsibilities defined in the “Principles for Financial Markets Infrastructures” (PFMI), there is no capital relief notwithstanding that the trades are technically centrally cleared.

### 3. What can Asian regulators do?

This paper shows that Asian banks are generally well-capitalized with stable funding. However, the pace of growth and the demand for credit in Asia is such that this healthy capital position could well be eroded by 2017, with a capital shortfall of between US\$250 billion to US\$1 trillion, even without considering the possible reduction in Western bank lending as a result of the residual impact of the GFC that cannot be fully offset by domestic Asian banks. At the same time, Asian banks could be seeking to manage this while grappling with reduced profitability. In addition, several provisions of Basel III may hurt Asian lending in ways that are not commensurate with the risk of that sector, such as trade finance.

Fortunately, because each country faces different levels of preparedness and macroeconomic contexts, Basel allows national regulators to exercise discretion in several areas. Given the uncertainty over the adequacy of future bank lending in some Asian countries, as well as potentially excessive risk weighting of low-risk sectors such as short-term trade finance, we think Asian regulators should consider exercising discretion in:

- **Timing of rollout.** As some Western regulators are delaying implementation of Basel III beyond January 1st, there is little competitive advantage of being a first mover in implementing the Basel III rules, and the staggered implementation of these rules in various jurisdictions may in fact lead to an uneven and unfair playing field for banks in jurisdictions which have taken the lead in implementing Basel III. Moreover, given the healthy state of the banking sectors in Asia, as shown in Section 2, there is little urgency to use Basel III as a means to fix any glaring shortcomings in the sector, or as a safeguard against the underestimation of risks. Asian regulators may wish to use additional time to study the potential impact of Basel on loan growth rates and pricing of credit. Thereafter, the implementation timetable could be revisited and further customized to accommodate domestic conditions and priorities. As most Asian regulators have already specified January 1, 2013 as the commencement date, timing could be adjusted by specifying the new capital standards as a 'parallel run' for now prior to full implementation. This would also permit the incorporation of changes that could arise from the current review to simplify Basel III.
- **Phasing in of standards.** Another option is to consider modifying the timing of the phase-in. Minimum Tier 1 capital levels will rise from 4.5 per cent in 2013 to 6 per cent in 2015 while the common equity capital ratio will rise from 3.5 per cent in 2013 to 7 per cent in 2019. If there are substantial concerns over the adequacy of bank financing in the near-term, the minimum standards might be postponed for a short period until those concerns have been resolved.
- **Calibration of discretionary standards.** Some parameters, such as the countercyclical capital buffer add-on and the additional requirements for Systemically Important Banks (SIBs), are subject to regulatory discretion because they are hard to parameterize across all markets.

As Asian regulators establish these parameters, they can incorporate thinking on the economic cycle and competitive context, including the extent to which access to credit may be becoming tighter. In addition, as many Asian regulators have availed of other more specific and effective tools to constrain potential bubbles particularly in real estate (e.g., through changes in stamp duty, minimum LTV ratios, and capital gains taxes), the need to add any countercyclical buffer would seem less critical than in most Western markets, where regulators have typically not intervened with such market-specific actions. Finally, the practice of state capitalism and ownership in several Asian countries would also mean that the state and regulator have additional tools with which to address cyclical and systemic issues not present in other countries. These would argue for a different calibration of applicable discretionary standards to reflect the broader range of available regulatory measures unrelated to capital.

