

ASEAN Macro View

Macro Themes for 2013: Poised for Gradual Recovery

- **Theme #1: Lingering domestic resilience, with modest recovery of cyclicals in 2H13** — Resilience of domestic demand will likely persist into 1H13, especially for PH and TH, given: [1] tight labour markets, [2] continued investment revival amidst FDI inflows, [3] record low real interest rates amidst generally low household leverage, and [4] room for supportive fiscal policy in PH and TH sustaining infrastructure projects. Despite near-term headwinds, a cyclical recovery in developed economies should allow SG, MY and TH to outperform in 2H13.
- **Theme #2: Shifting bias to monetary normalization amidst inflation uptrend** — Key drivers include: [1] narrowing output gaps and [2] structural cost normalization as subsidy rationalization commences (MY and possibly ID) and wage inflation pressures (especially SG and TH). Central banks may turn more hawkish by 2H13, although CA surplus countries may lean first on FX appreciation rather than rate hikes as inflation remains below target. The exception is BI, where we expect two hikes in 2H13, even if fuel price hikes are more effective in reducing the deficit.
- **Theme #3: Policies to stay vigilant against external and financial imbalances** — With domestic demand and credit growth still robust and external balances not likely to improve significantly, tighter macroprudential policies remain an option to tackle imbalances. With risks that ID's CA deficit remains above 2% of GDP, BI's rate hikes may be complemented by macroprudential measures as well as government policies to reduce imports – including risk of fuel price hike. Concern over credit growth – especially into property – may also drive macroprudential tightening in SG, PH and MY, and influence monetary policy in MY and TH.
- **Theme #4: Capital inflows and CNY strength to drive FX appreciation, except IDR** — Amidst abundant global liquidity, safe haven inflows may persist on growth resilience, reduced external vulnerability, prospects of sovereign ratings upgrades, and reserve diversification. Modest CNY appreciation driven by rebalancing imperatives should reduce the constraints on managed ASEAN currencies to appreciate. Exception is the IDR, where currency weakness is a policy tool to reduce external imbalance. Risks to our bullish ASEAN FX view include less market-friendly policies on capital inflows or a sell-off in US Treasuries.
- **Theme #5: Long term, spillovers from rebalancing in China to persist** — Long term, as China's wage cost advantage is eroded amidst its own growth rebalancing, manufacturing FDI into ASEAN could continue to benefit from a diversification of MNCs' portfolios of direct investments away from China, complemented by decent logistics performance and superior returns on investments in ASEAN. On the flip side, rising wages in China could also catalyze structural wage inflation pressures within ASEAN, though this need not erode ASEAN's relative cost competitiveness and may provide a more sustainable basis for consumer spending going forward.

Head of ASEAN Economics; Malaysia and Singapore

Wei Zheng Kit
+65-6657-5079
wei.zheng.kit@citi.com

Indonesia

Helmi Arman
+62-21-5290-8960
helmi.arman@citi.com

Philippines and Thailand

Jun Trinidad
+63-2-894-7270
jun.trinidad@citi.com

Brian Tan
brian.tan@citi.com

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Citi Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

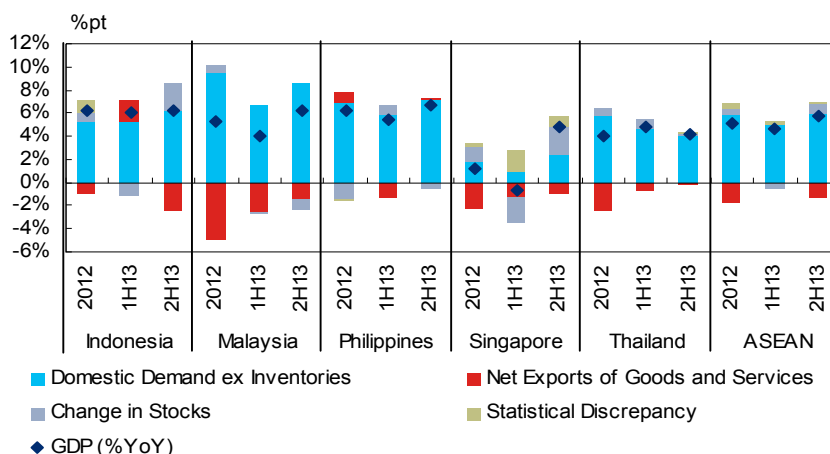
Macro Themes for 2013: Poised for Gradual Recovery

Whilst the domestic demand driven resilience that characterized ASEAN in 2012 is expected to persist, a modest recovery in the US in 2H13 would bring about a gentle upswing in the more cyclical open economies. Closing output gaps and adjustments in factor costs on minimum wage hikes and subsidy rationalization will keep inflation on a gradual uptrend in 2013, in our view. As a result, central banks will likely shift towards a hawkish bias as growth risks subside, though most will be slow to hike rates. Amidst structural CNY appreciation and continued safe haven inflows, the initial policy response may be to lean on FX appreciation to tighten monetary conditions, though currency strength beyond tolerance levels could be met with less market-friendly policies on capital flows. While not yet overheating, policymakers will nonetheless respond to pockets of imbalances with more macroprudential and credit tightening. Over the long term, China's growth rebalancing process will continue to divert FDI towards ASEAN, even as it indirectly stokes wage inflation pressures within ASEAN, which could ensure greater sustainability of consumption growth over time.

Theme #1: Lingering domestic resilience, with modest outperformance of ASEAN cyclicals in 2H13

We envisage steady GDP growth for ASEAN at 5.0% in 2013 (2012: 5.1%), rising to 5.3% in 2014. But within the relatively steady annual growth path, we anticipate slightly slower domestically-driven growth in 1H13, giving way to a gradual export-driven pick up in 2H13 that continues into early 2014. Within ASEAN, while MY and ID should see steady or slightly slower growth in 2013, growth should see a modest pick up in the rest of ASEAN.

Figure 1. We envisage steady GDP growth for ASEAN

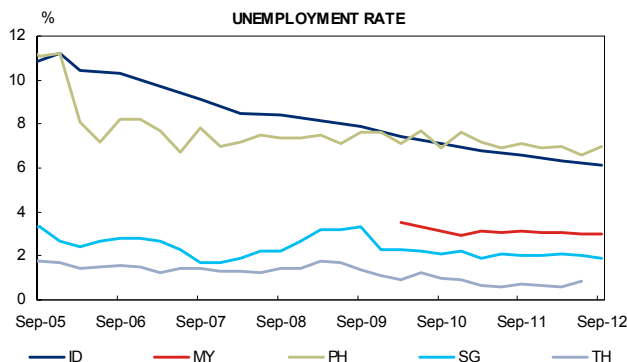


Source: CEIC, Haver, Citi Research Estimates

As argued in [Asia Macro and Strategy Outlook - Prospects for 2013](#), we see outperformance of more domestically-driven ASEAN economies as a lingering theme at least in 1H13. We forecast most of the ASEAN economies – even ultra-open Singapore – should see fairly resilient domestic demand for a few reasons.

First, labour markets have remained tight throughout the region, with unemployment rates at historical lows. Stronger employment growth in combination with higher wages and hikes in minimum wages – which will cause abnormally low wage-to-GDP shares to normalize – have allowed for steady household income growth, supporting consumption. PH has also had the benefit of being bolstered by continued strong inflow of offshore remittances.

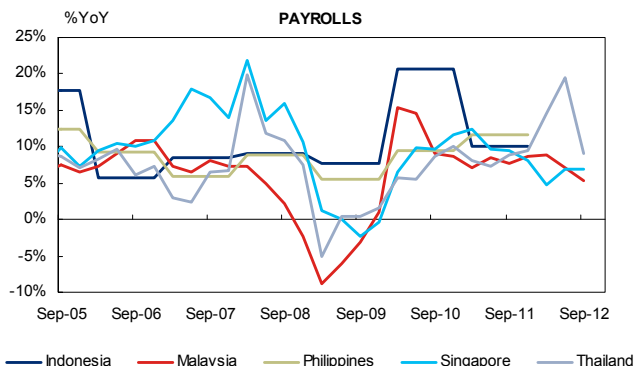
Figure 2. Unemployment rates have been falling throughout the region



Note: ID and MY are non-seasonally adjusted. PH, SG, and TH are seasonally-adjusted.

Source: Haver, Citi Research

Figure 3. Robust employment growth in combination with higher wages have allowed for steady growth in payrolls, supporting consumption

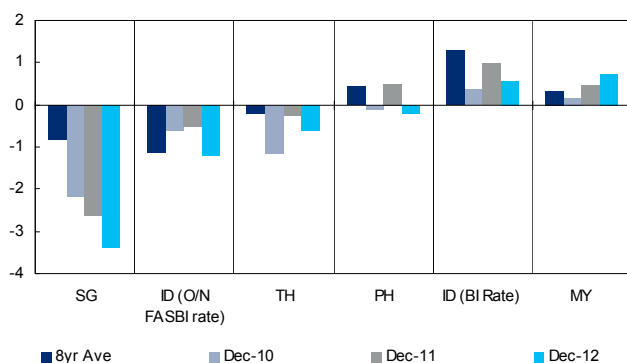


Note: We calculate payrolls as the product of employment and wages. ID and PH are annual data. We use manufacturing sector payrolls for MY and ID and use non-agricultural worker payrolls for PH.

Source: CEIC, Haver, Citi Research

Second, real interest rates remain near historical lows and would provide room for re-leveraging, especially in PH and ID where real policy rates are already near historical lows and household leverage is at low levels relative to the levels of per capita GDP. At the opposite of the spectrum is MY, where real rates are at post-Lehman highs and where high household debt to GDP suggests the debt-driven consumption growth model has probably reached its limits.

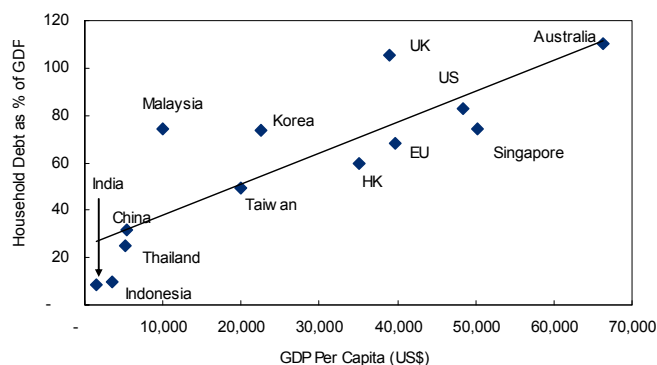
Figure 4. Real policy interest rates discounted by average 12-month average consensus inflation forecast



Note: Real interest rates are based on the current policy rate minus 1yr ahead consensus inflation forecast.

