APAC Economic Perspectives
ASEAN and India: The Big NPL Debate

Economics

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What does the credit cycle say about NPLs?

We have been writing about the maturing credit cycle under our *Debtopia* framework for three years. Deep into the credit slowdown, there is growing evidence that mal-investment during the boom is being recognised across the region. Growth in Non-Performing Loans (NPLs – a subset of bad assets) has been elevated in India and Indonesia for some time and has picked up in Thailand, Singapore and Malaysia. This raises three pivotal questions: 1) Will NPLs ratios keep rising in each of the ASEAN and Indian economies?; 2) Will the NPL cycle in ASEAN prove to be as elongated as in India?; and 3) What will be the implications for consensus growth estimates?

NPL ratios to rise further; consensus growth estimates too optimistic

Consensus GDP growth estimates appear too optimistic in our view, but not dramatically so. We believe rising bad assets are a drag on economic growth and an almost inevitable consequence of the maturing credit boom in the region. With the credit cycle still unwinding, NPL ratios are likely to rise further across ASEAN and India even if there is no crisis in the next 18 months. However, absent a crisis, the rise in NPL ratios should not be as elongated in the ASEAN-5 economies as in India. Institutional frameworks and surplus savings put ASEAN in a better position to manage bad assets once they appear. Having said that, within ASEAN, we believe the risk of an elongated cycle is greatest in Indonesia.

It does get better - eventually

The good news is that, firstly, India and Indonesia may see less growth disappointment as the bad asset issues there may be more widely recognised. Secondly, we believe the disinflationary impact of balance sheet repair should help keep nominal interest rates low across the region (except Singapore). Thirdly, recognition and resolution of bad debts is part of the balance sheet clean-up process that sets the stage for a renewed credit cycle upswing – eventually.

Market implications – Stand, or deliver. Public or private strife

Under pressure from disappointing growth, governments will likely feel obliged to respond. We expect easing or no policy tightening this year from ASEAN and Indian central banks. A transfer of private balance sheet strife to the public sector through fiscal stimulus or balance sheet support could benefit companies linked to government largess as Ian Gisbourne argues in ASEAN Equity Strategy: Stand, or deliver. Government money or strife. However, in the fullness of time, sovereign credit-worthiness could suffer and currencies allowed to weaken as Bhanu Baweja argues in in Global Macro Strategy: EM Enters a New , Dangerous Phase.

UBS Research THESIS MAP

PIVOTAL QUESTIONS

Q: Will officially defined NPL ratios rise in coming quarters?

We think so. NPLs are to be expected after a period of rapid credit creation. The message from India's experience in recent years is that, even without a crisis, a slowing credit expansion can result in a drawn out rise in the NPL ratio.

Q: Will the NPL cycle in ASEAN be as elongated as in India?

Unlikely. We think ASEAN looks better placed than India, due to better debt resolution institutions, surplus savings and external assets. However, within ASEAN, Indonesia looks less well placed on these metrics while Singapore looks better placed to manage bad assets as they appear.

Q: What's the impact of rising bad asset ratios on consensus growth estimates?

We expect rising ratios of bad assets to good assets will contribute to lower than expected real GDP growth in ASEAN and India over the next 1-2 years. Bad assets tie up economic resources and force the suppliers of savings to wait longer for their returns. Bad assets can also hinder the expansion of credit, which in turn can be a drag on growth and create disinflationary pressures. More positively, recognition and resolution of bad debts is part of the balance sheet clean-up process that sets the stage for a renewed credit cycle upswing – eventually.

WHAT'S PRICED IN?

There is little evidence that consensus expects a major drag on growth from the credit cycle. Consensus forecasts show real GDP growth accelerating into 2017 versus 2015, with 2017 growth above or close to long run averages, in most ASEAN economies and India. That optimism appears to rest on stronger domestic demand since aggregate China, US and Euro zone real GDP growth is forecast to slow in 2017 relative to 2015 and to a pace below long run averages.

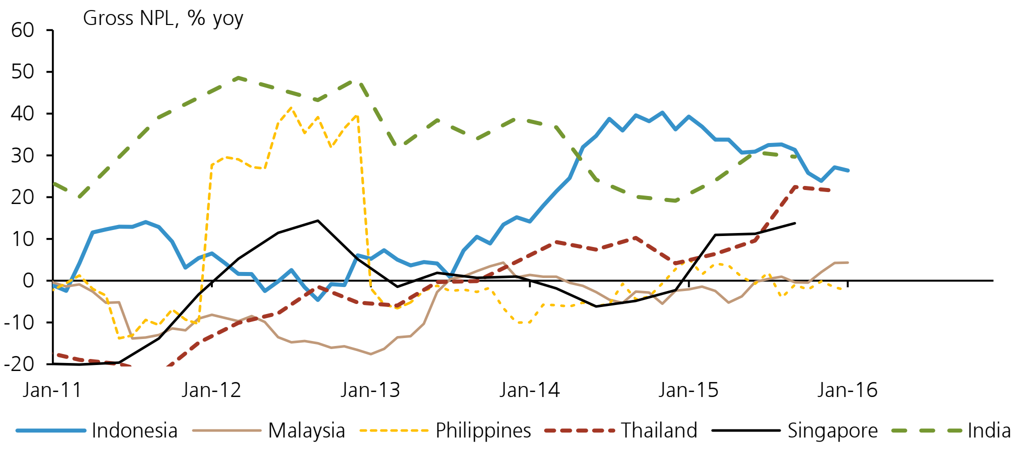
UBS VIEW

We expect the credit cycle to depress domestic demand and act as a drag on real GDP growth going into 2017 across ASEAN and, to a lesser extent, India. We believe consensus estimates are likely too optimistic because they appear to suggest a benign domestic demand outcome at a time when underperforming assets will probably be a drag on credit growth and productivity. India and Indonesia may see less growth disappointment as bad asset issues there are more widely recognized.

EVIDENCE

A key driver of misallocated resources is a boom in credit creation. When the expansion in credit slows, the demand for products and the availability of resources for investment are shown to be lower than expected – assets underperform expectations as a result. Non-performing loans – a subset of underperforming assets more generally – become more prevalent. NPL ratios rise.

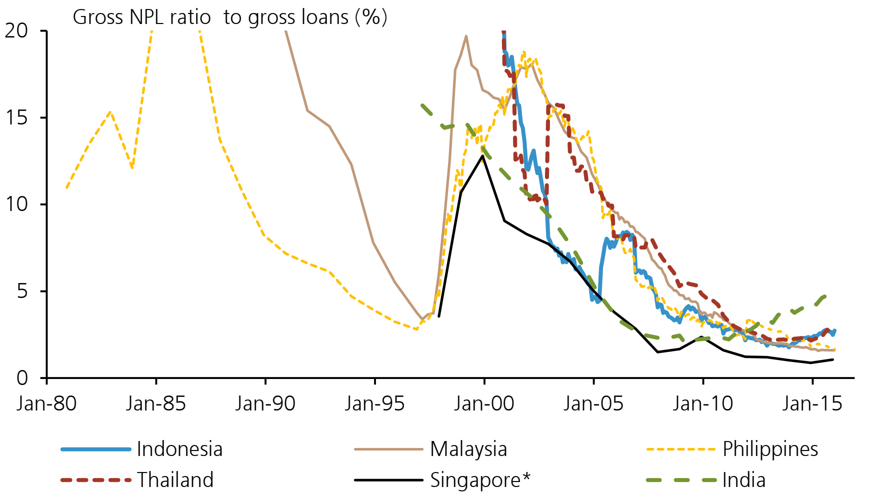
NPLs are rising – that's bad news for economic growth



Source: Haver, IMF, CEIC and UBS calculations

The story in pictures

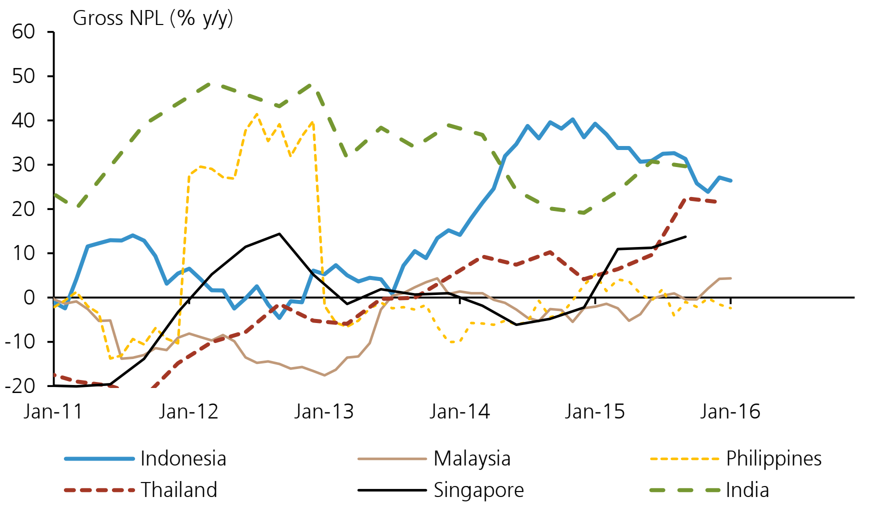
Figure 1: Non-Performing Loan (NPL) ratios are low relative to history…



Source: UBS, Haver, CEIC

According to our framework, underperforming assets (of which NPLs are a subset) are an almost inevitable result of a credit boom. The credit booms recorded across ASEAN and India are still unwinding. As such, while ratios of troubled assets are currently low by historical standards, we think they are likely to rise further across the region.