- On a related note, we have also observed that certain regulators have imposed sector-specific risk weight adjustments to arrest emerging pockets of risk concentration e.g. increasing risk-weights for certain sectors that are experiencing asset bubbles. Compared to the countercyclical capital add-on, which is applied across all the applicable RWA, such an approach offers greater precision in achieving the intended prudential objective while managing the opportunity costs of regulatory intervention.
- **Tailoring of selected parameters for local markets through the appropriate exercise of national discretion.** In some Asian markets, the Basel III impact on specific market segments, such as trade finance or SME lending, may be substantial. Where these seem excessive, the regulator may wish to fine-tune the applicable Basel parameters. Specifically:
  - The AVC impact on trade finance bank counterparties is unwarranted, and should be waived. There is also merit in revisiting the 100 per cent CCF imposed on off-balance sheet trade finance exposures for leverage ratio compliance;
  - We understand that Europe is on track to grant CVA exemptions to trades with corporates, sovereigns and pension funds, and also considering extending this to intra-group transactions. This could also be contemplated for Asia, particularly for project finance-driven hedging transactions;
  - A corresponding initiative, consistent with the proposed CVA exemptions, is to exempt the same entities from central clearing. In Europe, corporate and sovereign clients are exempted;
  - On central clearing in general, our view is that, if Asian CCPs are not able to meet the PFMI requirements, Asian regulators should not enforce central clearing; and
  - To better insulate the SME sector, given the national importance of that segment for economic growth and employment, the applicable capital requirements for such exposures could be moderated. A parallel to this suggestion is the U.K.'s exemption of capital requirements for eligible lending throughout the European Economic Area, where the increase in the minimum Pillar 1 capital requirement due to such exposures are

reduced correspondingly through the Pillar 2 Capital Planning Buffer. This initiative seeks to support lending to the real economy, and could also be considered in Asia.

- **Setting overall capital targets.** Asian regulators have the discretion to impose add-ons above the Basel minimum capital standards. As each bank then needs to maintain additional capital substantially above the new minimum, this generally imposes even greater costs on the regulated banks. While some excess over Basel minimums can be justified by the higher risk volatility in local Asian markets, any further add-ons should be finely calibrated to actual incremental risks.

Basel III is a strong step forward in the global efforts to minimize banking systemic risk. However well-intentioned, this framework works best when minimum requirements are harmonized across different jurisdictions and implemented concurrently, and where adequate and appropriate exercise of national discretion is available to address potential unintended effects. Ultimately, standard rules can never be calibrated to address specific and particularistic features and concerns unique to Asia, and departures have to be accommodated in order to achieve consistency in outcomes.

Our study has focused principally on the capital limb of Basel III. With the LCR framework having been agreed and entering national implementation phase, the same considerations would apply, and we would, similarly, encourage the appropriate exercise of national discretion in this regard. At the same time, level playing field considerations must also be given adequate consideration when deliberating policy trade-offs. Liquidity is another area where policy decisions in various areas can overlap: for example, we note the ongoing industry discussion on the margin requirements for non-centrally cleared derivatives, where it has been contended that collateral assets arising from initial margin requirements, when coupled with LCR implementation, could lead to a shortage of liquid financial instruments.

Asian regulators have always adopted a dynamic and adaptive approach to supervision, and to great effect. It would be unfortunate if this is jettisoned in favor of a strict rules-based approach for the implementation of Basel III. Given the macroeconomic landscape that Asia will be navigating in over the medium- to long-term, as well as Asia's growing importance to the global economy, the importance in Asia staying nimble and flexible in the application of regulatory rules cannot be over-emphasized. Ultimately, the implications of missed opportunities extend beyond the Asian banking sectors; the real economy will also be at risk.

## Appendix: Model assumptions

The key assumptions underlying our base case model and projections are:

- Asian economies will grow over the next five years through to 2017 at the rates for nominal GDP growth forecast by the IMF.
- We have assumed that Asian banks will maintain their current Tier 1 capital ratios going forward – as these ratios are well above the Basel III requirements, what this means is that we do not envisage that the banks and the regulators will allow the Tier 1 capital ratios to fall towards the minimum levels required under Basel III. Imposing Basel III's higher capital requirements will lead to a drop in ROE of 20 per cent (i.e. a bank with a current ROE of 10 per cent in 2011 will find its ROE reduced to 8 per cent in each of the years between 2012-2017 as a result), which in turn reduces the banks' ability to internally generate capital while maintaining a particular dividend payout ratio. The 20 per cent assumption is the same as that made by Standard Chartered Bank in their report, "Basel III triggers metamorphosis of Asian corporate funding," November 8, 2012. Standard Chartered references two other studies that suggest 20 per cent is a reasonable parameter: a Fitch study that estimated the impact on large Asian banks as a 20 per cent decline, and a McKinsey study that estimated the impact on European banks as a 30 per cent decline. This assumption effectively assumes that banks will not be able to pass along the higher costs of capital through to borrowers. We assume this impact occurs immediately as of 2013.