Source: Bloomberg, CEIC, Consensus Economics, Citi Research.

Figure 5. Household debt in Asia



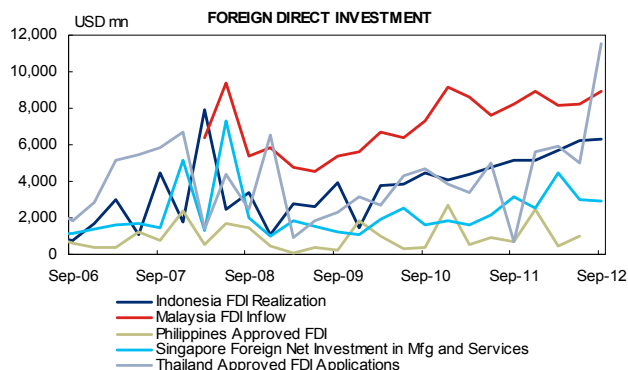
Note: Based on latest available data

Source: CEIC, Haver, Citi Research

Third, for ASEAN as a whole, investment share of GDP should continue to rise from a low base of 24% in 2012 to around 25% in 2013 amidst an increase in FDI inflows. Realized FDI inflows recovered amongst all ASEAN countries in 2012 except for PH. The region has benefited from a diversification of manufacturing FDI away from China given the latter's eroding cost competitiveness (more to be discussed later) as well as a diversion of Japanese FDI away from China amidst recent political tensions. Intra-ASEAN FDI flows have also been on the rise, reflecting regionalization efforts by companies – especially in SG and MY – to seize demand opportunities and overcome domestic cost constraints, with ID being the

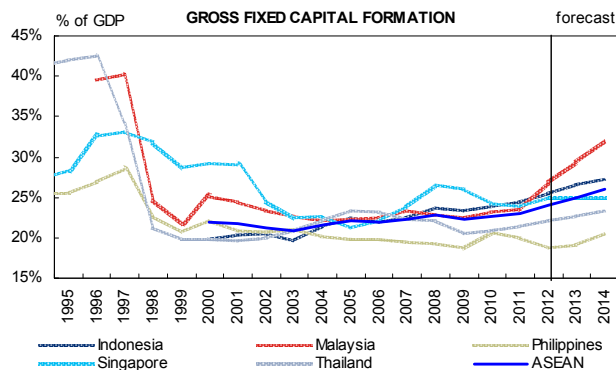
largest recipient of inflows. TH's 37.5% YoY increase in FDI approvals has been particularly pronounced – our Thailand economist Jun Trinidad thinks this could add 3.2%pts to fixed investment gains in 2013. At the other end of the spectrum is ID, where lower commodity prices could cause resource-related FDI to slow.

Figure 6. FDI inflows have increased



Source: CEIC, Citi Research

Figure 7. Fixed investment share of GDP



Source: Haver, Citi Research

Figure 8. Intra-ASEAN FDI (% of total)

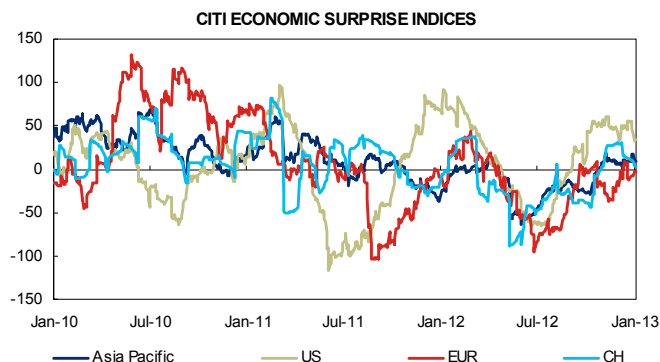
Investment from	Investment to					Total
	Indonesia	Malaysia	Philippines	Singapore	Thailand	
Indonesia	0.0	0.0	0.0	6.8	0.1	6.8
Malaysia	6.5	0.0	0.1	19.8	1.9	28.3
Philippines	0.0	0.0	0.0	1.6	0.1	1.7
Singapore	31.5	13.3	1.5	0.0	14.5	60.7
Thailand	0.2	0.1	0.1	2.2	0.0	2.5
Total	38.2	13.3	1.7	30.3	16.5	100.0

Source: Coordinated Direct Investment Survey (CDIS), Citi Research

Fourth, investments will also be helped by the long pipeline of infrastructure and other domestic projects, helped in some cases by pro-active fiscal policy, especially PH and TH. Fiscal policy will play an active role in financing infrastructure related to floodworks control and drainage systems in both TH and PH, while the budget in PH will also be deployed for irrigation, housing, and educational projects. In the case of MY, off-budget government-guaranteed financing for major infrastructure projects such as the MRT will continue to be a major driver, as will the aggressive O&G capex of Petronas.

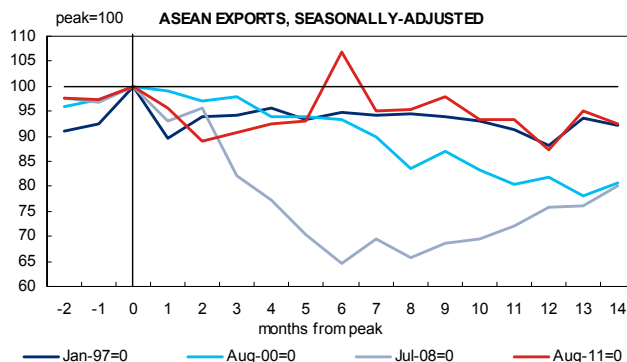
Notwithstanding the return of our Asia Economic Surprise Index to positive territory and the relatively shallow export downturn thus far for most, the 1H13 outlook remains clouded for the more cyclical export-oriented economies (SG, MY, TH). First, anemic performance of developed economies in 1H13 – with sub-2% growth in the US, the Euro area mired in recession, and stagnation in Japan – may not be fully offset by a modest cyclical rebound in China. With the exception of ID, we estimate that less than half of China's imports from ASEAN are for its own domestic demand, with the rest destined for China's exports – mostly to developed markets. As such, we find that ASEAN's exports to China (ex ID) may be more correlated with US and EU GDP than China's own domestic demand.

Figure 9. Citi Economic Surprise Indices



Source: Bloomberg, Citi Research

Figure 10. The export downturn within ASEAN has been relatively shallow vs. past downturns

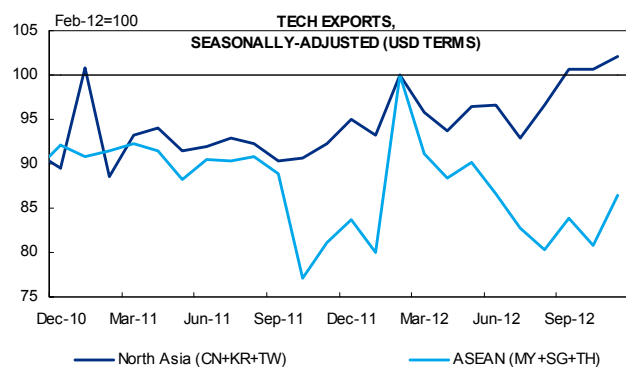


Note: We include Indonesia, Malaysia, Philippines, Singapore, and Thailand exports in USD terms. For Singapore, we use non-oil domestic exports (NODX).

Source: CEIC, Citi Research

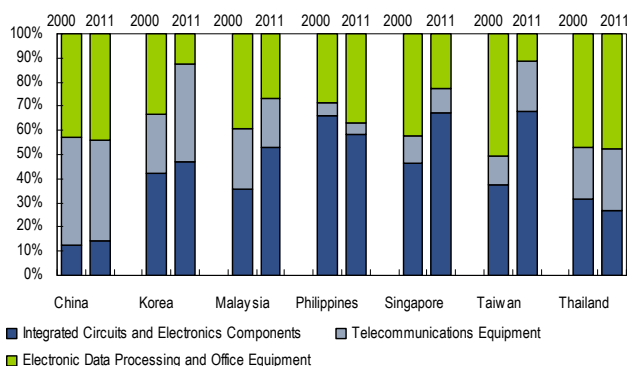
Second, the outlook for the critical tech sector remains clouded in the near term, notwithstanding some recent improvement in global tech indicators and Thailand's post-flood normalization in HDD production, which may be one-off. Critically, with ASEAN electronics exports more heavily concentrated in PC-related products, the recent smartphone/tablet driven tech export rebound in North Asia could bypass ASEAN. This is likely to weigh more heavily on tech heavy economies like SG and MY.

Figure 11. Tech exports in Asia – North Asia outperforms vs. ASEAN



Source: CEIC, Citi Research

Figure 12. ASEAN electronics exports less exposed to the fast growing smartphone segments



Source: WTO, Citi Research

These headwinds to exports could subside in 2H13 as a cyclical recovery in the developed economies gains traction, leading to outperformance of export-driven SG, MY and TH. Our US economists expect US GDP growth to exceed 3% in 2H13 due to pent-up demand in corporate investments as uncertainties over the fiscal cliff subside. Similarly, we see growth picking up to the 1-2% range in Japan in 2H13 and the Euro Area recession hitting its trough in 1Q. For SG, MY and TH, these should more than offset a moderation in China, given the significantly higher share of exports to G3 as % of GDP as well as the indirect lift to processing-driven exports to China.

Figure 13. Direct and indirect exports to G3 (4Q11-3Q12)

% of GDP	ID	MY	PH	SG	TH
Direct Exports to US	1.7	6.5	3.1	4.9	6.3
Direct Exports to EU	1.7	7.0	2.5	7.7	5.4
Direct Exports to Japan	3.5	9.3	4.1	3.3	6.5
Direct Exports to China	2.6	9.7	2.6	6.2	7.5
Exports to China used for Processing (% of exports to China)	13.2	61.4	71.0	57.1	49.4
Exports to China used for Domestic Demand (% of exports to China)	86.8	38.6	29.0	42.9	50.6
Exports to China used for Domestic Demand	2.2	3.7	0.8	2.7	3.8
China's Exports to US (% of China's exports)	17.3	17.3	17.3	17.3	17.3
Indirect Exports to US via China	0.1	1.0	0.3	0.6	0.6
Total Direct and Indirect Exports to US	1.8	7.5	3.4	5.6	6.9
China's Exports to EU (% of China's exports)	17.1	17.1	17.1	17.1	17.1
Indirect Exports to EU via China	0.1	1.0	0.3	0.6	0.6
Total Direct and Indirect Exports to EU	1.8	8.1	2.8	8.3	6.0
China's Exports to Japan (% of China's exports)	7.7	7.7	7.7	7.7	7.7
Indirect Exports to Japan via China	0.0	0.5	0.1	0.3	0.3
Total Direct and Indirect Exports to Japan	3.6	9.8	4.2	3.6	6.8
Total Direct and Indirect Exports to G3	7.2	25.4	10.5	17.5	19.8

Note: All figures are % of GDP unless indicated otherwise. For Singapore, we use non-oil domestic exports (NODX). Indirect exports via China are calculated as the product of direct exports to China, the share of exports to China used for processing, and the share of China's exports to the destination country.