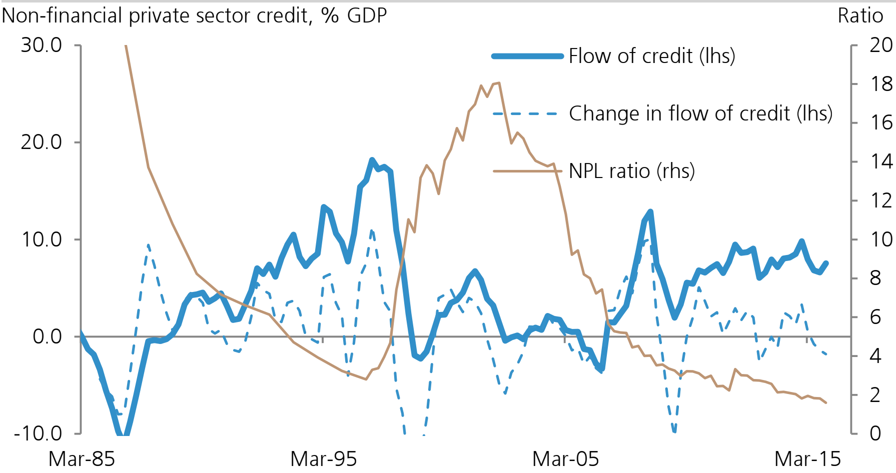
Figure 2: …but NPLs are rising



Source: UBS, Haver, CEIC

NPL growth in India has been rapid for several years. Indonesian NPLs have been likewise growing quickly for some time. Elsewhere NPL growth is accelerating. Only in Philippines has it yet to pick up.

Figure 3: Credit cycles create bad assets, which become an economic drag

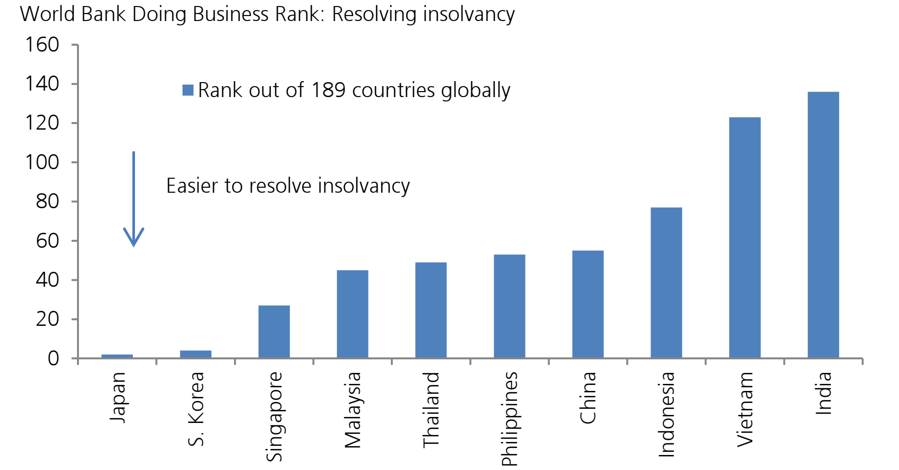


Source: UBS, Haver, CEIC

We show the Philippines as an example in this Figure as the lengthy NPL data history available allows a sense of the relationship between bad assets and credit creation over time. The lack of recent acceleration in Philippine official NPL data is likely because the flow of credit has yet to slow. Elsewhere in ASEAN and India, the flow of credit has slowed and NPLs grown.

The story in pictures cont.

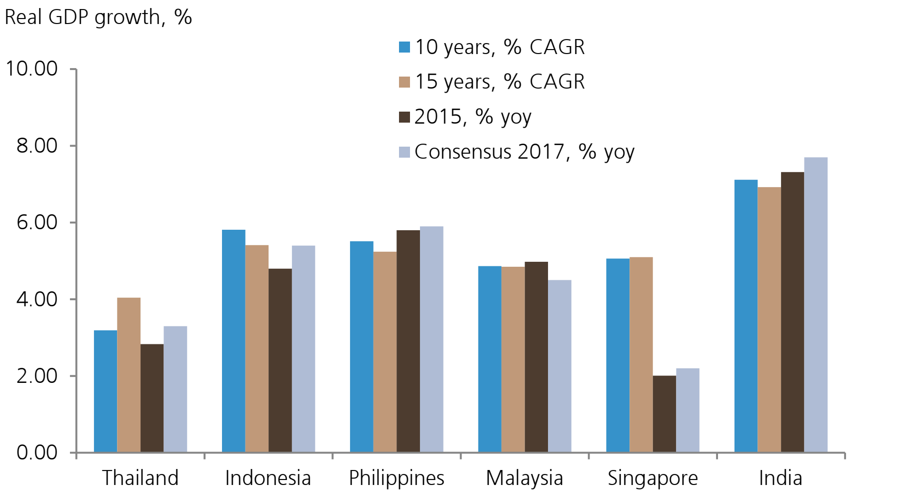
Figure 4: Stronger bad debt resolution framework in ASEAN-5 vs. India



Source: World Bank

Underperforming assets are a drag on economic growth and credit formation. Resolving bad assets quickly is key to restoring growth to its potential. ASEAN is better placed here than India because of institutional bad debt resolution frameworks (see Figure), surplus savings and external assets.

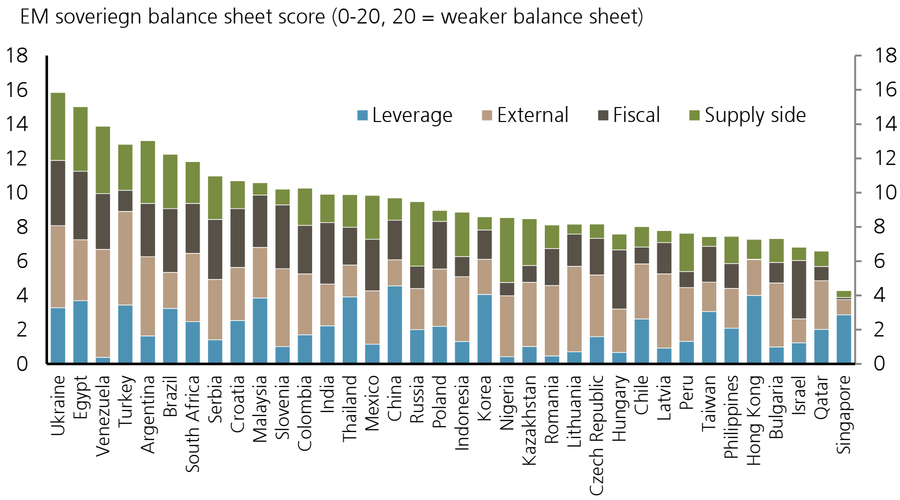
Figure 5: Consensus growth expectations look optimistic



Source: UBS, Haver

Consensus growth estimates for ASEAN and India appear to embody a recovery in domestic demand. The weighted average consensus growth projection for the US, Europe and China is for slowing growth in 2017 versus 2015. Yet consensus growth estimates for most of ASEAN and India optimistically look for accelerating growth in 2017 verses 2015. Wider recognition of bad asset issues may mean less of a disappointment in India and Indonesia.

Figure 6: Government response may lead to weaker sovereign balance sheets



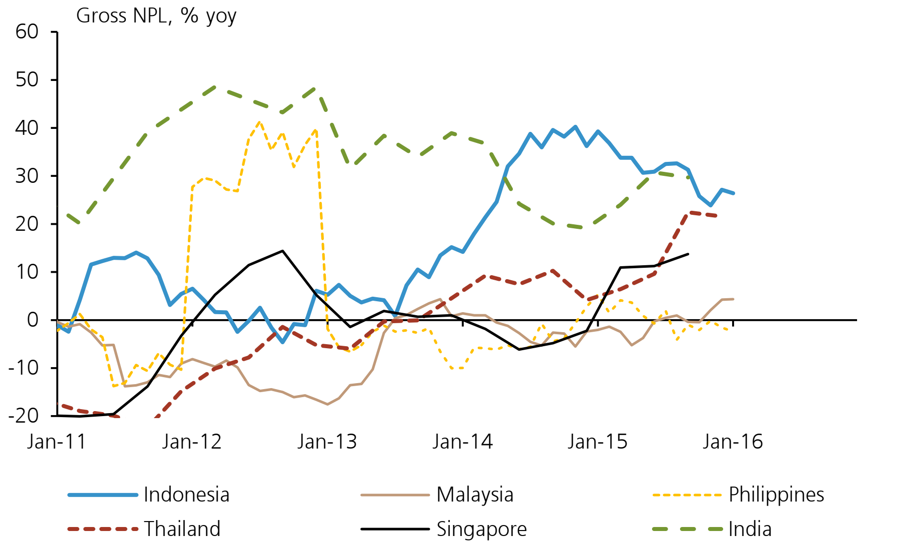
Source: UBS

It is possible underperforming assets rise meaningfully and are not quickly resolved by the private sector. In this case the government may feel obliged to intervene with looser fiscal policy or the transfer of bad assets to the sovereign balance sheet. Where sovereign balance sheets are already stretched (See figure) sovereign credit-worthiness could be impaired. Singapore looks relatively well placed on this metric.

Will officially defined NPL ratios rise?

We think so. NPLs are to be expected in a credit cycle downturn. And the credit cycle has turned down in ASEAN and India. NPLs ratios are rising in India and most ASEAN economies but are still not high in a historical context. Absent a financial crisis NPLs need not spike higher. Nonetheless, the message from India's experience is that, even without a crisis, a slowing credit expansion can result in a drawn out rise in the NPL ratio.

Figure 7: Growth in NPLs has accelerated in ASEAN



Source: UBS, CEIC

Why might NPL ratios rise?

Logically and empirically, non-performing assets follow from rapid credit expansions – usually coming to light as the credit expansion slows.

Absent a credit expansion, the level of savings in an economy – the share of productive resources not directed to consumption – provides the funding and resources for investment. Savings allow the purchase of capital goods and pay the wages of labour that will ultimately contribute to the production of consumer goods beyond the immediate future. A decision by individuals in an economy to increase the rate of saving out of income tends to lower interest rates and allows longer term but also more productive investments to be undertaken.

Credit can be created in two ways (1) credit creation – the co-incident creation of loans and deposits on the part of banks – and (2) the harvesting and on-lending of national savings. The former process – evidenced by rapid loan growth or rising debt to GDP – temporarily increases purchasing power in the economy. That purchasing power might support consumption or, more often, investment. In the case of investment, an expansion in credit creation gives the impression more savings are available, temporarily depressing market rates of interest. However, unlike an increase in the rate of saving out of income, an increase in credit does not reduce the demand for consumer goods which allows resources to be

redirected toward investment. On the contrary, an expansion in credit creation can increase the demand for both consumer and investment goods.