## Summary of scenarios used

Dimension	Scenario 1: Slow Growth	Scenario 2: The 'New' Normal	Scenario 3: Global Recovery
Summary	Pessimistic future with both depressed demand and supply of credit across the board	Base case scenario with full recovery in credit demand in Asia as well as supply from foreign originators	Optimistic scenario with aggressive growth in credit demand in Asia, and stable supply from foreign originators
Credit demand	<ul style="list-style-type: none"> <li>Loan demand growth in each country equal to forecast nominal GDP growth</li> <li>Aggregate CAGR of 10.2 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Loan demand growth in each country at historical multiple of forecast nominal GDP growth</li> <li>Aggregate CAGR of 14.0 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Loan demand in each country at the greater of historical multiple of forecast nominal GDP growth and 1.5x</li> <li>Aggregate CAGR of 15.9 per cent</li> </ul>
Continental European credit supply	<ul style="list-style-type: none"> <li>Drastic retreat from Asian loan market</li> <li>2008-11 historical CAGR applied, capped at 0 per cent</li> <li>Aggregate CAGR of -2.1 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Continued deleveraging but targeted growth in specific markets</li> <li>2008-11 historical CAGR applied, uncapped</li> <li>Aggregate CAGR of 4.3 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Robust growth in Asia's loan market</li> <li>Equal growth rate to credit demand</li> <li>Aggregate CAGR of 15.0 per cent</li> </ul>
U.K. credit supply	<ul style="list-style-type: none"> <li>Drastic retreat from Asian loan market</li> <li>2008-11 historical CAGR applied, capped at half of GDP growth of respective loan market</li> <li>Aggregate CAGR of 3.5 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Maintain strong post-GFC surge</li> <li>2008-11 historical CAGR applied, uncapped</li> <li>Aggregate CAGR of 21.9 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Robust growth in Asia's loan market</li> <li>Equal growth rate to credit demand</li> <li>Aggregate CAGR of 14.1 per cent</li> </ul>
Rest of World credit supply	<ul style="list-style-type: none"> <li>Drastic retreat from Asian loan market</li> <li>2008-11 historical CAGR applied, capped at half of GDP growth of respective loan market</li> <li>Aggregate CAGR of 3.6 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Maintain strong post-GFC surge</li> <li>2008-11 historical CAGR applied, uncapped</li> <li>Aggregate CAGR of 21.7 per cent</li> </ul>	<ul style="list-style-type: none"> <li>Robust growth in Asia's loan market</li> <li>Equal growth rate to credit demand</li> <li>Aggregate CAGR of 14.6 per cent</li> </ul>

## Aggregate credit demand and supply growth assumptions

### Compounded Annual Growth Rates (CAGRs) assumed in model

Country	Credit growth : GDP growth*	Nominal GDP	Aggregate credit demand		
			Scenario 1	Scenario 2	Scenario 3
HK	1.8	6.8 per cent	6.8 per cent	12.2 per cent	12.2 per cent
SG	2.0	5.4 per cent	5.4 per cent	10.8 per cent	10.8 per cent
CH	1.3	11.0 per cent	11.0 per cent	14.6 per cent	16.5 per cent
IN	1.1	14.6 per cent	14.6 per cent	16.0 per cent	21.9 per cent
TW	1.7	4.7 per cent	4.7 per cent	8.1 per cent	8.1 per cent
KR	2.0	6.8 per cent	6.8 per cent	13.5 per cent	13.5 per cent
MY	1.1	8.0 per cent	8.0 per cent	9.0 per cent	11.9 per cent
ID	1.4	14.5 per cent	14.5 per cent	20.9 per cent	21.7 per cent
PH	1.1	9.0 per cent	9.0 per cent	9.9 per cent	13.5 per cent
TH	1.6	8.2 per cent	8.2 per cent	13.3 per cent	13.3 per cent
<b>Aggregate</b>			<b>10.2 per cent</b>	<b>14.0 per cent</b>	<b>15.9 per cent</b>