Source: CEIC, Citi Research

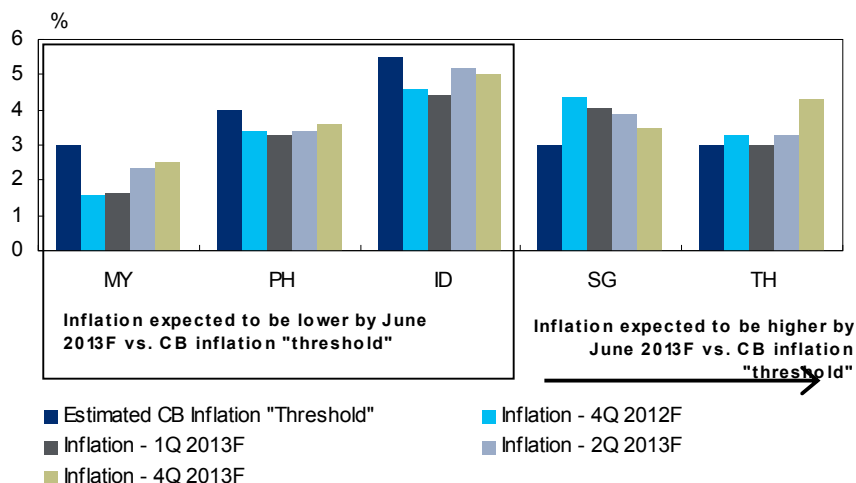
Even so, we only expect a relative modest recovery for ASEAN as a whole for various structural reasons. Electronics exporters may continue to be hampered by the structural underexposure to fast-growing star segments. For commodity exporters, especially ID, the strength of any export rebound may be capped by China's structurally lower and less commodity-intensive growth path, given that two thirds of China's imports from Indonesia are in mineral fuels (largely coal) and animal and vegetable fats (CPO). The strength of any export rebound in SG may also be hurt, capped by domestic supply constraints and REER appreciation eroding cost competitiveness.

Overall within ASEAN, domestic demand in PH and TH should outperform in terms of growth trajectory, helped by fiscal pump priming, low leverage, historically low real interest rates, and for TH, a surge in FDI and modest export recovery. We also expect GDP growth to pick up modestly in Singapore, but from a low base and remaining below trend. In contrast, rural incomes in ID and MY may be hurt by lower commodity prices, ID will face constraints from its current account deficit, while MY's need to consolidate its fiscal position post-elections alongside high household debt will be additional constraints on growth.

Theme #2: Modest shift to monetary normalization amidst gradual inflation uptrend

Inflation had been generally benign in 2012 and surprised on the downside, but we project ASEAN inflation to be on a gradual steady uptrend in 2013, accelerating to 3.7% in 2013F, from 3.5% in 2012, though by and large remaining below central bank comfort levels/targets (except TH and SG). The exception to this is Singapore, where inflation is projected to moderate from a high base, but remaining above MAS's comfort thresholds.

Figure 14. Headline inflation projections versus Citi estimated central bank comfort threshold



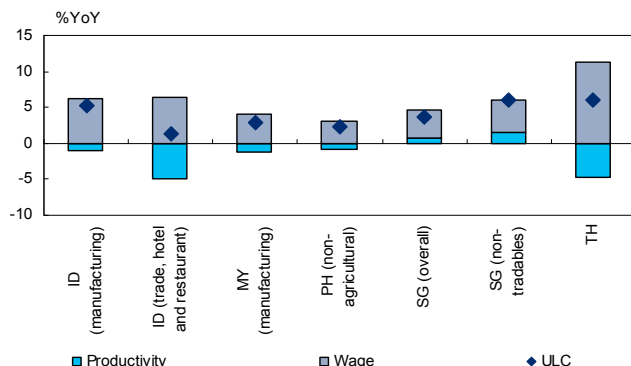
Source: CEIC, Citi Research Estimates

Supply-driven commodity price shocks aside, key drivers underpinning the inflation uptrend would include:

First, cost pressures from subsidy rationalization (MY and ID) and other administrative price adjustments. While our relatively benign outlook for crude oil prices implies only limited risk of significant fuel price adjustments, we assume gradual subsidy rationalization will commence in MY after the election, with two 10 sen/litre hikes in RON95 prices in Jun and Dec respectively. For ID, we have factored in a 15% increase in electricity tariffs which could raise inflation by 0.3-0.4%-pts and – despite impending elections in 2014 – risk of a fuel price hike remains, given that industrialization needs have pushed energy subsidies to 87% of non-tax revenue.

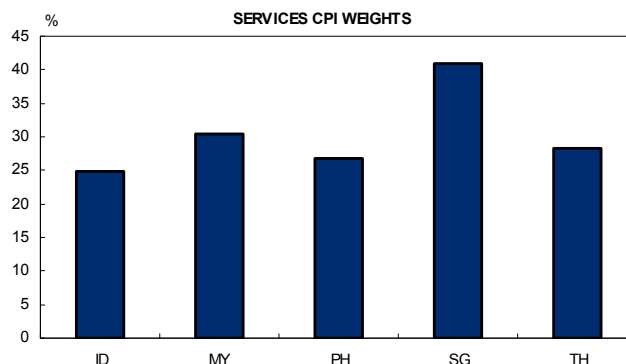
Second, wage inflation pressures arising from tighter foreign worker policies and/or minimum wage hikes, which could see stronger pass through in SG and TH. Impact of higher wages on consumer prices would depend on: [1] whether wage increases are sufficient to incentivize offsetting productivity gains, [2] output gaps, which determine the pricing power of firms, and [3] share of labour-intensive non-tradables services prices. In both SG and TH, the rise in wages will likely outstrip productivity gains in 2013 while positive output gaps will also allow swifter pass through to consumer prices. Productivity gains in the services sector in ID could mitigate wage increases, whilst the wage components in the CPI are in the informal sector which is not automatically affected by the minimum wage, though the impact on inflation expectations should be watched. In MY, productivity gains and the inclusion of fixed allowances in the computation of the minimum wage may help to mute inflationary pressures (see [ASEAN Macro View - Should We Worry about Wage Inflation in ASEAN?](#))

Figure 15. With the exception of Singapore and TH, productivity gains have partly offset wage pressures in the rest of ASEAN



Source: CEIC, Citi Research

Figure 16. Services CPI weights in ASEAN

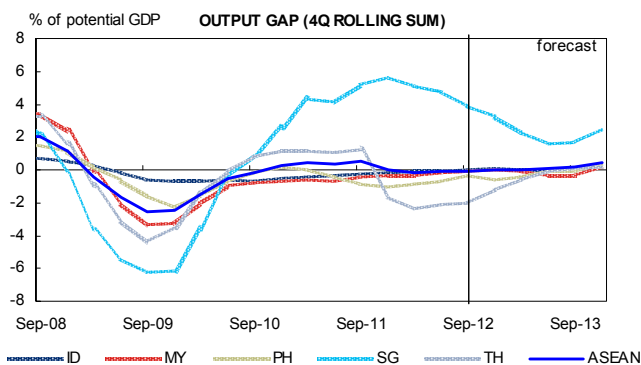


Note: We estimate the weights by examining the available CPI sub-categories, including for Malaysia

Source: CEIC, Citi Research

Third, narrowing negative output gaps. While measures of output gap and potential output are not directly observable, more direct evidence of limited economic slack can be seen in tight labour markets. Thus, companies may have greater ability to pass on any cost pressures on margins that could arise (which can be proxied by the gap between CPI and PPI inflation). MY, PH and TH are likely to see their negative output gaps turn positive by 4Q13 as the export recovery reinforces resilient domestic demand in eliminating economic slack. SG's output gap is already positive while ID's output gap will become more positive in 2013F. Lower commodity prices have reduced margin pressures for producers so far, implying benign inflation pressures near term (though ID and TH have arguably seen less margin relief), but impending cost pressures from factor cost normalization and subsidy rationalization are risks that need to be watched out for.

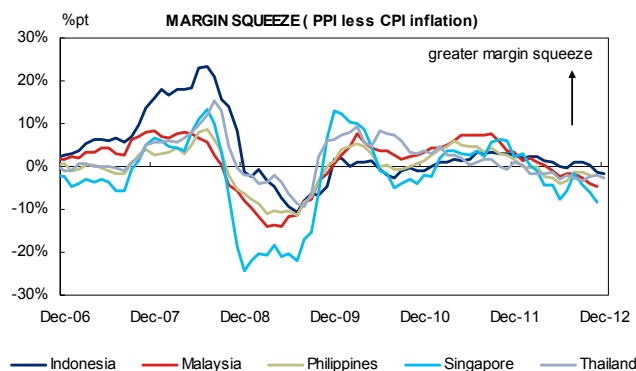
Figure 17. Output gaps in ASEAN



Note: We assume 3% potential growth for SG starting 2011, reflecting the policy-induced tightening of labour supply

Source: CEIC, Citi Research

Figure 18. Margin squeeze in ASEAN



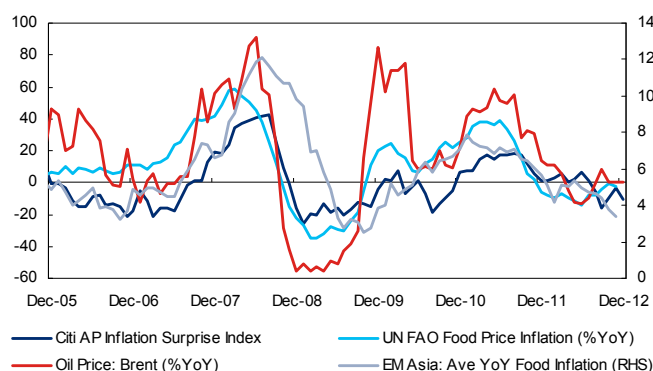
Note: Margin squeeze is calculated by subtracting the %YoY CPI inflation from %YoY PPI inflation. A higher differential indicates greater margin squeeze.