This is why credit expansions tend to be associated with a rise in inflation or declines in current account surpluses. When the rise in purchasing power outstrips the available domestic resources, price pressures or import pressures increase. As these unwanted excesses grow, market forces or policy makers tend to slow the expansion of credit – rendering the rise in purchasing power temporary.

When these constraints bite the ability for real consumption or investment to meet hoped for levels is disappointed. For consuming households this merely involves the disappointment of unmet consumption plans. For investing entrepreneurs it can be a disaster.

Because the increase in credit tends to lower interest rates, some of the investment projects started as a result will have been those with a long gestation period. Stopping such an investment early might means a half finished building, a factory that is poorly connected to the rest of the supply chain, or an investment for which the expected consumption proved to be a temporary facet of the credit expansion. The result is excess capacity or mal-investment. Under performing assets in a broad sense that are likely to translate into non-performing assets in a regulatory sense.

How this happens is important. A sharp adjustment in markets or rapid policy tightening by policy makers – such as in a crisis situation – can mean a swifter and more significant rise in bad assets and brake on activity. A gradual slowing of the credit cycle still implies underperforming assets, but probably less acute with a more modest rise officially defined NPLs than under a crisis scenario.

To be sure, the proximate cause for any given NPL may be bad luck, a lack of government permits or unexpectedly fierce competition, amongst others. However, a key driver of the scale of increase in the ratio of bad assets to total assets across and economy is the broad misallocation of resources associated with accelerated credit creation.

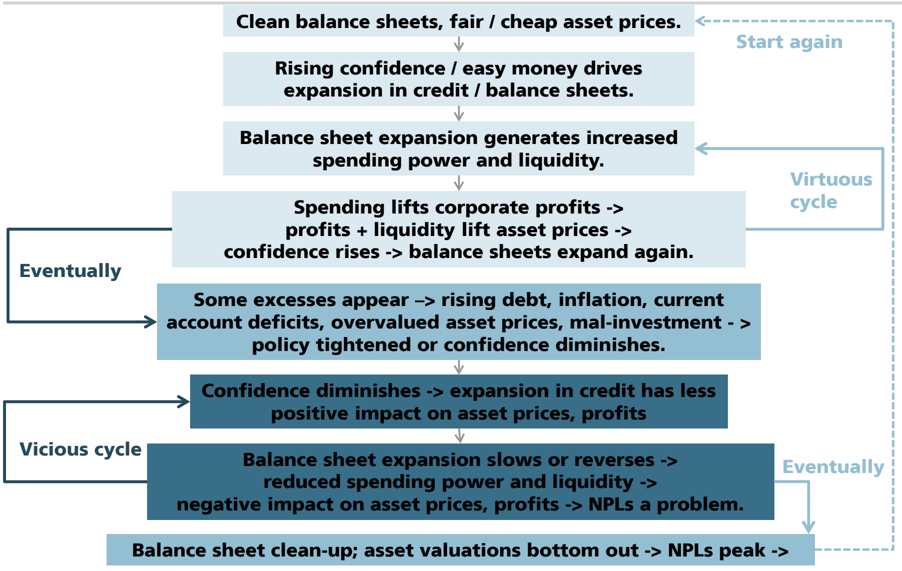
Another step in our Debtopia framework

Rising non-performing assets are another step in the Debtopia framework we have used in recent years[1]. Figure 8 shows the salient points. An increase in credit creation supports economic activity. But ultimately the credit creation leads to excesses that work to slow the expansion and render the boost to activity temporary – resulting in non-performing assets. Each of India, Indonesia, Malaysia, Thailand and Singapore have experienced one or more of these excesses as we have argued in previous work (link).

Consistent with the framework in Figure 8, credit growth has clearly slowed across the ASEAN-5 and Indian economies and we have seen economic growth moderate in turn. Expectations of sustained growth that had been supported by the credit expansion have come under downward pressure.

[1] Asian Focus: Debtopia; Duncan Wooldridge; 15 April 2013

Figure 8: Debtopia



Source: UBS

Will NPLs continue to rise? - scenarios

Under our framework, rising mal-investments should be associated with a slowing credit cycle and falling mal-investments with the early stages of a credit boom. To get a sense of the trend in mal-investments we look at data on officially defined NPLs[2].

We present three scenarios

1) Black sky - regional crisis

2) Grey sky – external demand remains depressed; no crisis but credit cycle continues to mature across ASEAN but in India

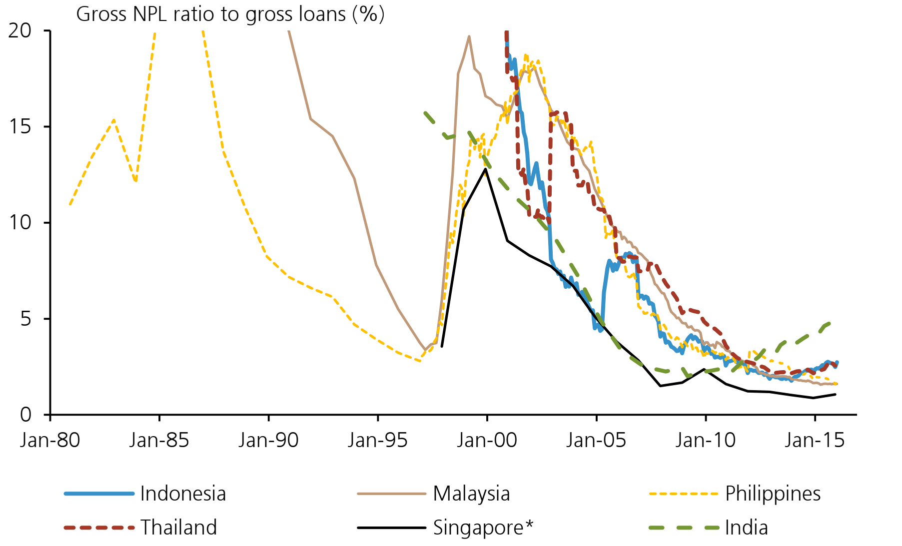
3) Blue sky - surprising recovery: easy monetary policy in US and Europe leads to a surprisingly strong global credit upswing which lifts Asian growth

Black sky

This is the extremely unlikely worse-case type scenario. One example of such an outcome could be the negative China scenario discussed in Q-Series® The Dragon's Tail: What Would A 4% China Do To World's Markets? Here the Chinese economy slows to around 4%, triggering a correction in financial markets and something of a credit crunch elsewhere in Asia.

[2] Unfortunately NPLs are only a subset of bad assets in the economy at any given time. See the Appendix for more on the official definition of NPLs.

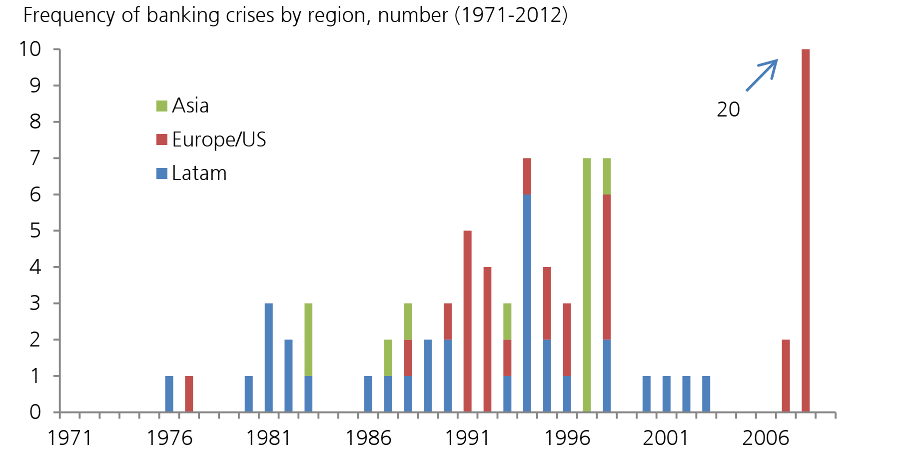
Figure 9: Ratio of NPLs to gross loans is low



Source: UBS, CEIC *Note: Singapore data is 3 largest banks only

Historical data (Figure 9 above) suggests NPLs rise sharply during crisis periods. The rise in NPLs around the time of the Asian Financial Crisis is prominent across ASEAN and India. Where earlier data is available the rise in Philippine NPLs was sharp in after the 1985 crisis that heralded the end of the Marcos era. Regional contagion effects are often seen in previous crisis outcomes around the world. Figure 10 shows the clustering of banking crises by region over the last 40 years. As such a crisis in one Asian country would likely push NPLs ratios up regionally – probably towards and over 10% of gross loans if history is any precedent. The actual scale of problem assets would likely be even worse.

Figure 10: Bunched banking crises



Source: UBS, IMF Working Paper - Systemic Banking Crises Database: An update, Laeven and Valencia (2012)
See also APAC Economic Perspectives ASEAN and India: What will governments do about slow growth and why it matters

Although a risk, we do not believe we face an imminent financial crisis in Asia. However, since the Global Financial Crisis, the message thus far from in India and Indonesia following their respective credit booms is that a financial crisis and contracting credit is not a necessary condition for a rise in bad assets. The slowing

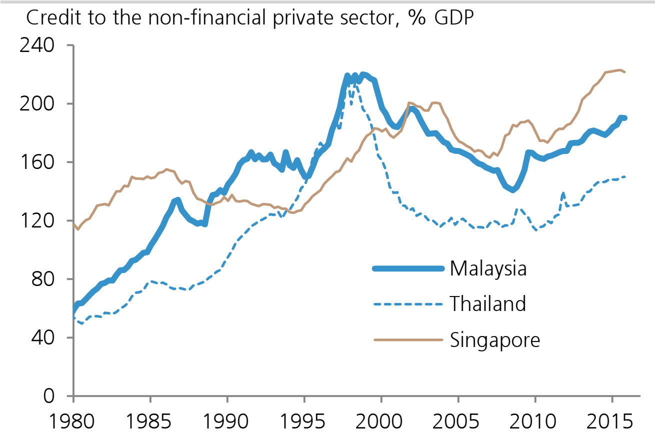
of a previous lively credit expansion is sufficient. The recent experience of NPL growth has been less sharp but more prolonged for India than was the experience in the Asian crisis for Malaysia and Philippines.