\* Based on 10-yr historical ratios from YE2001~YE2011

## Credit supply growth assumptions

### Loan supplied by Continental European banks

Country	2008~11 CAGR	Credit supply CAGR assumptions		
		Scenario 1	Scenario 2	Scenario 3
HK	0.4 per cent	0.0 per cent	0.4 per cent	12.2 per cent
SG	0.6 per cent	0.0 per cent	0.6 per cent	10.8 per cent
CH	18.2 per cent	0.0 per cent	18.2 per cent	16.5 per cent
IN	-5.5 per cent	-5.5 per cent	-5.5 per cent	21.9 per cent
TW	4.2 per cent	0.0 per cent	4.2 per cent	8.1 per cent
KR	-16.9 per cent	-16.9 per cent	-16.9 per cent	13.5 per cent
MY	-1.2 per cent	-1.2 per cent	-1.2 per cent	11.9 per cent
ID	0.6 per cent	0.0 per cent	0.6 per cent	21.7 per cent
PH	-1.4 per cent	-1.4 per cent	-1.4 per cent	13.5 per cent
TH	-0.4 per cent	-0.4 per cent	-0.4 per cent	13.3 per cent
<b>Aggregate</b>		<b>-2.1 per cent</b>	<b>4.3 per cent</b>	<b>15.0 per cent</b>

\* Minimum of country's GDP growth for given year and no growth

## Loans supplied by U.K. banks

Country	2008~11 CAGR	Credit supply CAGR assumptions		
		Scenario 1	Scenario 2	Scenario 3
HK	15.6 per cent	2.9 per cent	15.6 per cent	12.2 per cent
SG	15.5 per cent	2.2 per cent	15.5 per cent	10.8 per cent
CH	38.6 per cent	5.1 per cent	38.6 per cent	16.5 per cent
IN	16.2 per cent	6.1 per cent	16.2 per cent	21.9 per cent
TW	22.8 per cent	1.5 per cent	22.8 per cent	8.1 per cent
KR	6.7 per cent	2.6 per cent	6.7 per cent	13.5 per cent
MY	16.4 per cent	3.5 per cent	16.4 per cent	11.9 per cent
ID	29.5 per cent	6.0 per cent	29.5 per cent	21.7 per cent
PH	29.1 per cent	3.6 per cent	29.1 per cent	13.5 per cent
TH	12.4 per cent	3.2 per cent	12.4 per cent	13.3 per cent
<b>Aggregate</b>		<b>3.5 per cent</b>	<b>21.9 per cent</b>	<b>14.1 per cent</b>

\*Minimum of half of market's GDP growth for given year and 3-yr historical CAGR

## Loans supplied by U.K. banks

Country	2008~11 CAGR	Credit supply CAGR assumptions		
		Scenario 1	Scenario 2	Scenario 3
HK	16.6 per cent	2.9 per cent	16.6 per cent	12.2 per cent
SG	8.2 per cent	2.2 per cent	8.2 per cent	10.8 per cent
CH	35.1 per cent	5.1 per cent	35.1 per cent	16.5 per cent
IN	21.5 per cent	6.1 per cent	21.5 per cent	21.9 per cent
TW	25.7 per cent	1.5 per cent	25.7 per cent	8.1 per cent
KR	15.1 per cent	2.7 per cent	15.1 per cent	13.5 per cent
MY	11.2 per cent	3.5 per cent	11.2 per cent	11.9 per cent
ID	27.8 per cent	6.0 per cent	27.8 per cent	21.7 per cent
PH	20.4 per cent	3.6 per cent	20.4 per cent	13.5 per cent
TH	20.6 per cent	3.2 per cent	20.6 per cent	13.3 per cent
<b>Aggregate</b>		<b>3.6 per cent</b>	<b>21.7 per cent</b>	<b>14.6 per cent</b>

## Disclaimer

This report reflects work in progress and the views expressed therein are those of the authors and do not necessarily reflect those of the Fung Global Institute. The authors are solely responsible for any errors or omissions.



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