Source: Haver, Citi Research

Accordingly, as growth risks subside, most ASEAN central banks may shift from the current accommodative stance towards a hawkish bias by 2H13, though we expect most central banks to be slow in hiking policy rates. Rather, the first choice for tightening of monetary conditions could be to tolerate more FX appreciation, especially for current account surplus countries. The exception is probably ID, where the current account deficit rules out FX appreciation as an option. Although there could be less urgency to hike as BI increasingly views fuel price hikes as more effective in tackling the widening oil and gas trade deficit, our base case nonetheless anticipates two hikes in the FASBI rate in 2H13 (see [Indonesia Macro Flash - Same Trade Deficit, Different Origin: Some Potential Consequences](#)). Elsewhere, our base case anticipates most central banks staying on hold, though we see some risk of hikes by BOT in 2H13, which may rise as inflation breaches the central bank's targets and exports recover. Elsewhere, with inflation to stay below comfort levels (PH and MY) or policy already on a tightening bias (SG), central banks will likely remain on hold.

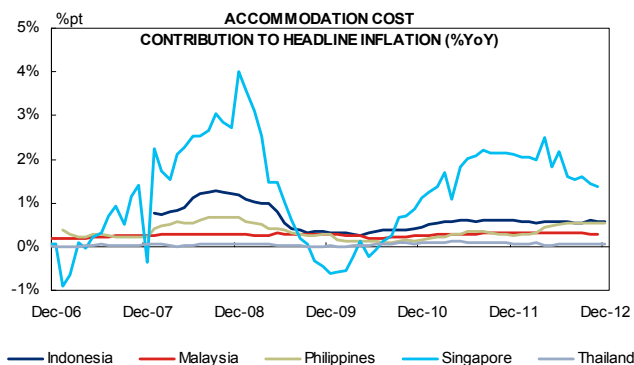
One obvious risk to this view could come from unexpected spikes in commodity prices, whose benign behaviour gave central banks flexibility to keep monetary conditions accommodative in 2012. Our current average Brent crude forecast of US\$99/bbl for 2013F from the Citi commodity team is predicated upon structurally lower and less oil-intensive growth in China, but could be at risk from geopolitical tension in the Middle East and QE-related liquidity pressures. Similarly, weather-related supply disruptions and higher income elasticity of demand for some kinds of food could generate large upside surprises to headline inflation across almost all ASEAN countries, given relatively high weights of food in the CPI basket, especially in ID and PH. Finally, we could see the lagged impact of recent property price increases in the region feed into the housing component of the CPI basket, which has already been felt in SG. Any such pressures could raise inflation expectations and generate second round inflation pressures in the context of greater pricing power conferred by positive/closing output gaps.

Figure 19. Asia Inflation Surprise Index vs. food and oil price inflation



Source: Bloomberg, CEIC, Citi Research

Figure 20. Accommodation cost contribution to headline inflation in ASEAN



Note: we use CPI cost for housing (Indonesia), CPI actual rental for housing (Malaysia and Philippines), CPI accommodation (Singapore), and CPI house rent (Thailand)

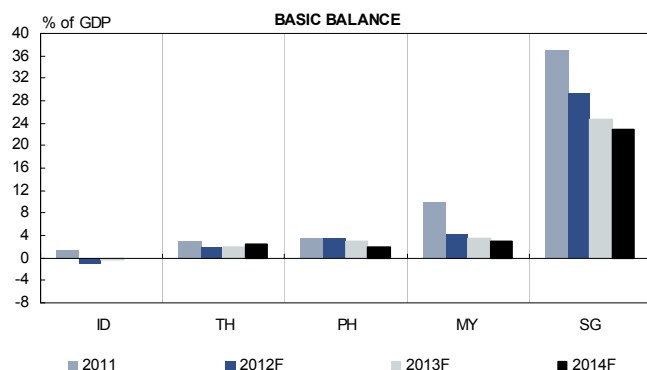
Source: CEIC, Citi Research

Theme #3: Policies to stay vigilant against external and financial imbalances

While overheating concerns should not be exaggerated, policymakers will continue to remain vigilant against the build up of imbalances in external accounts or financial system and will stand ready to respond to these with tighter macroprudential policies and other administrative measures – and in some cases monetary policies.

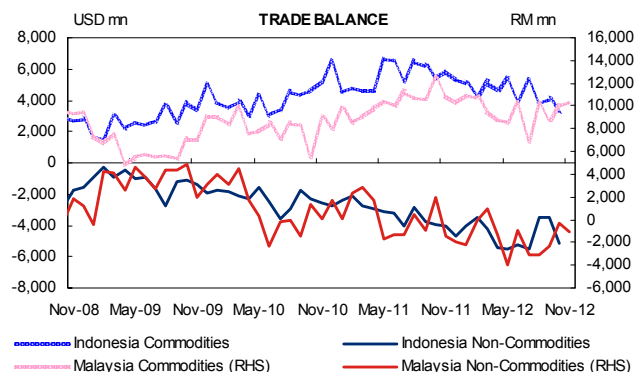
External imbalances are not expected to worsen significantly in 2013, but in the absence of significant improvement, will continue to dominate the attention of policymakers particularly in ID, but perhaps also in MY. The deterioration in current account position has been more a function of robust domestic demand driving imports, and only exaggerated by weaker commodity prices – a trend which we expect to continue into 2013. This is illustrated in particular by the continued (if smaller) net surplus in the commodity trade balance, and widening deficit in the non-commodity trade balance. The latter accounted for 70% of the YoY fall in the MY trade surplus in Jan-Nov 2012, and largely reflects a surge in capital goods, raw materials, and to lesser extent consumption goods imports to support the investment boom – though in ID's case, fuel subsidies and industrialization have led to a surge in oil and gas imports. With the rise in FDI inflows thus far insufficient to finance current account deficits, ID's basic balance has swung from a surplus of 3.4% of GDP in early 2011 to a deficit of 0.8% by 3Q12. While the current account remains in surplus in MY, the speed at which it has narrowed has nonetheless been significant, and with continued outward investments by domestic companies largely offsetting any improvement in FDI inflows, MY's basic balance surplus has halved in the last year. While a stabilization in commodity prices in 2013F should limit the deterioration in the commodity trade balance, continued resilience of domestic demand could further pressure the non-commodity trade deficits. Thus, although we do not expect a further sharp deterioration from here, neither do we expect a significant improvement in basic balances into 2013.

Figure 21. Basic balance



Source: Citi Research

Figure 22. Commodities and non-commodities trade balance

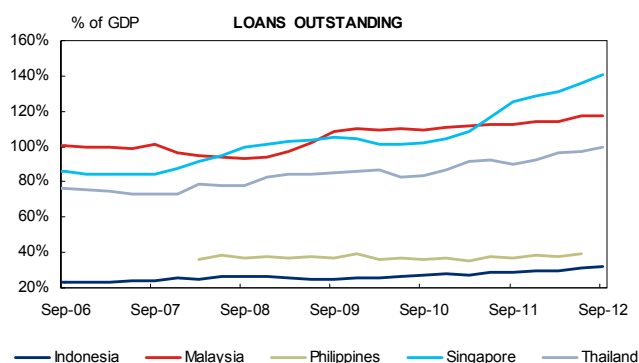


Note: We include oil, gas, coal, rubber, ores, and CPO under commodities

Source: CEIC, Citi Research

While external imbalances are less of an issue elsewhere in ASEAN, there will remain concern over excessive credit growth. Fuelled by low interest rates, bank lending growth has been robust in most ASEAN countries and outstanding loans have risen to over 100% of GDP in TH, MY and SG – though the rise in the latter reflects a surge in cross border loans, including to other ASEAN countries. With balance sheets of corporates and households (except MY) generally not over-leveraged, non-performing loans still at or near historical lows, and ASEAN banks well capitalized, the credit boom is not yet of systemic concern at this stage. Nonetheless, potential pockets of resource misallocation will continue to attract policymakers' attention, in particular lending to households and residential/commercial property, exacerbated by associated political sensitivities.

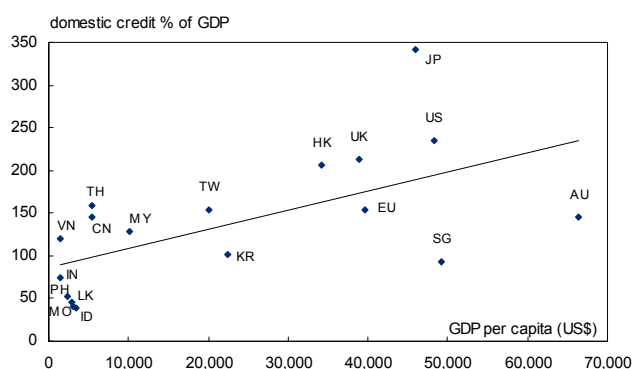
Figure 23. Loans outstanding in banking system



Note: We use commercial and rural bank loans for Indonesia, domestic banking unit loans for Singapore, commercial bank credit for Thailand, and banking system loans for Malaysia and Philippines.

Source: CEIC, Citi Research

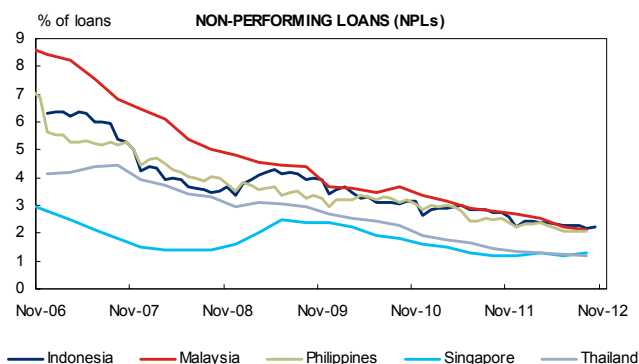
Figure 24. Domestic credit provided by banking sector vs. GDP per capita



Note: We use domestic credit data from the World Bank for consistency, which may differ from locally-sourced banking system data. Data as of 2011.