Grey sky – external demand depressed, no crisis

This is our baseline forecast. The ASEAN and Indian economies face a grind, but no imminent crisis, from the high debt levels at home and in key export markets – US, EU, China. External credit creation and flows matter alongside domestic credit cycles[3].

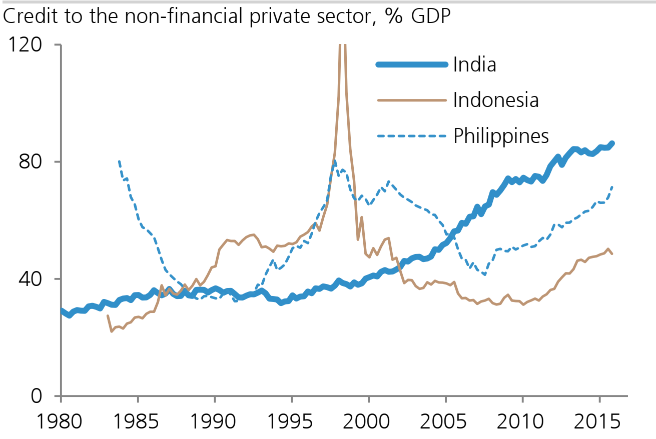
Under this scenario it is possible the future trajectory of NPLs will vary across economies given different flow of credit and other country specific factors. For example, outside India and Indonesia, market and policy interest rates have remained low as credit related excesses did not cause unmanageable capital outflows. Figures 13-18 show NPL ratios against UBS estimates of the flow (change in the level) of private non-financial credit to GDP and the change (acceleration) in that flow. Falling credit flow metrics are indicative of a slowing credit cycle. Given the cyclically high level of debt to GDP (Figures 11 and 12) across the region, one might expect economies still experiencing high credit flows to experience credit slowdowns in due course. Where debt levels are high in an absolute sense (Figure 11) deleveraging pressures are possible at some point.

Figure 11: Private sector debt to GDP



Source: UBS Estimates

Figure 12: Private sector debt to GDP



Source: UBS Estimates

At the country level:

- In India NPLs have been rising quickly for several years. Nonetheless, Indian Bank's Analyst Vishal Goyal believes we are still in the middle of the (officially defined) NPL cycle (Where are we in the NPL cycle?). Vishal estimates the pool of stressed loans could be more than 2x of the gross NPL reported by banks up to December 2015. In the last three years, there has been a lot of discussion around the size of problem loans/sectors, but Vishal believes NPL recognition and provisions thereof are lagging significantly. While the total pool of stressed loans may not increase from here on, NPL provisions may catch up to the latent

[3] Macro Keys: Asia: In Search of Top Line Growth, Wooldridge, 12 February 2015

stress in the system. Vishal analyses asset quality issues for the sector in our detailed notes (see Deep dive into lending practices and Corporate NPL risks persist) in FY17.

- In Indonesia the flow of credit has already slowed and the case for deleveraging is mitigated by a moderate level of private non-financial credit to GDP. NPLs have been rising quickly following the authorities efforts to reduce credit related excesses in the form of the current account deficit and inflation. Joshua Tanja, Head of Research and Banks analysis believes the pace of NPL growth has peaked – although the NPL ratio will continue to rise in 2016 (link).

- Malaysia's flow of credit still looks high relative to history and will likely continue to slow. We note that the 3 year increase in credit to GDP is over 15ppts of GDP – a red flag in the IMF's sovereign debt sustainability analysis. That should put upward pressure on the NPL ratio – consistent with Malaysia Head of Research and banks analyst Chris Oh's view.

- Philippines is the only country in ASEAN-5 and India not to have seen a clear uptick in the NPL ratio or NPL growth. That is not surprising. The flow of credit has yet to slow. As and when it does slow that could mean a rise in NPLs. However, in 2016, Philippines Head of Research and banks analyst Jody Santiago expects an essentially stable NPL ratio.

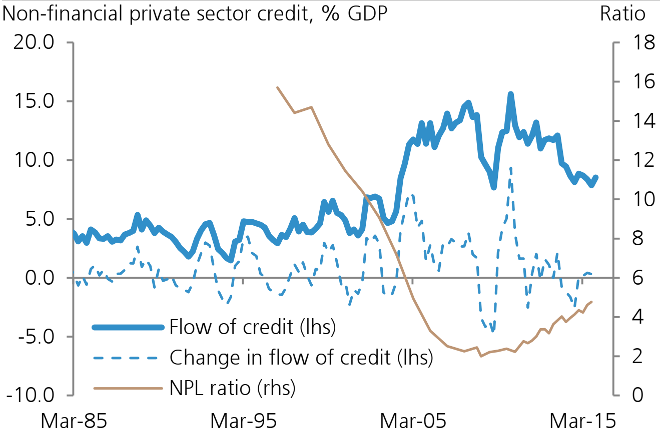
- In Singapore, the flow of credit has slowed dramatically but may come under pressure to slow further. We expected higher US interest rates will encourage capital outflow from Singapore, pushing up SGD rates and depressing credit growth. That implies higher NPLs – as Singapore Banks Analyst Aakash Rawat argues in 'The woes of non-performing lows revisited' (7 April). However, the picture is clouded in Singapore because of the high share of foreign exposure captured in the NPL data shown here but not the private non-financial credit flow data. As we discuss below Singapore resident entities may also face mal-investment issues not directly related to the Singapore economy.

- Thailand has recorded a cumulative 3-year rise in private credit to GDP of over 15 percentage points – as with Malaysia, a source of concern. Subsequently the flow of credit in Thailand has slowed meaningfully. That implies rising NPLs. To be sure, NPLs have already risen somewhat but Thai Banks Analyst Worawat Saisuphatphol believes 2016 will deliver a record pace of NPL recognition relative to recent years – with a peak in NPL growth in H2 2016 (link). We also note that lending by government Specialised Financial Institutions (SFI), whose assets are about 28% of commercial banks', is not covered by official NPL data shown below. Moreover SFI asset quality is, according to the 2015 IMF Article IV report, "weaker than in commercial banks". That report shows the Government Housing Bank and the Bank for Agriculture and Agricultural Cooperatives to have NPL ratios to gross loans of 6% and 4% respectively on data available at that time. Mal-investment resulting from the lending by these policy institutions could also act as a drag on the economy.

Blue sky- recovery in global credit cycle

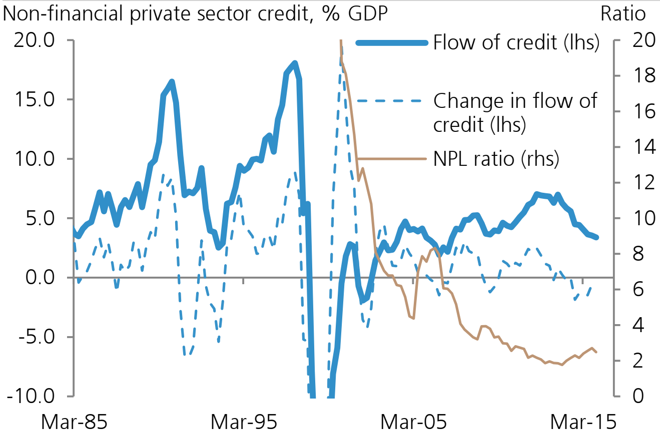
Here easy monetary policy in US and Europe leads to a surprisingly strong global credit upswing which lifts Asian growth. Downward pressures on the Asian credit cycle are reduced and easier Asian credit conditions limits NPLs. In this scenario NPL ratios might be expected to be stable or decline – so long as the external lift to growth is sustained.