Source: Haver, Citi Research

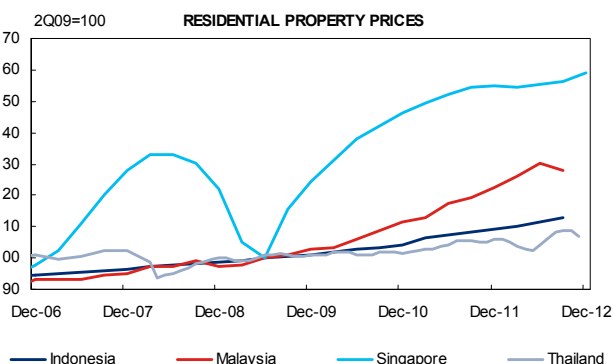
Figure 25. Non-performing loans in ASEAN



Note: We use commercial and rural bank loans for Indonesia, banking system loans for Malaysia, commercial bank loans for Philippines, non-bank loans by local banks for Singapore, and net loans for Thailand

Source: CEIC, Monetary Authority of Singapore, Citi Research

Figure 26. Residential property prices in ASEAN



Note: We use Bank Indonesia's residential property price index of 14 cities for Indonesia, the house price index for Malaysia, the Urban Redevelopment Authority's private residential property price index for Singapore, and the Thai Commercial Bank's housing price index for single detached houses including land for Thailand (which we have spliced with discontinued data from the Government Housing Bank to obtain a longer time series)

Source: CEIC, Citi Research

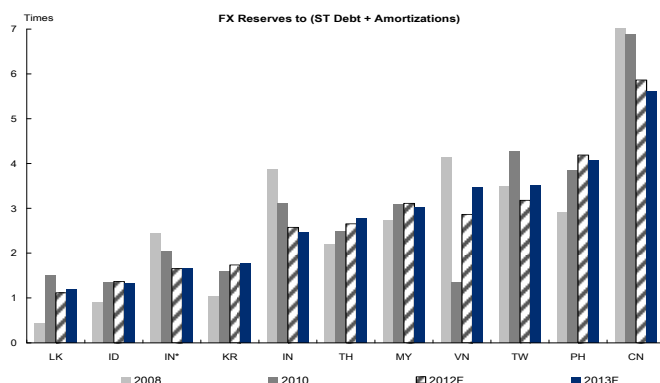
Against this backdrop, pro-active policy responses to curb domestic demand and import growth are likely. Besides monetary policies, macroprudential and other administrative policies focused on curbing excessive credit and import demand will continue to be deployed.

- With rising risks that ID's CA deficit remains at or above 2% of GDP in 2013, BI's rate hikes may be accompanied by government measures to reduce imports, e.g. recent trade regulations in Dec which regulate mobile phone, apparel and toys imports, and possibly more complementary macroprudential regulations. With the trade deficit dominated by the worsening oil and gas deficit, the most direct measure would be to raise fuel subsidies, though with impending elections in early 2014, this is not our base case. Meanwhile, although BI has introduced a host of macroprudential policies last year and early this year that aim to affect consumer credit growth and improve the balance of supply and demand in the FX market, we do not rule out further extensions of these policies in 2013.
- For MY, there appears to be less urgency, given that the current account remains in surplus and is normalizing from arguably excessive levels as the investment drought of the 2000s ends, while a large chunk of investments are in tradables sectors (such as oil and gas) which will eventually build up export capacity. Nonetheless, should the CA position turn into a deficit, measures to curb or stagger imports cannot be ruled out if the non-commodity deficit continues to widen. A resurgence in lending to households or commercial real estate could be met with more credit restrictions or capital gains taxes.
- In SG, notwithstanding the latest round of cooling measures announced on 11th Jan, policy risk will likely persist in the property segment. The latest announcement extended previous measures such as higher and broader-ranging Additional Buyer Stamp Duties (ABSD) and lowering of LTV ratios. The measures are aimed to curb investment demand, including from both locals and foreigners, tilting the balance in favour of genuine first time home buyers. In line with our earlier expectations (see [Singapore Macro View - Prospects for 2013: Persistent Pains of Restructuring](#)) raising of the ABSD to 15% for foreigners brings this in line with Hong Kong, further discouraging foreign inflows which would otherwise be diverted to Singapore – though we note the proportion of foreign buying had already collapsed in the wake of the initial imposition of ABSD in 2011. As expected, measures to discourage speculation in industrial properties via the imposition of sellers stamp duty were also implemented in the latest round. With the new measures the most comprehensive to date, and with the authorities hinting for the first time that some degree of price correction would be a measure of policy effectiveness, Citi Research property analyst Adrian Chua expects primary sales volumes to drop and private residential prices to fall by 5% in 2013 (prev. +2%) (see [Singapore Property - 7th Round of Measures: Bringing Out The Big Guns This Time](#)). However, a persistent demand/supply shortage for owner occupation will likely limit downside for prices near-term, in our view.
- For TH and PH with hefty FX reserves in excess of normal, i.e. close to 1 year's worth of imports of goods and services, and struggling with local currency appreciation, their central banks will be wary of using interest rates to ease strong domestic demand, surging imports, or upside inflation/liquidity risks. The policy preference in an environment of sharply rising local currencies may focus on the use of non-interest rate monetary tools, e.g. reserve requirements and open market operations, and macroprudential responses – for example, expanding the definition of banks exposure to the real estate sector to restrict credit growth for PH – to cool soaring demand pressures at the macro and sectoral level.

Theme #4: Capital inflows and CNY decoupling from DXY to drive FX appreciation

We envisage most ASEAN currencies will appreciate steadily vs. the USD in 2013, underpinned by a few factors. **First**, in an environment of abundant global liquidity from major central banks' QE, ASEAN will likely continue to attract more capital inflows. As noted in our [Asia Macro and Strategy Outlook - Prospects for 2013](#), the perception of Asia as a safe haven has been justified by growth resilience for Asia, particularly for domestically-driven ASEAN economies since early 2011. External vulnerability has been reduced across the region as FX reserve coverage has improved (except ID), complemented by regional safety nets such as the Chiang Mai Initiative.

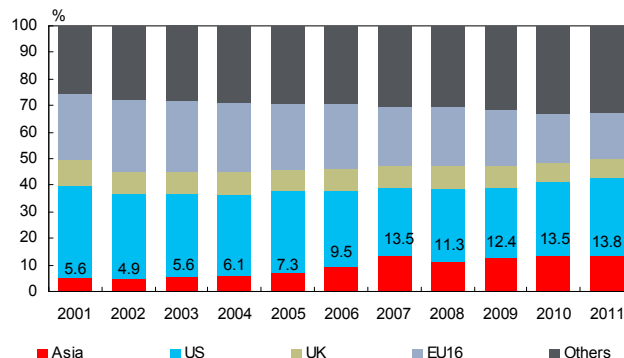
Figure 27. FX reserve coverage (% of STED by remaining maturities)



Note: *We include all non-resident deposits as a short term external liability

Source: Haver, Citi Research Estimates

Figure 28. Increasing intra-Asia portfolio investments – geographic share of non-resident portfolio investments from Asia

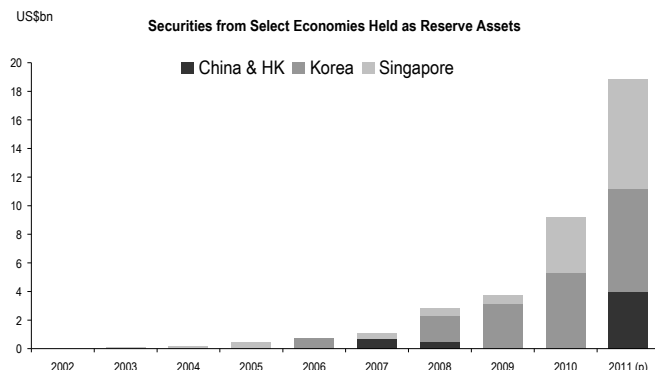


Note: *Destination of portfolio investments originating from the following: Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Pakistan, Philippines, Singapore & Thailand

Source: IMF Coordinated Portfolio Investment Survey (CPIIS), Citi Research

Within the context of ample global liquidity from global central banks, these perceptions are likely to drive further inflows, reinforced by rising portfolio inflows from within Asia and ASEAN. Higher rated sovereigns such as SG and, to a lesser extent, MY could benefit from reserve diversification flows, with the former made more attractive by a perception of “guaranteed” FX appreciation in the context of restructuring-related inflation pressures. With gradual improvement in fiscal dynamics, Malaysia could also benefit from more intra-Asian and intra-ASEAN reserve diversification flows – which have helped to push up foreign participation in the MGS market to the highest in Asia. However, even less well-rated sovereigns may also benefit at the margin from prospects of sovereign ratings upgrades – though more PH than ID given the latter’s challenging CA dynamics. While Citi equity strategist Markus Rosgen expects more cyclical North Asian equities to outperform ASEAN in 2013 (see [Pan-Asia Road Ahead 2013 - Risk Trade to Drive 15% Upside](#)), selected ASEAN markets, e.g. Philippines, could still see equity inflows lifting the currency according to Jun Trinidad (see [Philippines Macro View - Portfolio Equity Flow Pressure May Drive Strong Peso Outlook](#)).

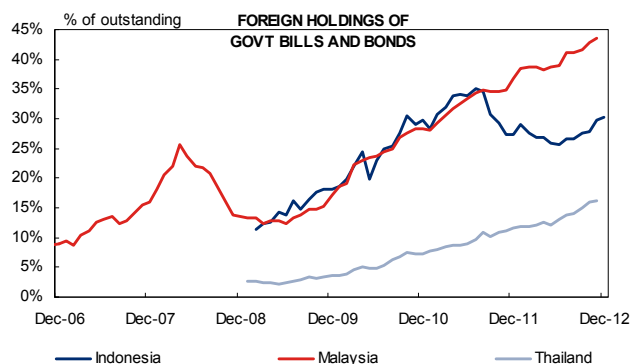
Figure 29. A rising trend – structural rise in reserve diversification flows into select Asian-issuer securities, 2006-2011



Note: The survey includes of 73 participating countries, but unfortunately, excludes two large holders of official reserves – China and Taiwan.

Source: IMF Survey of Securities Held as Foreign Exchange Reserves (SEFER), Citi Research

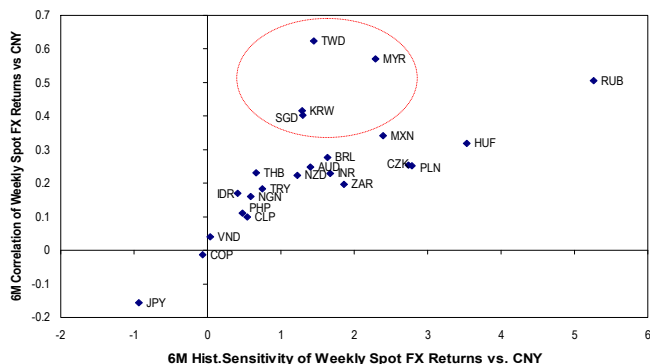
Figure 30. Foreign holdings of government bills and bonds



Source: CEIC, Citi Research

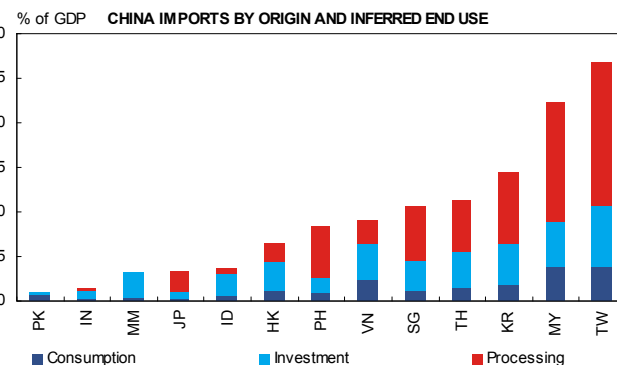
Second, modest CNY appreciation despite DXY strength, driven by a basic balance surplus and rebalancing imperatives, should reduce the constraints on other managed ASEAN currencies like PHP, THB, MYR and SGD to appreciate. We expect a “regime change” in China’s FX policy towards a more market-determined CNY fixing to accommodate pressures for economic rebalancing. Given our expectation of a continued (if narrower) basic balance surplus for China in 2013, we anticipate a modest appreciation in the CNY to 6.15 by year-end (or 3% from current spot levels) despite an expected USD rebound against other majors. This should reduce constraints on tolerating appreciation amongst the more managed ASEAN CA surplus currencies, especially those which could have greater trade linkages with China and thus be more sensitive to cost competitiveness concerns. This should underpin the outperformance of THB, MYR, and to a smaller extent SGD (to the extent that SGD NEER’s movements within the band will remain determined by cyclical gyrations).

Figure 31. Historical Correlation and EM FX with CNY



Source: Bloomberg, Citi Research

Figure 32. China imports by origin and inferred end use



Source: CEIC, Haver, Citi Research

The exception is IDR, which underperformed last year and remains vulnerable in an environment where the deficit in the basic balance renders the currency vulnerable to swings in capital inflows and external shocks. Even if the BOP remains positive, any appreciation pressure will be capped by strong domestic money supply and credit growth, as well as BI's desire to rebuild its reserves. More importantly, gradual currency depreciation is being pursued by BI as a policy tool to reduce external imbalances, though there could be greater reluctance to allow significant depreciation once USD-IDR hits the 10,000 psychological threshold.

Figure 33. Recent regulations on capital flows and potential future measures in the pipeline

	Last Measures Targeted at Capital Flows	Potential New Measures
Indonesia	(Aug 2012) reduction of minimum onshore hedging period from 3 months to 1 week (aimed more at deepening the onshore derivatives market rather than influencing IDR)	None (Indonesia would welcome capital inflows)
Malaysia	None	None
Philippines	(Jul 2012) Restriction of non-resident access to accounts linked to the Special Deposit Accounts (SDAs), (Jul-Aug 2012) Tighter monitoring of bank NDF positions, (Nov 2012) Announce a reduction in government's foreign borrowing plans next year	Relaxing regulations pertaining to capital outflows, for example easing the restrictions on selling dollars to offshore entities. BSP may also extend the BSRD (Bangko Sentral Registration Document) requirement not only for 90-day Time Deposit but also for portfolio investments for all types of fixed income instruments.
Singapore	(Dec 2011) Discriminatory property stamp duties based on residency status of the buyer. (Jan 2013) New round of property measures extending previous measures such as higher and broader-ranging Additional Buyer Stamp Duties and lowering of LTV ratios as well as measures to discourage speculation in industrial properties	Further increases in ABSD and stamp duty if property prices fail to soften
Thailand	(Oct 2012) Announced the "Capital Account Liberalization Master Plan" to encourage overseas investment; remove limits to ODI by Thai individuals, widen institutional investor base and raise limits for outward portfolio investment; remove limit on FCY deposit account, etc.	Lower taxes or grant tax exemption to dividends/profits repatriated from abroad to encourage more capital outflows, could tighten foreign exemptions from paying the 15% WHT

Source: Citi Research

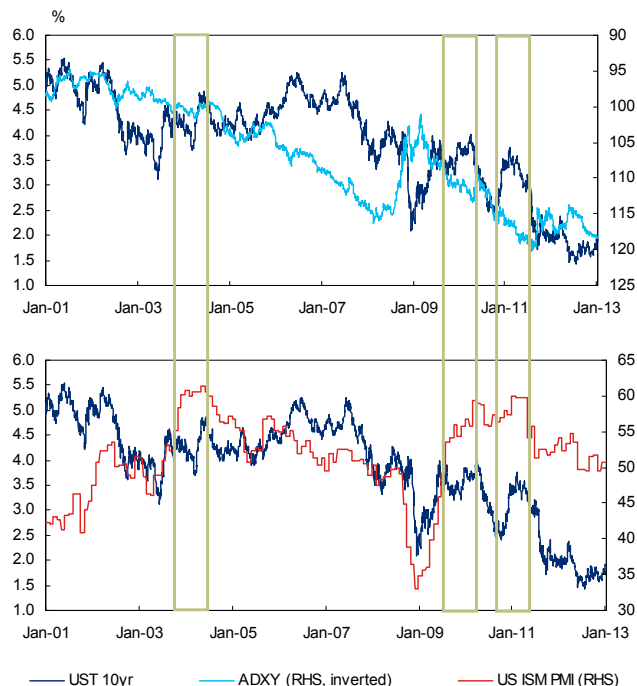
One key risk to our bullish ASEAN FX view is if REER pressures threatens a significant loss of cost competitiveness, prompting more vigorous FX intervention, or less market friendly policies on capital inflows. Within the ASEAN space, the risk is greatest in: [1] more export dependent basic balance surplus countries less dependent on portfolio inflows, [2] where FX intervention sterilization costs are of greater concern to the central bank, and [3] where inflation/financial stability concerns would warrant a greater weight on monetary autonomy (THB and PHP). Alternatively, in the absence of 'hard' restrictions on capital inflows, liberalization measures to encourage larger portfolio and direct outflows by domestic institutional investors may also offset FX appreciation pressures.

A second risk would be a sustained US Treasury sell-off, though the impact on currencies is ambiguous if the UST sell-off is due to upside growth surprises in the US. A US recovery scenario would be accompanied by stronger GDP growth and larger exporter FX demand in more trade dependent and cyclical economies, likely more equity-related capital flows, and inflation risks and greater willingness by central banks to use FX appreciation as a monetary tightening tool.

Figure 34. Estimated average carrying costs of sterilized intervention

	2006	2007	2008	2009	2010	2011	2012
China	-3.2	-1.9	0.7	-0.2	0.7	2.4	2.3
India	7.0	3.7	6.9	6.4	5.6	5.8	-4.1
Indonesia	11.9	8.4	9.2	7.5	6.4	6.2	-4.4
Korea	-0.3	0.8	2.8	1.4	1.8	2.8	-2.8
Malaysia	-1.2	-0.9	1.0	0.9	1.7	2.3	-2.7
Philippines	3.0	2.6	3.3	3.4	3.3	4.0	-3.8
Sing	-1.5	-1.7	-1.1	-0.6	-0.5	-0.3	0.0
Taiwan	-3.2	-2.5	-0.4	-0.6	-0.3	0.2	-0.5
Thailand	0.1	-0.4	0.9	0.1	0.3	2.1	-2.5

Figure 35. A risk would be a sustained US Treasury sell-off, though impact on currencies is ambiguous if the UST sell-off is due to a upside surprises to growth in the US



Note: Measured as the spread between the main sterilization instrument (CN: 3M PBOC Bills, IN: 1yr MSS, ID: series is a combo of SBI bills and more recent use of TD rates; KR: 3M-12M MSBs, MY: 3M BNM notes, PH: 1M SDA rate, SG: 3M FX Swap & MAS 1yr bill; TW: 3M NCD rate and TH: 3M FX Swap & 1yr Bills) and the average of the US 2- and 3-y Treasury yields

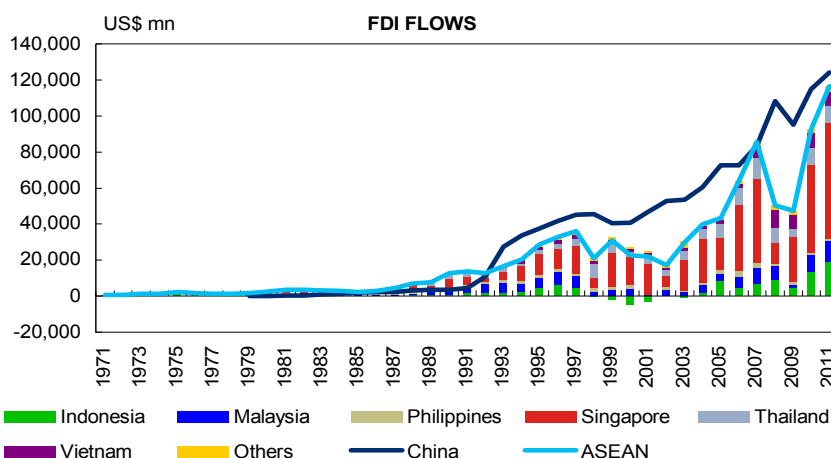
Source: Bloomberg, Reuters, Citi Research

Source: CEIC, Bloomberg, Citi Research

Theme #5: Long term, spillovers from rebalancing in China to persist

Long term, as China's wage cost advantage is eroded amidst its own growth rebalancing, manufacturing FDI into ASEAN could continue to benefit from a diversification of MNCs' portfolios of direct investments away from China. As it stands, FDI into ASEAN almost caught up with China in 2011, with the FDI recovery broadening beyond SG and ID to include TH and MY. FDI into ASEAN had actually overtaken China briefly in 2007 before the onset of the 2008/09 financial crisis.

Figure 36. FDI into ASEAN had almost caught up with that into China by 2011

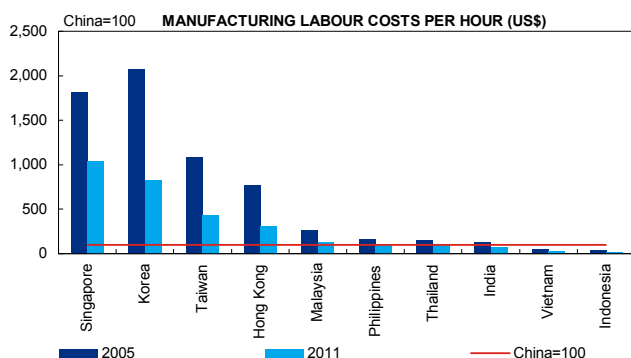


Source: UNCTAD, Citi Research

There are a few reasons for this recent diversification of FDI away from China.