Figure 13: India



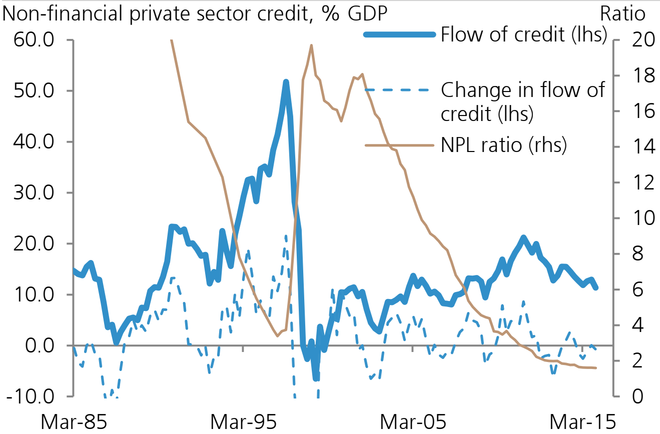
Source: UBS Estimates

Figure 14: Indonesia



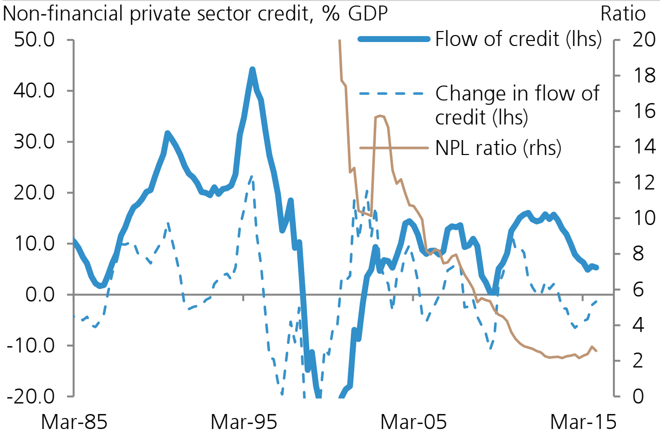
Source: UBS Estimates

Figure 15: Malaysia



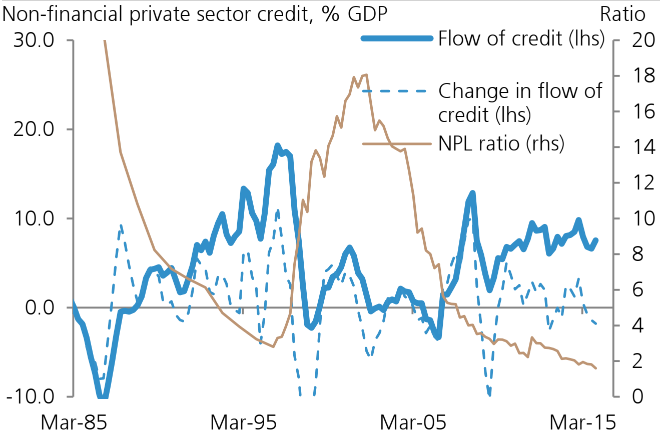
Source: UBS Estimates

Figure 16: Thailand



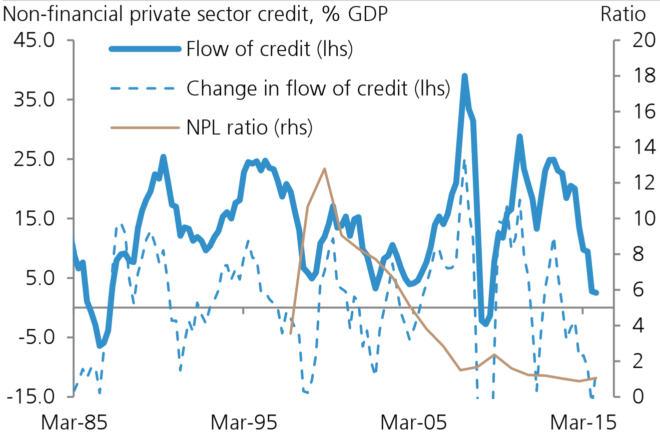
Source: UBS Estimates

Figure 17: Philippines



Source: UBS Estimates

Figure 18: Singapore

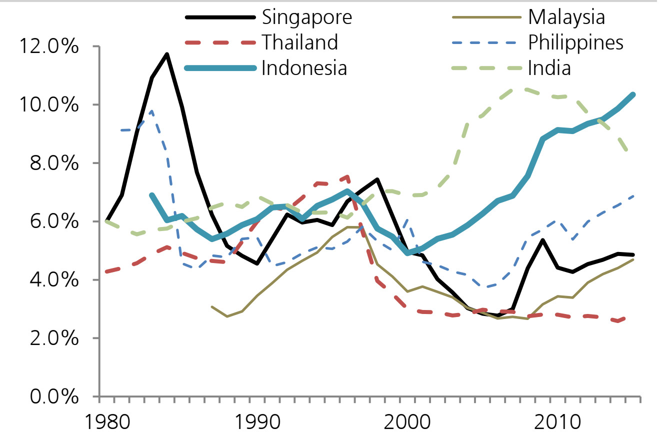


Source: UBS Estimates

But what about interest rates?

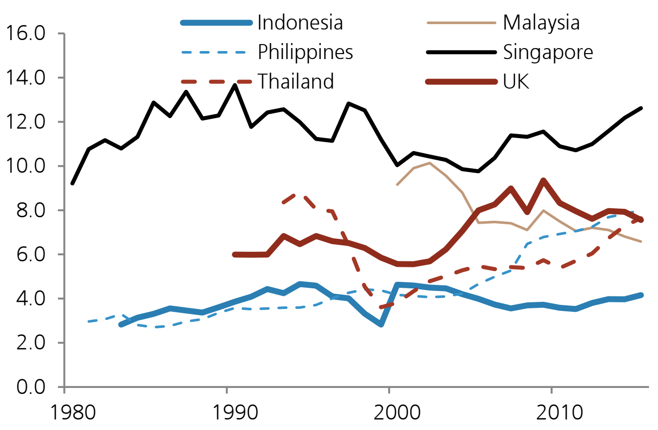
One might be sceptical that mal-investments or NPLs should rise just because credit growth has slowed – especially if interest rates have not risen. The key element to our argument is that the prior flow of credit has driven up activity in areas of the economy that is unlikely to be supported once the flow of credit slows. The following Figures suggest activity has been driven up in the usual suspects one would usually expect to benefit from easy money – construction (for India, Indonesia, Malaysia and Philippines) and finance (for Singapore, Thailand and Philippines[4]). To be clear, we do not mean any mal-investments will necessarily come from these specific sectors. Instead we argue that activity levels pumped up by credit creation will ultimately correct once the flow of credit slows. And it is this correction that will reveal mal-investments across the economy in its wake. Naturally this process can happen more violently if policy makers or capital outflows force interest rates higher, but visibly higher nominal interest rates are not a necessary condition for a credit boom to deliver mal-investments.

Figure 19: Construction sector share of GDP



Source: UBS, Haver, CEIC

Figure 20: Financial sector* share of GDP[4]



Source: UBS, Haver, CEIC
* Financial services and insurance

[4] It is possible the rise in Philippines' financial services value added share of GDP is more linked to the rise in Business Process Outsourcing rather than activity associated with buoyant credit and asset prices.

Will the NPL cycle in ASEAN be as elongated as in India?

Although NPL growth in India peaked in 2012, the rise in NPLs has been a constant concern for investors and policy makers over the subsequent four years. Could a rise in ASEAN NPLs prove as elongated?

This matters because the persistence of underperforming assets in the economy is just as important as their appearance in the first place. A bad loan, once properly provisioned for, might become less of an issue for investors in bank equity. For the economy, bad assets will continue to be a drag until the scare labour and physical resources involved are redirected elsewhere or the asset is rehabilitated through additional investment. Here ASEAN looks better placed than India, due to better debt resolution institutions alongside more prevalent surplus savings and external assets. However, within ASEAN, we think Indonesia looks less well placed on these metrics while Singapore looks better placed to manage bad assets once they appear.

Institutional issues

Similar to India's experience of a slowing credit cycle in recent years, the slowdown across the ASEAN economies has been relatively gradual. ASEAN has not suffered a sharp correction in financial markets and economic activity with a corresponding sudden multi-fold rise in NPLs. However, that means there has been no crisis policy response or bail-out dealing with NPLs. Nor has also been a corresponding sharp recovery to aid asset recoveries. Instead the weight of adjustment has fallen on the standing institutional arrangements and economic resources to deal with insolvencies.

Figure 21: Insolvency regimes compared

Economy	World Bank Rank (of 189)	Recovery rate (cents on the dollar)	Recovery time (years)	Cost of proceedings (% of estate)	Strength of insolvency framework index (0-16)	Bankruptcy Law (date)
Japan	2	92.9	0.6	3.5	14.0	Yes (2004)
S. Korea	4	83.6	1.5	3.5	14.5	Yes (2007 & 2009)
Singapore	27	89.7	0.8	3	8.5	Yes (2012)
Malaysia	45	81.3	1.0	10	6.0	Yes (1967, revised 1988)
Thailand	49	42.5	2.7	36	11.5	Yes (1940, amended 2006)
Philippines	53	21.4	2.7	32	14.5	Yes (2013)
China	55	36.2	1.7	22	11.5	Yes (2007)
Indonesia	77	31.2	1.9	21.6	9.5	Yes (2004)
Vietnam	123	20.1	5.0	14.5	8.0	Yes (2014)
India	136	25.7	4.3	9	6.0	No (submitted to parliament in 2015)
East Asia & Pacific	..	32.5	2.7	21.8	6.8	
OECD high income	..	72.3	1.7	9	12.1	

Source: World Bank
Note: The World Bank Resolving Insolvency rank 2015 is based on an simple average of the relative performance under two indicators: i) the recovery rate on the dollar under a simulated debt resolution case and ii) the trangth of insolvency framework score.
The recovery rate analysis is based on the hypothetical case of a business loan default which produces a simulated recovery rate, recovery time and case cost
The strength of insolvency framework is based on index scores for i) Commencement of / access to proceedings; ii) Management of debtors assets; iii) reorganisation proceedings / compliance with international best practice; and iv) Level of creditor participation. A higher value of the strength of insolvency framework index indicates legislation that is better designed for rehabilitating viable firms and liquidating non-viable ones.

In these circumstances, the poor institutional infrastructure in India has probably lengthened the period of rising NPLs. The Figure 21 shows the results of a World Bank 'Doing Business' study on Resolving Insolvency. The data provides a sense rather than a full institutional picture; but India scores badly, while Singapore looks relatively well prepared. Echoing this, in contrast with ASEAN-5 economies, we note that India does not have a specific Bankruptcy Law – let alone one revised in the light of the Asian Financial Crisis experience. Finally, comparative work by Vishal Goyal (Indian Banks: When banks open their books…) highlights that Indian bank's asset quality disclosures are poor relative to global best practice. A lack of information can only hurt the broader bad asset resolution process.

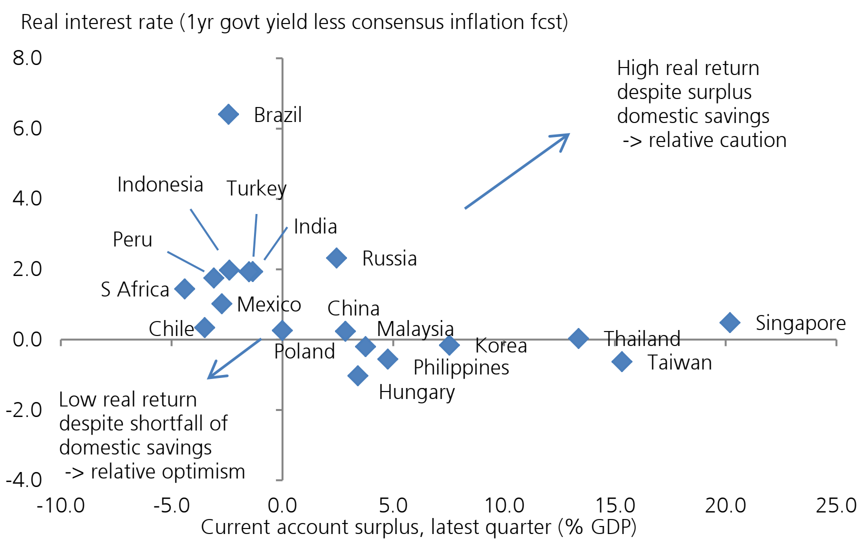
India's does have bankruptcy legislation in the pipeline. Currently with parliament, the 'Insolvency and Bankruptcy Code 2015', is part of a package of reforms designed to meet the challenge of high official NPLs and restructured loans. Nevertheless, while the institutional arrangements for the management of bad assets are being reformed, the prevailing situation has likely made India's NPL situation worse than it otherwise would have been.

Domestic resources – availability of savings

Also unhelpful will have been the shortfall in savings in India. As we argued above, the mal-investment aspect of non-performing loans or bad assets can create stranded assets in the supply chain. These assets could be converted to productive investments given the right institutional framework and the availability of savings to fund the investment necessary to make the assets useful.

The current account deficit measures the gap between domestic savings and domestic investment. That does not necessarily mean savings are in short supply since capital can flow across borders. However, absent foreign investor enthusiasm and buoyant capital inflows – which usually occurs during the early rather than late stages of a credit expansion – real rates will tend to be higher in current account deficit countries than in surplus countries as the Figure below shows. A shortfall in savings and the associated high real rates – such as in India and Indonesia – will likely make managing a bad asset cycle more difficult.

Figure 22: Surplus savings and real rates



Source: UBS, Bloomberg, Haver

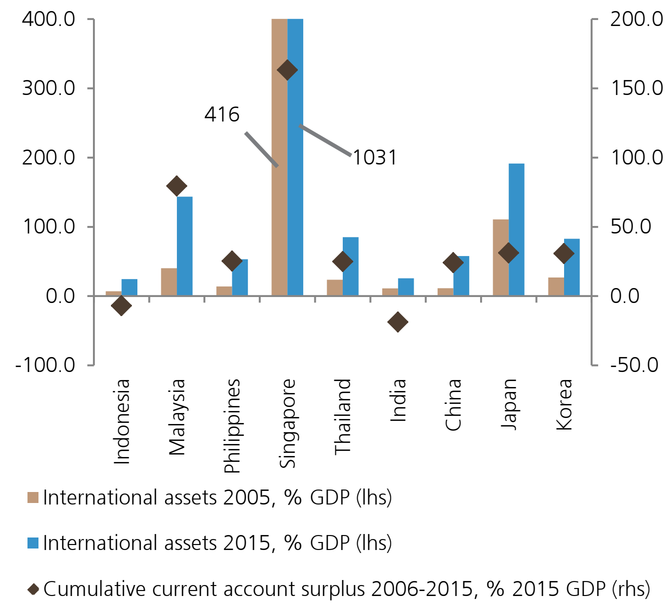
International resources – external assets

Unfortunately persistent current account surpluses do not necessarily limit exposure to rising bad assets. By definition current account surpluses also imply net capital outflows. These net capital outflows will, in turn, have contributed to credit expansions in other economies. Figure 23 below shows current account balances over time against the changing size of external assets to GDP. The data implies that Singapore, with its large current account surplus, gross asset and net asset positions is particularly exposed to (good and bad) asset cycles in other economies. The gross asset position is partly a consequence of Singapore's position as a financial centre, but the net asset position suggests an exposure for Singapore itself. Malaysia and Thailand also have significant exposures as, to a lesser extent, does India.

Our colleagues in equity research have analysed the more prominent exposures. Singapore Banks analyst Aakash Rawat has written on concerns over Singapore Bank exposure to commodity sectors (link) and China (link). Head of Singapore Research Cheryl Lee has written on concerns over Singapore conglomerate investment in Brazil (link) and (link).

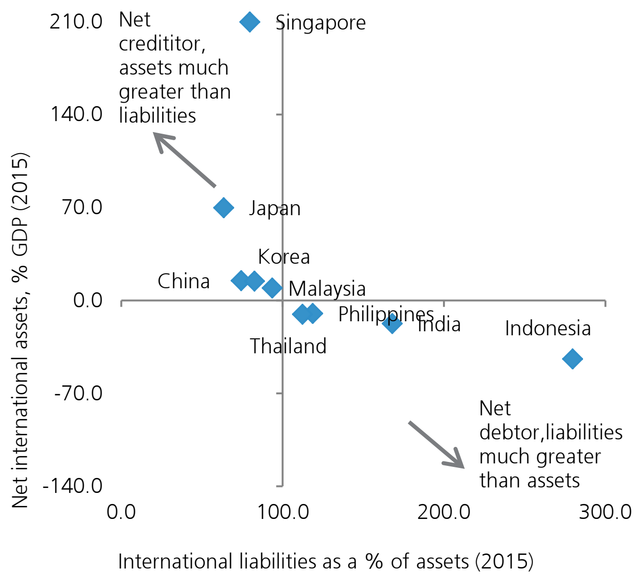
Nonetheless, when the balance of assets and liabilities are taken into account, we believe Singapore appears relatively well positioned with both surplus savings and international assets to cope will mal-investment outcomes. Absent foreign investor enthusiasm, Indonesia as well as India may face headwinds to resolving non-performing assets because of the shortfall in savings.

Figure 23: Current account balance and international financial assets over time



Source: UBS, CEIC, Haver

Figure 24: International financial assets vs liabilities



Source: UBS, CEIC, Haver

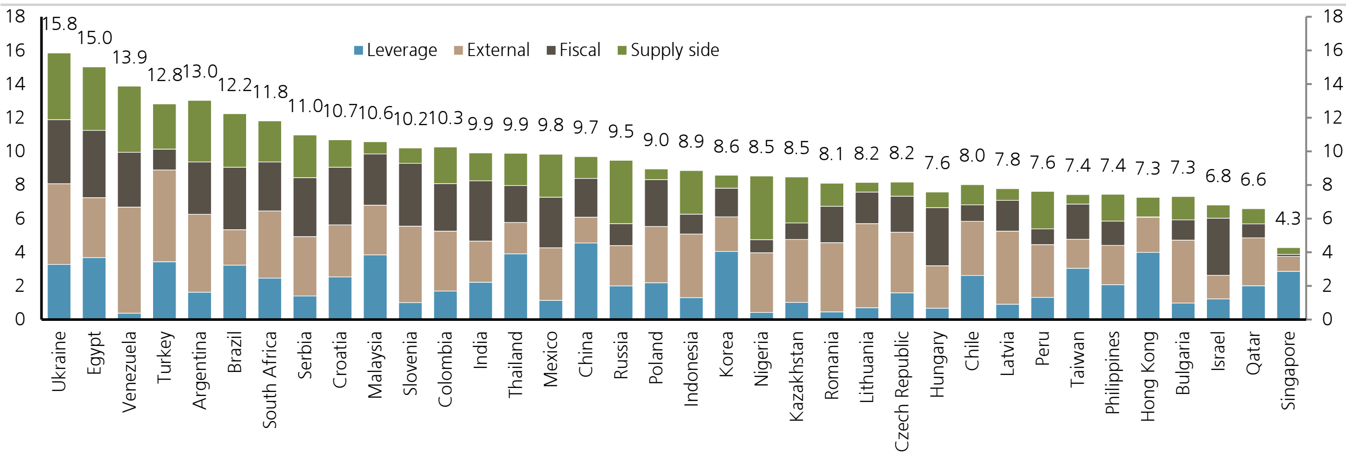
Dealing with bad loans – policy stimulus vs. workout

Absent an effective or acceptably swift bad asset workout process it is highly likely policy makers feel obliged to offer additional policy easing in response to weak growth. Looser monetary policy may form part of the response, once the excesses of the credit boom have been reduced. A fiscal policy response is also possible. If sustained, fiscal support for private sector balance sheets either via wider budget deficits or direct investment in the private sector could lead to deteriorating public sector balance sheets.

Although such policies may reduce the balance sheet burden on the private sector in a narrow sense, transferring bad assets onto the government balance sheet does not entirely remove the drag on the economy. The bad assets will still be bad. Indeed the government may not be best position to return the a bad asset to health given the political difficulty governments often face in laying-off workers or judging the most economically efficient investments. As UBS' Emerging Market's Equity Strategist Geoff Dennis recently highlighted in Macro Keys – GEM SoE's: Underperforming and Underweight, listed SoE's return on equity has consistently underperformed that of non-SoE's.

We, along with our colleague, Head of EM Global Asset Allocation, Bhanu Baweja have discussed this in Global Macro Strategy: EM Enters a New , Dangerous Phase and APAC Economic Perspectives ASEAN and India: What will governments do about slow growth and why it matters. The Figure below shows Bhanu's sovereign balance sheet score - which suggests India, Malaysia and Thailand are in a worse starting position than Indonesia, Philippines and, especially, Singapore.

Figure 25: UBS EM Macro Balance Sheet Score per country (1=least risky, 20=most risky)



Source: UBS

What's the impact of rising bad assets on consensus growth estimates?

Bad assets are bad for growth. At the most basic level, they tie up economic resources and force the suppliers of savings to wait longer for their returns – introducing an opportunity cost of reduced productivity in the economy. Bad assets can also reduce the ability of the financial system to allocate resources. We expect under-performing assets contribute to disappointing real GDP growth across ASEAN and India in the next 1-2 years. However, India and Indonesia may see less of a disappointment as the NPL issues there are more widely recognised.

Opportunity costs

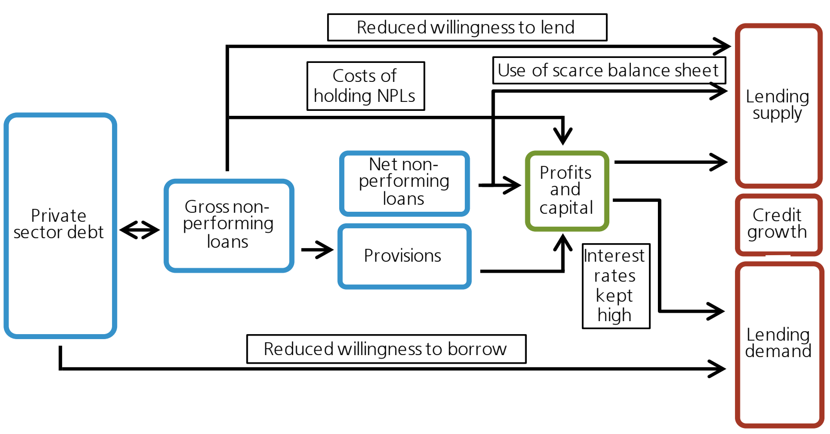
Economic growth is all about allocating scarce resources more efficiently. In an uncertain world, efficiency is always about trial and error. Resources are allocated and reallocated, with more profitable investments rewarded at the expense of less profitable investment. Rapid credit expansions magnify the risk and scale of misallocation by misleading investors as to the availability of resources and the rewards offered by different investments.

Unfortunately not all investments can easily be reallocated. Buildings or machines may need additional investment and workers retraining before they can be redeployed – if they can be redeployed at all. Even if excess capacity is ultimately brought into use with a lag, the point still stands that scarce resources could have been better used. The economy's performance will be below what could have been.

A brake on lending

Beyond the opportunity costs of past misallocations of resources, bad assets can reduce financial systems' willingness and ability to lend. The below diagram, based on work by the IMF[5] concerning Europe's almost trillion euros of NPLs, highlights the channels by which both credit demand and supply may be reduced by bad loans.

Figure 26: Non-performing assets are bad news for credit growth

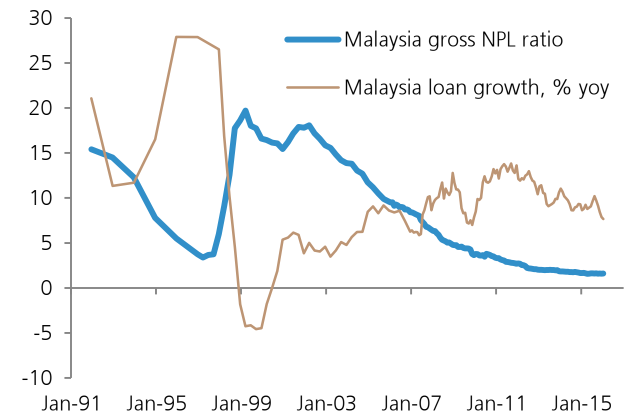


Source: IMF, UBS

[5] IMF Financial Stability Report, April 2015

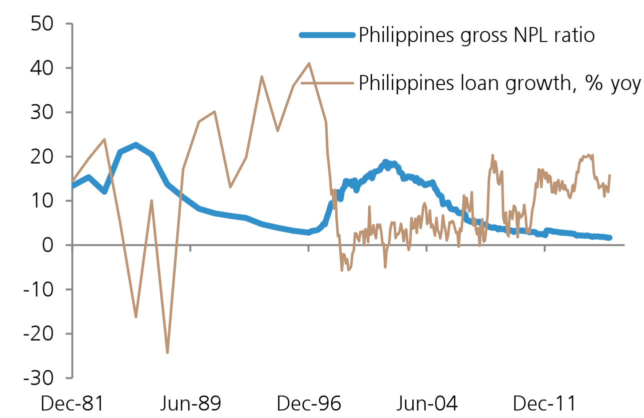
Long run data on NPLs is limited, but where it is available for Philippines, Malaysia (and the US), the empirical message fits with the above logic. An elevated NPL ratio is consistent with weak credit growth.

Figure 27: Malaysian credit growth and NPL ratio



Source: UBS, CEIC

Figure 28: Philippine credit growth and NPL ratio



Source: UBS, CEIC

This matters because, under our Debtopia credit cycle framework, a credit upswing can be a key driver of cyclically buoyant asset prices. Lacklustre credit growth as a result of NPLs might mean lacklustre asset markets. That's the bad news.

The good news

The good news is that the balance sheet repair process and resolution of NPLs should set the stage for the buoyant early stages of the next credit cycle. The excesses associated with the prior expansion in credit should diminish. Slower credit growth may act to reduce debt to income ratios. However, it should also reduce spending verses income and spending verses the supply of goods and services. The current account balance (the gap between spending and income) should rise as a result and inflation should slow. An upshot of these dynamics is that investments made under a subdued credit growth environment have a better chance of turning out to be productive in the long run.

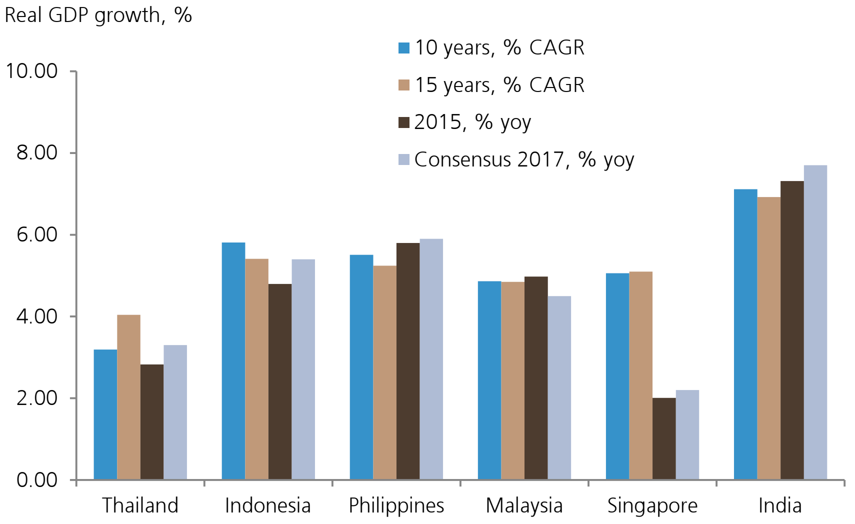
As such the outlook for assets prices should improve as the full scale of any NPL problem becomes better understood and resolution efforts get underway. A point that Asia Equity Strategist Niall MacLeod argues in APAC Equity Strategy: Asia's de-rating and the new theory of relativity.

What's priced in? We see potential for downside surprise to consensus projections

At present consensus forecasts appear to put limited weight on the potential for the bad asset cycle to depress economic activity growth in India and ASEAN.

Consensus projections for real GDP growth envisage accelerating growth into 2017 versus 2015, to rates close to or above long run averages in most ASEAN economies and India. Malaysia is an exception but even here growth is expected to remain close to historical averages. Indeed, only in Singapore is growth expected to markedly underperform 10 and 15 year compound annual growth rates.

Figure 29: Consensus forecasts are for higher real GDP growth…



Source: UBS, Haver, Bloomberg Consensus Estimates

That optimism appears to rest on stronger domestic demand since aggregate China, US and Euro zone real GDP growth is forecast to slow in 2017 relative to 2015 and long run averages. It follows that the consensus must expect a relatively benign outcome for the domestic credit cycle in ASEAN and India. This is probably in part because official NPL ratios, even in India, but especially across ASEAN, are low relative to history.

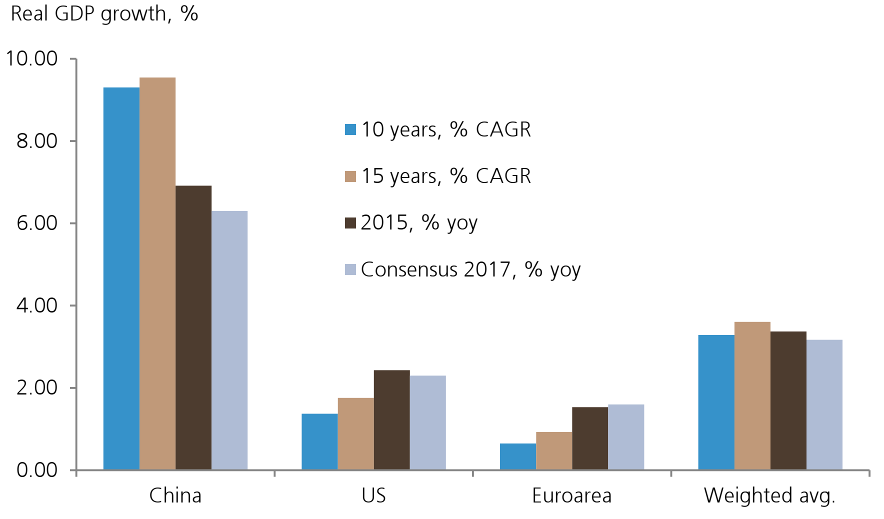
Bad assets risks may be more widely recognised in India and Indon.

However, in our baseline grey-sky scenario we project higher NPL ratios and expect the maturing credit cycle and related bad asset cycle to depress real GDP growth relative to consensus in ASEAN and India. That said, this is not a crisis scenario, the scale of bad assets does not imply a collapse in growth – we believe consensus growth estimates are less than 1ppts too high due to this issue under our baseline 'grey sky' scenario.

In India, we note that Indian Bank's Analyst Vishal Goyal expects NPLs officially defined to rise further, but thinks the pool of stressed assets may not. We believe the pool of stressed assets has been recognised by investors, if not the banks. In Indonesia, tight policy to reduce credit boom related excesses is being unwound. The current account deficit remains a source of risk given weak external demand and loose policy, but the growth in NPLs may have peaked. As such the scope for disappointment in terms of the impact on the economy may be lower in India and Indonesia than in Singapore, Thailand and Malaysia where NPL ratios are lower but the scope of troubled assets potentially an upside surprise. In part because of less scope for adverse surprises on asset quality in India, we expect 2016-17 and 2017-18 real GDP growth to disappoint consensus by less than 0.5ppts. In Philippines it may be too soon to forecast a drag on growth from bad assets because the credit cycle has yet to slow.

In the 'black sky' crisis scenario Indian and Indonesian growth could disappoint by 2-3ppts and growth in the rest of ASEAN would be negative. Consensus and our own forecasts would be higher in a blue sky scenario.

Figure 30: …despite projections of slower G3 growth (due to China)



Source: UBS, Haver, Bloomberg Consensus Estimates   Note: Average is nominal GDP weighted

Policy and currency implications

We expect higher NPL ratios will lead to lower growth and dampened lending activity leading to reduced inflation and more positive current account balances. That both puts pressure on policy makers to respond and, given diminished evidence of excesses, removes the impediments to policy easing.

We argued in APAC Economic Perspectives ASEAN and India: What will governments do about slow growth and why it matters, that the authorities may respond by trying to reform or reflate the economy.

Figure 31: Policy options

		Positives	Negatives
Reflate	Ease monetary policy	Can support or extend credit cycle	Suffers from diminishing marginal returns. Adds to prior excesses of credit cycle
	Fiscal budget stimulus	Impulse to growth (depends on source of funds)	Can result in crowding out
	SoE support for employment/investment	Off general government balance sheet	Still on public sector balance sheet. May not help efficiency of economy.
Reform	Pro-market reform	Helps wider economy/consumers	Hurts certain groups/industries
	Regulation/macro-prudential measures	Can stop markets from creating outcomes undesirable in the eyes of policy makers	Potential impediment to economic activity/growth
	Regional cooperation/Patronomics	Regional cooperation could support trade and manage economic and financial risks	Potential diversion rather than creation of economic activity

Source: UBS APAC Economic Perspectives ASEAN and India: What will governments do about slow growth and why it matters,

Figure 32 below summarises our judgement of the policy direction in each economy. A common theme across ASEAN (outside Malaysia) is looser fiscal policy. In ASEAN Equity Strategy: Stand, or deliver. Government money or strife, ASEAN Head of Research Ian Gisbourne recommends overweighting companies that benefit from government spending.

Figure 32: Policy direction

	India	Indonesia	Malaysia	Philippines	Singapore	Thailand
Ease monetary policy	Underway	Underway	Not imminently	Not imminently	Underway	Not imminently
Fiscal budget stimulus	Reduced	Increased	Reduced	Increased	Increased	Increased
SoE support for employment/investment	Yes	Yes	Yes	Yes	No	Yes
Pro-market reform	Yes	Yes	Yes	Yes	Yes	Yes
Regulation/macro-prudential measures	Yes	Yes	Yes	Yes	Yes	No
Regional cooperation/Patronomics	Yes	Yes	Yes	Yes	Yes	Yes

Source: UBS

We note that often, once economic weakness has become pronounced, it is the slowdown in credit that is seen as the immediate problem rather than – as we have argued here – the expansion of credit in the first place. As such we believe central banks in ASEAN and India will come under pressure to lower nominal policy rates or keep policy rates low relative to any rise in US rates (except Singapore which uses the currency as its key monetary policy tool).

Figure 33: UBS policy rate forecasts

Central Bank	Instrument	Current	End 2016 E	End 2017 E
RBI repo rate	Repo rate	6.50	6.25	6.25
Bank Indonesia	BI rate	6.75	6.75	6.75
	Deposit Rate	4.75	4.75	4.75
BSP	RRP	4.00	4.00	4.50
	SDA	2.50	2.50	3.00
BNM	ODR	3.25	3.25	3.25
BoT	Repo rate	1.50	1.50	2.25

Source: UBS Estimates

However, it is not clear that lower interest rates will spur faster credit if confidence in asset quality is deteriorating. Low policy rates and the ongoing existence of bad assets may put off foreign investors. The upshot promises to be weaker currencies.

We expect the maturing credit cycle to continue to weigh on currencies across ASEAN and India – especially if slower growth in China results in a weaker CNY against the USD and the US Fed's FOMC raises the Fed Funds rate 150bps as we expect over the next two years.

In Singapore, the exchange rate based policy framework means US interest rate policy will be imported, with the risk premia associated with concerns over currency depreciation against the USD likely to be sustained. As higher US interest rates encourage capital flows out of Singapore, we assume 3 month SIBOR interest rates will rise from 1.2% currently to 2.4% by end 2017. That will tend to depress credit growth and reveal underperforming assets – pushing up NPLs. We expect Singapore's Monetary Authority will only modestly loosen currency policy in October 2016 – to a flat policy band. However, as the drag from higher rates on the Singapore economy grows, the government will likely loosen macro-prudential measures applicable to the housing and car market – in addition to running an accommodative budgetary policy. USDSGD will likely rise as the USD strengthens against Singapore's trading partner currencies. However the decline in the SGD may prove less than other regional currencies both because of the policy framework and because of Singapore's relatively strong position to deal with bad assets once they appear as a result of prior credit expansions at home and abroad.

Appendix: NPLs are only part of the problem

Actually NPLs, as defined by the regulators, are only a subset of underperforming assets or mal-investment that can act as a drag on the economy. The reason we look at NPLs is because they are readily measurable, have a direct bearing on the banking institutions at the centre of the credit cycle and give a sense of the trend in asset quality more broadly.

In Southeast Asia and India bad loans are typically categorised by regulators as[6]:

1. **Pass:** Payments on time
2. **Special mention:** Payments up to 90 days past due
3. **NPL – Substandard:** Payments 90-120 days past due
4. **NPL – Doubtful:** Payments 120-180 days past due
5. **NPL – Loss:** Payments more than 180 days past due

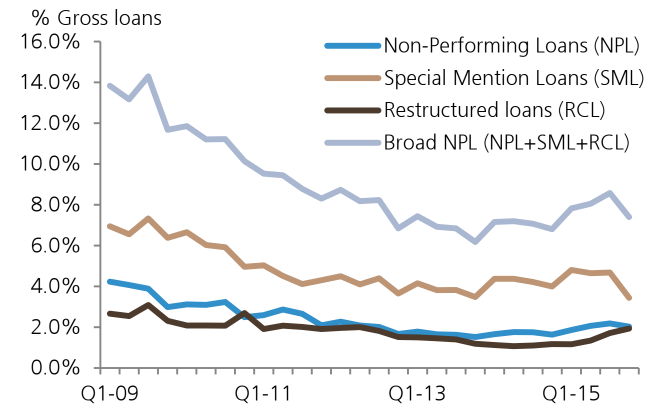
This said, there is considerable variety in the standards around these definitions and the standards change over time. Moreover, since reporting bad loans entails costs to the reporting institution in terms of higher capital and other requirements it is highly likely that the level of reported NPLs overstates the asset quality in banking systems and the economy more generally. In some cases the authorities allow underperforming loans to be *restructured* thereby avoiding recognition as an NPL. As such a certain amount of caution has to be exercised when comparing official NPL data over time and across countries.

For example in Indonesia, from Q3 2015 the regulator allowed banks to restructure loans prior to reporting them as NPLs – thereby reducing the need to report loans as NPLs. Previously loans had to be reported as non-performing before restructuring could take place. Restructured loans expanded 87% on the year in Q4 according to data from the four largest banks.

In India, a recently introduced Strategic Debt Restructuring scheme allows a consortium of lenders to convert part of their loan to a troubled corporate to equity, with the consortium owning at least 51% stake. The SDR scheme allows for a more relaxed regulatory regime where loans under the scheme are not treated as non-performing for 18 months, by which time the consortium is supposed to have turned the corporate's business around. After 18 months all regulatory relaxations cease and the loans must be recognised as non-performing. Prior to that, during the Global Financial Crisis, the RBI allowed loans at risk but no certain of becoming NPLs to be restructured thereby avoiding NPL status (under certain conditions). This practice of regulatory forbearance was discontinued on 1 April 2015.

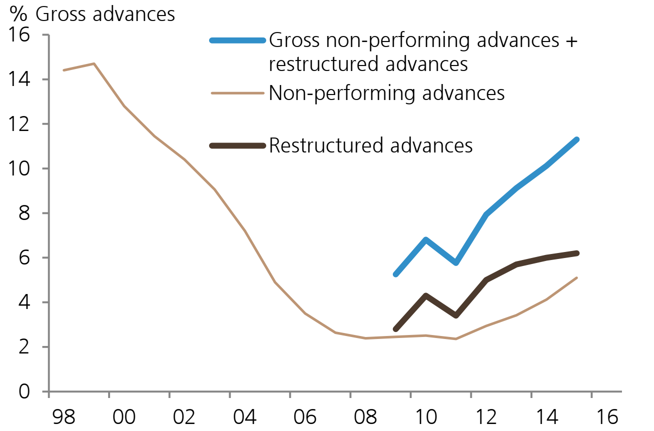
[6] In its Financial Soundness Indicators Compilation Guide, the IMF recommends[6] that loans (and other assets) should be classified as Non-Performing Loans when (1) payments of principal and interest are past due by three months (90 days), or (2) interest payments equal to three months (90 days) interest or more have been capitalised, refinanced or rolled over.

Figure 34: Indonesia four largest banks underperforming assets



Source: UBS, Mandiri, BCA, BRI, BNI

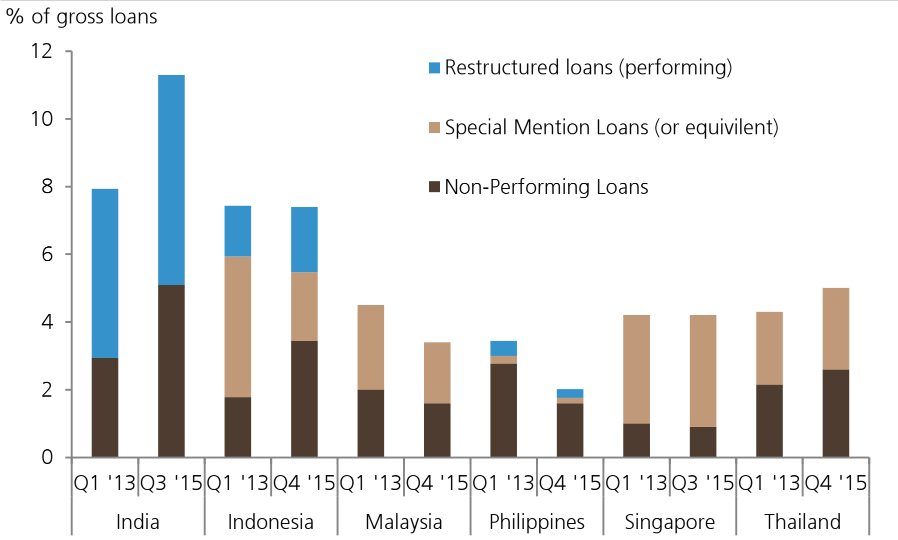
Figure 35: India NPAs and restructured advances



Source: UBS, RBI

The combination of restructured, special mention and NPLs or 'Broad NPLs' is more than double the level of NPLs in most markets. However, on the available evidence from India and Indonesia, the trend in overall bad assets is correlated with the level of NPLs – which means historical NPL data probably provides a reasonable guide to the ups and downs in the bad asset cycle over time.

Figure 36: NPLs, special mention and restructured loans



Source: UBS, Haver, CEIC, National Central Banks
* India does not (yet) publish special mention loans although data collection has begun
** Philippine data is Universal and Commercial Banks to be consistent with other NPL data in this report. Banking system data is also available showing slightly higher NPLs

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