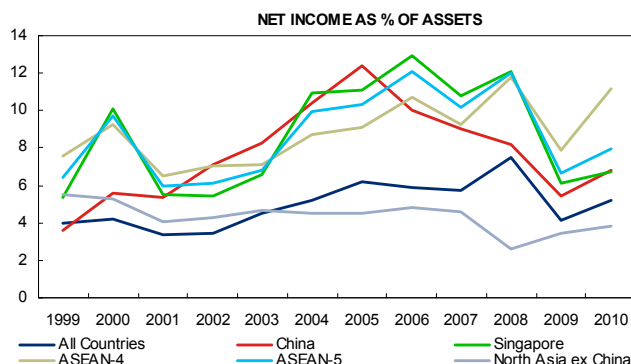
First, as China rebalances its economy from investment towards consumption, the cost advantage it once enjoyed over ASEAN in the last decade has been rapidly eroded (see [Citi GPS: CHINA & EMERGING MARKETS - China is about to rebalance. How will EM be affected?](#), 16th July 2012). ASEAN manufacturing wages as a multiple of Chinese wages have shrunk dramatically in the last decade, including for the more industrialized ASEAN economies. For example, China is more expensive than even TH, which was not the case a decade ago. Competitive labour costs have been a major factor driving superior returns on US and Japanese MNCs investments in ASEAN vs. those in China. With ASEAN's logistics performance set to improve from fairly respectable levels, ASEAN is likely better placed to benefit from a relocation of manufacturing.

Figure 37. China's wage cost advantage over ASEAN has eroded in terms of manufacturing labor costs per hour



Source: Economic Intelligence Unit, Citi Research

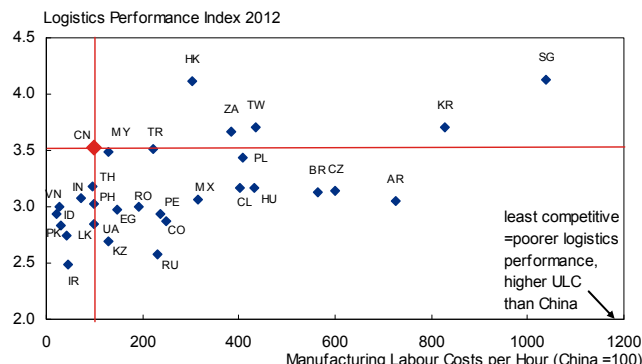
Figure 39. US MNCs: Net Income as % of Assets



Note: ASEAN-5 comprises Indonesia, Malaysia, Philippines, Singapore, and Thailand. ASEAN-4 excludes Singapore.

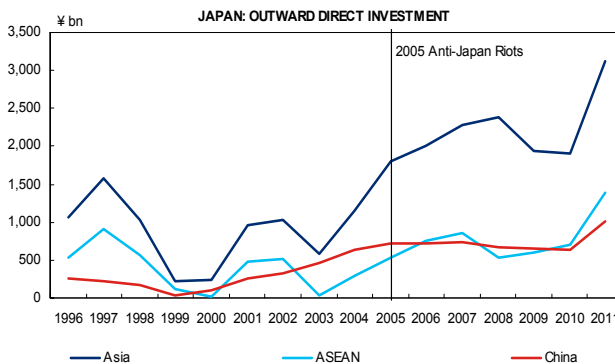
Source: US Bureau of Economic Analysis, Citi Research

Figure 38. Except for SG, ASEAN's wages are generally lower or comparable to China, while logistics performance remains decent.



Source: Economist Intelligence Unit, World Bank, Citi Research

Figure 40. Japan: Outward Direct Investment

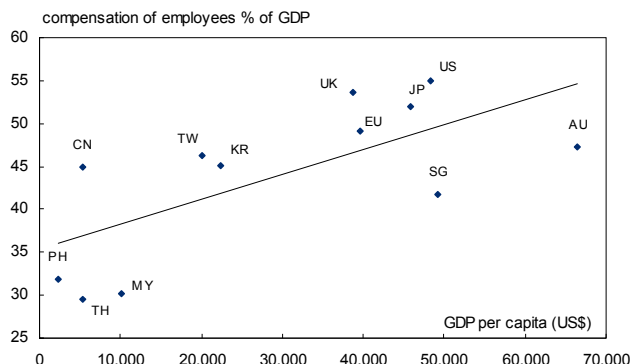


Source: Haver, Citi Research

Second, recent tensions between China and Japan may cause Japanese FDI to be diverted into ASEAN, as Japanese firms adopt a China + ASEAN strategy when it comes to where to locate their investments. Following the previous round of anti-Japanese protests in China in April 2005, Japanese ODI to China gradually stagnated, and the ASEAN-5 (ex SG) countries overtook China briefly in 2006. Already in late-2012, the Singapore *Straits Times* reported that the ASEAN-Japan Centre in Tokyo has received more queries from Japanese firms interested in ASEAN.

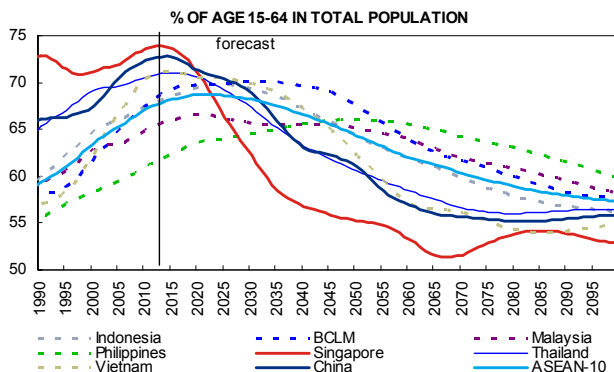
On the flip side, rising wages in China could also be a factor catalyzing structural wage inflation and rebalancing pressures within ASEAN. As we had argued (see [ASEAN Macro View - Should We Worry about Wage Inflation in ASEAN?](#)), recent wage inflation pressures in the region could reflect a structural catch up, given that ASEAN's employee compensation share of GDP – at less than 30-42% – remains relatively low for its level of per capita GDP. Singapore for example with a per capita GDP of US\$49k has a wage share of GDP of 42.7%, far lower than the US and Japan (55% and 51%) which have comparable per capita GDPs – or for that matter even China (45%). To the extent that the positive supply shock from China's entry into global production chains may have been a major factor depressing wages in the 2000s, wage inflation within China may now conversely restore the pricing power of labour within ASEAN and give policymakers more leeway to tolerate wage inflation.

Figure 41. ASEAN's wage share of GDP remains abnormally low relative to its per capita income levels, implying room for catch up



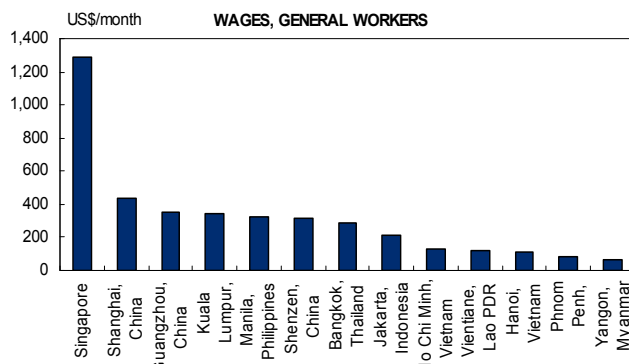
Source: CEIC, Haver, Pemandu, Citi Research

Figure 43. Working age population



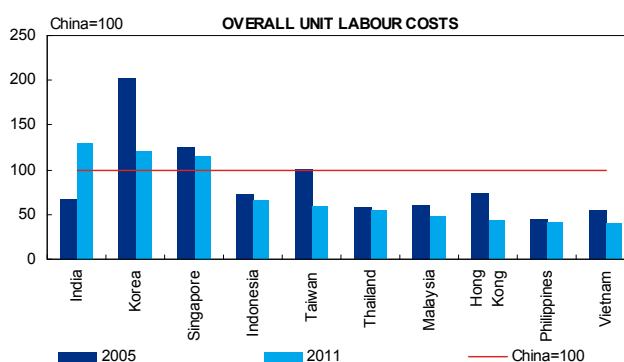
Source: Haver, Citi Research

Figure 42. Average wage levels for general workers in the coastal regions of China are generally higher than ASEAN (ex Singapore)



Source: Japan External Trade Organization (JETRO), Citi Research

Figure 44. Overall unit labour costs level (index CN=100; lower means country is gaining cost competitiveness relative to China)

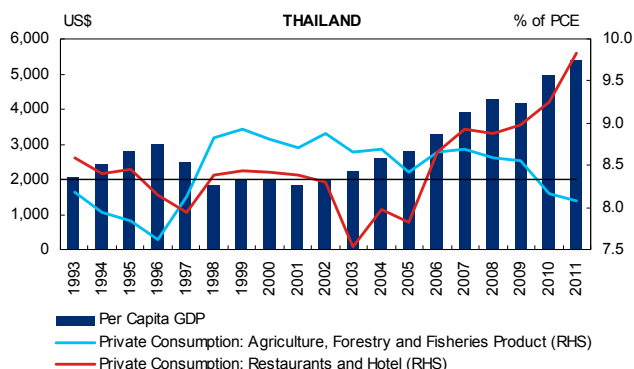


Source: Economist Intelligence Unit, Citi Research

We doubt wage inflation will necessarily derail ASEAN's cost competitiveness nor its attractiveness to FDI. First, wages in China are higher to begin with, and are rising just as quickly if not faster. Even after recent revisions, minimum wages in PH and TH remain 10-20% below that in China; in ID, minimum wages in Jakarta will still remain below those in Shenzhen even after the recent 44% minimum wage hike – and minimum wages outside Jakarta are even lower. Second, ASEAN's demographic dividend may keep the wage gap vis-à-vis China relatively wide. While China could see its working age population start to decline as a proportion of overall population from 2015, ASEAN should see a small rise in the share of working age population from 67% in 2011 before reaching a plateau at 69% in 2020-2024. Third, adjusted for productivity, overall unit labour costs in ASEAN remain between 40-63% that of China in 2012, according to data from the Economist Intelligence Unit. Finally, costs other than wages, including land and energy costs, remain competitive vis-à-vis China.

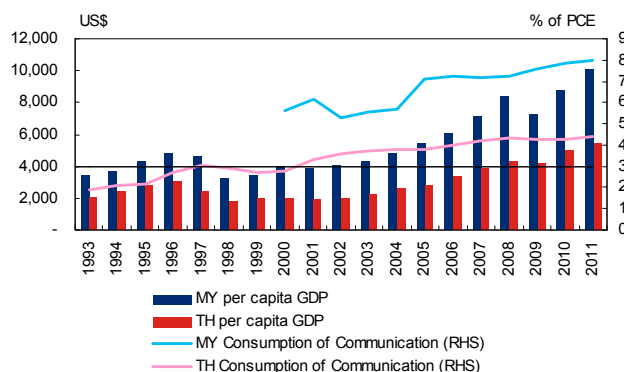
Indeed, a rising wage share of income may provide a more sustainable basis for consumer spending going forward. A rising wage share of GDP as per capita GDP rises should also support a rising consumption share of GDP over time. Of course, the consumption share of GDP in many ASEAN countries is already relatively high, but in some cases has been lifted by rising household leverage (especially in MY) or offshore worker remittances (especially in PH) rather than domestic wages. In such cases, rising wages could ensure greater sustainability of consumption growth over time. Rising household income levels will imply changes in consumption patterns, though the consumer sectors that could benefit will depend on the starting level of income. In general, the proportion of consumption on basic essentials such as raw food tends to decline along with rising per capita incomes, with a shift towards consumer durables and services. Given that the greatest wage catch up is likely to be in low income segments of the workforce, consumption could be more tilted towards prepared food/restaurants, transport equipment/white goods, and smaller ticket consumer durables items, away from raw food.

Figure 45. Share of household consumption on restaurants and hotels took off in 2003 for Thailand, when per capita GDP breached US\$2k/m



Source: CEIC, Haver, Citi Research

Figure 46. Malaysia and Thailand, share of household consumption on communications



Source: CEIC, Haver, Citi Research

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of this research report are named in bold text in the author block at the front of the product except for those sections where an analyst's name appears in bold alongside content which is attributable to that analyst. Each of these analyst(s) certify, with respect to the section(s) of the report for which they are responsible, that the views expressed therein accurately reflect their personal views about each issuer and security referenced and were prepared in an independent manner, including with respect to Citigroup Global Markets Inc and its affiliates. No part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this report.

IMPORTANT DISCLOSURES

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Research product ("the Product"), please contact Citi Research, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance [E6WYB6412478]. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets Singapore PTE LIMITED	Wei Zheng Kit; Brian Tan; Adrian Chua, CFA
PT Citigroup Securities Indonesia	Helmi Arman
Citibank N.A. Philippines	Jun Trinidad
Citigroup Global Markets Asia	Markus Rosgen

OTHER DISCLOSURES

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. LLC (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Research research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to Citi Research research reports.

Important disclosure regarding the relationship between the companies that are the subject of this Citi Research research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures.

For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

This Citi Research research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of Citi Research. This could create a conflict of interest.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in **Australia** through Citi Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in **Brazil** by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of **Canada** by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. This product is available in **Chile** through Banchile Corredores de Bolsa S.A., an indirect subsidiary of Citigroup Inc., which is regulated by the Superintendencia de Valores y Seguros. Agustinas 975, piso 2, Santiago, Chile. The Product is made available in **France** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product is distributed in **Germany** by Citigroup Global Markets Deutschland AG ("CGMD"), which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). CGMD, Reuterweg 16, 60323 Frankfurt am Main. Research which relates to "securities" (as defined in the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong)) is issued in **Hong Kong** by, or on behalf of, Citigroup Global Markets Asia Limited which takes full responsibility for its content. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Research is made available through Citibank, N.A., Hong Kong Branch, for its clients in Citi Private Bank, it is made available by Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citibank N.A. is regulated by the Hong Kong Monetary Authority. Please contact your Private Banker in Citibank N.A., Hong Kong, Branch if you have any queries on or any matters arising from or in connection with this document. The Product is made available in **India** by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in **Indonesia** through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in **Israel** through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A. Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in **Italy** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Via dei Mercanti, 12, Milan, 20121, Italy. The Product is made available in **Japan** by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by SMBC Nikko Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Citi Velocity website. If you have questions regarding Citi Velocity, please call (81 3) 6270-3019 for help. The Product is made available in **Korea** by Citigroup Global Markets Korea Securities Ltd., which is regulated by the Financial Services Commission, the Financial Supervisory Service and the Korea Financial Investment Association (KOFIA). Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. KOFIA makes available registration information of research analysts on its website. Please visit the following website if you wish to find KOFIA registration information on research analysts of Citigroup Global Markets Korea Securities Ltd. <http://dis.kofia.or.kr/fs/dis2/fundMgr/DISFundMgrAnalystPop.jsp?companyCd2=A03030&pageDiv=02>. The Product is made available in Korea by Citibank Korea Inc., which is regulated by the Financial Services Commission and the Financial Supervisory Service. Address is Citibank Building, 39 Da-dong, Jung-gu, Seoul 100-180, Korea. The Product is made available in **Malaysia** by Citigroup Global Markets Malaysia Sdn Bhd (Company No. 460819-D) ("CGMM") to its clients and CGMM takes responsibility for its contents. CGMM is regulated by the Securities Commission of Malaysia. Please contact CGMM at Level 43 Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia in respect of any matters arising from, or in connection with, the Product. The Product is made available in **Mexico** by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comisión Nacional Bancaria y de Valores. Reforma 398, Col. Juárez, 06600 Mexico, D.F. In **New Zealand** the Product is made available to 'wholesale clients' only as defined by s5C(1) of the Financial Advisers Act 2008 ('FAA') through Citigroup Global Markets Australia Pty Ltd (ABN 64 003 114 832 and AFSL No. 240992), an overseas financial adviser as defined by the FAA, participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in **Pakistan** by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in the **Philippines** through Citicorp Financial Services and Insurance Brokerage Philippines, Inc., which is regulated by the Philippines Securities and Exchange Commission. 20th Floor Citibank Square Bldg. The Product is made available in the Philippines through Citibank NA Philippines branch, Citibank Tower, 8741 Paseo De Roxas, Makati City, Manila. Citibank NA Philippines NA is regulated by The Bangko Sentral ng Pilipinas. The Product is made available in **Poland** by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku

Handlowego S.A. ul.Senatorska 16, 00-923 Warszawa. The Product is made available in the **Russian Federation** through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in **Singapore** through Citigroup Global Markets Singapore Pte. Ltd. ("CGMSPL"), a capital markets services license holder, and regulated by Monetary Authority of Singapore. Please contact CGMSPL at 8 Marina View, 21st Floor Asia Square Tower 1, Singapore 018960, in respect of any matters arising from, or in connection with, the analysis of this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore Branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Please contact your Private Banker in Citibank N.A., Singapore Branch if you have any queries on or any matters arising from or in connection with this document. This report is intended for recipients who are accredited, expert and institutional investors as defined under the Securities and Futures Act (Cap. 289). This report is distributed in Singapore by Citibank Singapore Ltd ("CSL") to selected Citigroup/Citigold Private Clients. CSL provides no independent research or analysis of the substance or in preparation of this report. Please contact your Citigroup/Citigold Private Client Relationship Manager in CSL if you have any queries on or any matters arising from or in connection with this report. This report is intended for recipients who are accredited investors as defined under the Securities and Futures Act (Cap. 289). Citigroup Global Markets (Pty) Ltd. is incorporated in the **Republic of South Africa** (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in **Spain** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in the **Republic of China** through Citigroup Global Markets Taiwan Securities Company Ltd. ("CGMTS"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan and/or through Citibank Securities (Taiwan) Company Limited ("CSTL"), 14 and 15F, No. 1, Songzhi Road, Taipei 110, Taiwan, subject to the respective license scope of each entity and the applicable laws and regulations in the Republic of China. CGMTS and CSTL are both regulated by the Securities and Futures Bureau of the Financial Supervisory Commission of Taiwan, the Republic of China. No portion of the Product may be reproduced or quoted in the Republic of China by the press or any third parties [without the written authorization of CGMTS and CSTL]. If the Product covers securities which are not allowed to be offered or traded in the Republic of China, neither the Product nor any information contained in the Product shall be considered as advertising the securities or making recommendation of the securities in the Republic of China. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security or financial products. Any decision to purchase securities or financial products mentioned in the Product must take into account existing public information on such security or the financial products or any registered prospectus. The Product is made available in **Thailand** through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in **Turkey** through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Büyükdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the **U.A.E.**, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFS") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different Citi Research ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in **United Kingdom** by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in **United States** by Citigroup Global Markets Inc, which is a member of FINRA and registered with the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Pursuant to Comissão de Valores Mobiliários Rule 483, Citi is required to disclose whether a Citi related company or business has a commercial relationship with the subject company. Considering that Citi operates multiple businesses in more than 100 countries around the world, it is likely that Citi has a commercial relationship with the subject company.

Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Research's Products can be found at https://www.citivelocity.com/cvr/eppublic/citi_research_disclosures.

Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations.

The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted.

Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product. With the exception of our product that is made available only to Qualified Institutional Buyers (QIBs) and other product that is made available through other distribution channels only to certain categories of clients to satisfy legal or regulatory requirements, Citi Research concurrently disseminates its research via proprietary and non-proprietary electronic distribution platforms. Periodically, individual Citi Research analysts may also opt to circulate research posted on

such platforms to one or more clients by email. Such email distribution is discretionary and is done only after the research has been disseminated via the aforementioned distribution channels. Citi Research simultaneously distributes product that is limited to QIBs only through email distribution. The level and types of services provided by Citi Research analysts to clients may vary depending on various factors such as the client's individual preferences as to the frequency and manner of receiving communications from analysts, the client's risk profile and investment focus and perspective (e.g. market-wide, sector specific, long term, short-term etc.), the size and scope of the overall client relationship with Citi and legal and regulatory constraints. Citi Research product may source data from dataCentral. dataCentral is a Citi Research proprietary database, which includes Citi estimates, data from company reports and feeds from Reuters and Datastream.

© 2013 Citigroup Global Markets Inc. Citi Research is a division of Citigroup Global Markets Inc. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc. and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure of this report (the "Product"), including, but not limited to, redistribution of the Product by electronic mail, posting of the Product on a website or page, and/or providing to a third party a link to the Product, is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient to any third party. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, redisseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST
