1 The International Economy

Some Improvement In Global Growth

The underlying pace of global economic activity has picked up in recent months, on the back of firming momentum in the US and China and steady expansions in the Eurozone and Japan. From the expenditure perspective, both consumption and investment are strengthening in the G3, while external demand has emerged as a driver of growth in Asia ex-Japan. At the global level, industrial production, trade flows and corporate earnings have all registered some improvement. These developments have, accordingly, led to a slight upgrade of the international economic outlook since the last Review, with the global economy projected to expand at 4% in both 2017 and 2018. (Table 1.1)

Forward-looking indicators, such as new orders and composite leading indicators, as well as measures of economic confidence, including consumer and business expectations surveys, have lifted, suggesting that the improved growth momentum could continue. A rekindling of "animal spirits" could increase household spending, business investment and risk-taking activities. However, this rather upbeat sentiment has coincided with an environment of elevated policy uncertainty, and persistent risk factors could derail household and firm expectations. In comparison, inflation expectations are more firmly anchored, with global inflation outcomes likely to stay subdued even as the disinflationary effects of oil prices dissipate.

Table 1.1
Global GDP Growth

(%)

	Q3 2016	Q4 2016	2016	2017F	2018F
	q-o-q SAAR		y-o-y		
Total*	**3.1**	**4.2**	**3.9**	**4.0**	**4.0**
G3*	**2.3**	**1.8**	**1.5**	**1.8**	**1.7**
US	3.5	2.1	1.6	2.2	2.4
Japan	1.2	1.2	1.0	1.3	1.0
Eurozone	1.7	1.9	1.7	1.7	1.5
NEA-3*	**3.2**	**3.3**	**2.0**	**2.2**	**2.2**
Hong Kong	3.3	4.8	1.9	2.1	2.1
Korea	1.9	2.0	2.8	2.5	2.5
Taiwan	4.0	1.8	1.5	2.0	2.0
	y-o-y				
ASEAN-4*	**4.6**	**4.6**	**4.6**	**4.7**	**4.7**
Indonesia	5.0	4.9	5.0	5.2	5.4
Malaysia	4.3	4.5	4.2	4.4	4.4
Philippines	7.1	6.6	6.9	6.4	6.3
Thailand	3.2	3.0	3.2	3.3	3.3
China	**6.7**	**6.8**	**6.7**	**6.5**	**6.2**
India**	**7.4**	**7.0**	**7.9**	**7.3**	**7.6**

Source: CEIC, Consensus Economics, Apr 2017 and EPG, MAS estimates

* Weighted by shares in Singapore's NODX.

** Figures are reported on a Financial Year basis; FY2017 refers to the period from April 2017 to March 2018.

1.1 G3 Economies

Consumption And Investment Have Picked Up

Although G3 GDP growth declined to 1.8% q-o-q SAAR in Q4 2016, from 2.3% in Q3, this was mainly on account of a pullback in the US economy after a one-off export-led surge. Abstracting from quarterly fluctuations, average G3 growth in H2 2016 (2.1%) was higher than in H1 (1.6%). Led by the US, the G3 as a whole has experienced a strengthening of domestic demand in Q4, compared to Q3, as labour markets continued to recover and economic sentiment picked up.

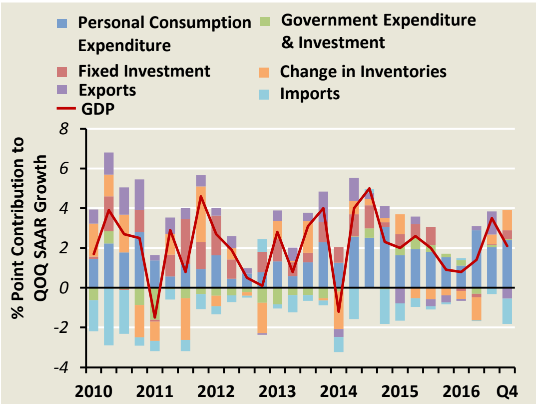
Moreover, forward-looking indicators, such as PMIs, suggest that G3 activity is likely to stay firm this year. Positive business sentiment and higher corporate earnings could also support a more decisive upturn in private investment. On the downside, shifts in the domestic and foreign policies of the US administration remain a risk, and the political uncertainty arising from key elections in Europe has further clouded the outlook. Global economic policy uncertainty has reached unprecedented levels in recent periods, and a downward adjustment of growth expectations, should pro-growth policies not materialise, cannot be ruled out. As a baseline, the G3 economies are expected to grow by 1.8% in 2017 and 1.7% in 2018, up from 1.5% last year.

Domestic demand firmly underpinned US growth.

US GDP growth at the end of last year was underpinned by firm domestic demand, especially consumption spending. Personal consumption expenditure, supported by job gains and rising wages, expanded at 3.5% q-o-q SAAR in Q4 2016, up from 3.0% in the preceding quarter. Household spending contributed 2.4% points to Q4 GDP growth of 2.1% q-o-q SAAR, which was, in turn, a pullback from the 3.5% in Q3, mainly due to the normalisation of soybean exports. (Chart 1.1) Concomitantly, net exports subtracted 1.8% points from GDP growth in Q4, although this was partially offset by a positive 1.0% point contribution from inventory accumulation.

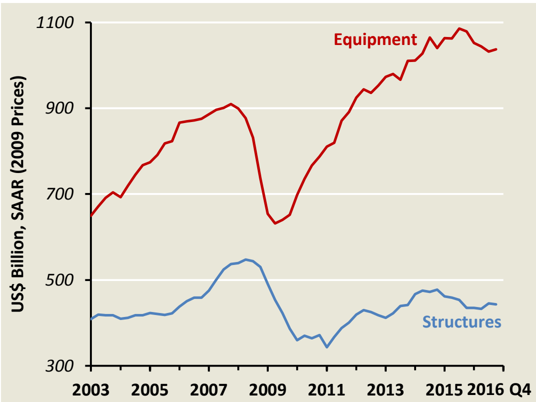
After several quarters of weakness, private fixed investment showed nascent signs of a recovery in Q4, rising by 2.9% q-o-q SAAR on the back of a 9.6% q-o-q SAAR pickup in residential investment. While equipment investment showed a marginal improvement, capital spending on structures dipped slightly, after rebounding in Q3. (Chart 1.2) From a longer perspective, investment in both structures and equipment has levelled off in the last two years following the post-GFC recovery. As mentioned in the last *Review*, the "accelerator" model can, to a large extent, explain the weakness in private non-residential investment as an outcome of subdued overall economic growth. Firmer final demand, coupled with the prospect

Chart 1.1
Contribution to US GDP Growth



Source: Bureau of Economic Analysis

Chart 1.2
US Private Fixed Investment: Structures and Equipment

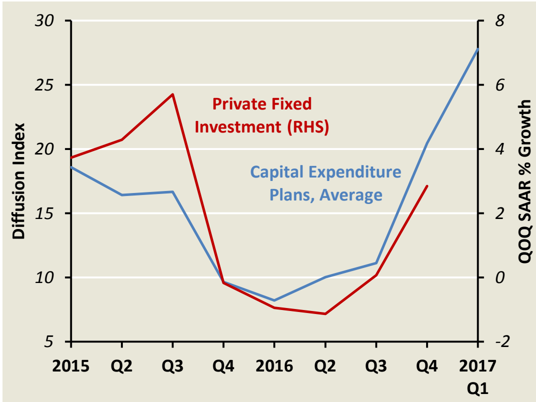


Source: Bureau of Economic Analysis

of tax cuts, infrastructure spending and deregulation by the new administration, could spur private investment in the quarters ahead. Indeed, the Federal Reserve's capital expenditure survey suggests that private corporates are planning to raise investment expenditure over the next six months. (Chart 1.3)

As for public investment, a 2016 report by the American Society of Civil Engineers noted that the US infrastructure investment gap remained significant and would continue to depress economic performance if not addressed.[1] In January 2017, the US Department of Transportation identified a US$836 billion backlog of unmet capital investment needs for highways and bridges, including critically needed repairs. While recent federal, state and local investment spending have gone some way towards meeting these shortfalls, further efforts to direct fiscal resources to infrastructure improvement are essential. The current administration's plan to encourage private participation in infrastructure investment through tax credits is noteworthy, but its success will depend on Congressional approval of broader tax reform and other budgetary priorities.

Chart 1.3
Planned Capital Expenditure Diffusion Index and Private Fixed Investment



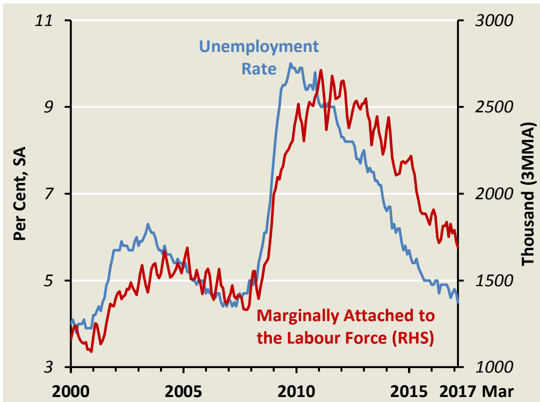
Source: Federal Reserve Board, Bureau of Economic Analysis and EPG, MAS estimates

Note: The diffusion index is a simple average of indices compiled by the Federal Reserve Board in New York, Texas, Chicago, Philadelphia, Kansas and Virginia.

Private consumption will remain robust, supported by a healthy labour market.

Recent indicators suggest that the US labour market remains supportive of growth in consumption. Non-farm payrolls increased by an average of 178,000 a month in Q1 2017, with the unemployment rate falling to a post-GFC low of 4.5% in March. (Chart 1.4) Meanwhile, the number of marginally attached workers has also been on a steady declining trend. Due in part to increased tightness in the labour market, average hourly earnings rose by 2.7% y-o-y in March, up from about 2.0% throughout much of the post-GFC period. Positive wealth effects stemming from the rally in the stock market and the ongoing recovery in the housing sector may also boost household spending.

Chart 1.4
US Labour Market Indicators



Source: Haver Analytics and EPG, MAS estimates

Note: Marginally attached workers refer to persons not in the labour force who want, and are available for, work and who have looked for a job sometime in the previous 12 months.

In addition, a number of structural factors will continue to contribute to the expansion in personal consumption expenditure. US household balance sheets have improved since the GFC: total household debt service payments as a ratio of disposable personal income fell to 10.0% in Q4 2016 from a peak of 13.2% in Q4 2007. As favourable economic conditions motivate more young Americans to leave their family homes, the rate

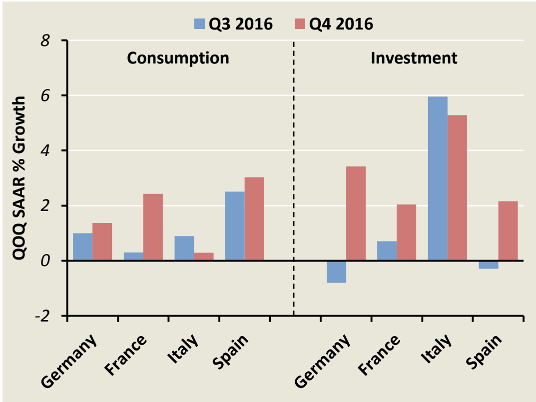
[1] American Society of Civil Engineers (2016), *Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future*, May, Boston. This report provides data and projections for infrastructure in five sectors: surface transportation, water and wastewater, electricity, airports, inland waterways and marine port infrastructure.

of household formation will likely continue to rise, and in the process, prop up spending on durable goods. Recent data show an increase in the number of households headed by 25–29 year olds, while the average size of households fell to just 2.53 in 2016 from a peak of 2.59 in 2010. Overall, the US economy is expected to grow by 2.2% in 2017, before picking up to 2.4% in 2018.

Eurozone growth in Q4 was lifted by domestic demand.

The Eurozone economy grew at a firmer 1.9% q-o-q SAAR in Q4 2016, from 1.7% in the previous quarter. Robust domestic demand was the main driver, with private consumption contributing 1.0% point and investment adding 2.7% points. Notably, consumer spending in France accelerated on the back of growing household income. (Chart 1.5) The increase in Eurozone private investment growth was led by a rebound in construction investment in Germany and firm equipment investment in Italy. Government consumption in the Eurozone provided further support, expanding by 1.8% q-o-q SAAR in Q4, up from 0.6% in Q3. However, Eurozone net exports posed a drag to overall GDP growth, as the pickup in export volumes was offset by an even stronger rise in imports.

Chart 1.5
Consumption and Investment in Major Eurozone Economies

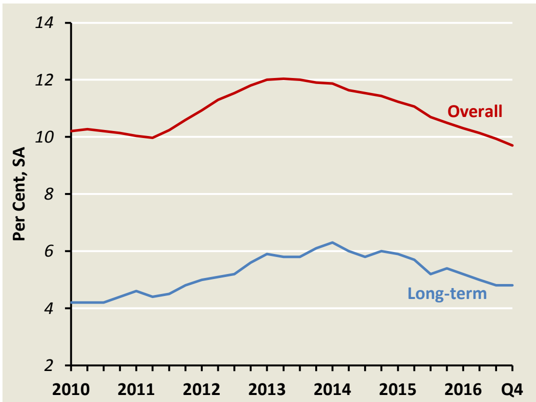


Source: Eurostat and EPG, MAS estimates

A moderate expansion is projected for 2017, amid some downside risks.

With momentum carried over from 2016, the Eurozone economy is envisaged to expand at a steady pace this year. The aggregate Markit manufacturing PMI for the region rose to 56.2 in March, a level not seen in six years. The continued recovery in the labour market and favourable financing conditions augur well for sustained gains in household spending. Long-term unemployment has declined, and the overall unemployment rate fell to 9.7% in Q4 2016, from a peak of 12% in Q2 2013. (Chart 1.6) Growth should also benefit from a pickup in exports as global economic conditions improve in 2017. Reflecting this more positive outlook, the Eurozone Economic Sentiment Indicator reached its highest level since the sovereign debt crisis in 2011.

Chart 1.6
Eurozone Unemployment Rates



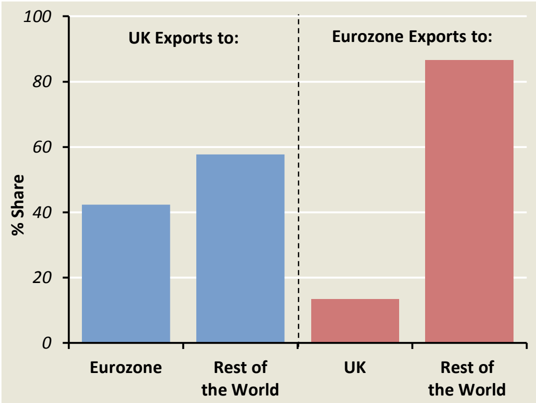
Source: Haver Analytics

Note: The long-term unemployment rate refers to the number of people who are out of work and have been actively seeking employment for at least a year.

The continuation of measures to stimulate public and private investment under the "Juncker plan" would also help to reverse weak investment growth in the post-GFC period. In a 2016 report, McKinsey estimated that the infrastructure investment rate in Europe declined by 0.4% point from 2008 to 2013, most notably in roads and telecommunications.[2] Higher investment in these areas would, therefore, support short-term demand and boost longer-term growth potential.

Nonetheless, there are downside risks to growth from the uncertainties associated with Brexit, the upcoming national elections in France and Germany, and the unresolved Greek sovereign debt problem. The outcome of negotiations over the terms of the UK's exit from the EU and therefore the future of the Eurozone's economic and trade relations with the UK, are highly unpredictable and could weigh on corporate capital spending. Moreover, while transitional arrangements are being negotiated, the Eurozone's exports to the UK, which account for 13% of total merchandise exports, could be affected. (Chart 1.7) However, in the event of a "hard Brexit", it is probably the UK that would be more adversely affected, with over 40% of its merchandise exports going to the Eurozone.

Chart 1.7
Eurozone and UK
Merchandise Exports, 2016



Source: Eurostat and EPG, MAS estimates

Brexit aside, the rise of populist, nationalistic and anti-immigrant parties in Europe could lead to election outcomes in France and Germany that unnerve investors and depress economic confidence. Such a scenario could derail the near-term steady growth path of the Eurozone, with possibly more severe long-term consequences. Against this backdrop, growth in the Eurozone is expected to come in at 1.7% this year and 1.5% in 2018.

In Japan, growth will be shored up by fiscal easing and stronger exports.

Japan's GDP grew by 1.2% q-o-q SAAR in Q4 2016, unchanged from the previous quarter, as an increase in exports and a jump in capital expenditure offset a pullback in private consumption growth. The latter increased only marginally by 0.2% q-o-q SAAR in Q4, down from 1.4% in the preceding quarter, as household spending was dampened by higher fresh food prices after a bout of inclement weather. Overall government expenditure also edged down by 1.0% q-o-q SAAR, due to a contraction in public investment, but it should increase this year as the planned fiscal stimulus package is implemented. A rise in net exports contributed 1.0% point to Japan's Q4 GDP growth as the region's cross-border production networks swung into higher gear at the end of last year driven, in part, by a surge in demand for electronics components used in the manufacture of smartphones.

[2] McKinsey Global Institute (2016), *Bridging Global Infrastructure Gaps*, June.

Meanwhile, the weaker yen also helped to raise Japanese corporate profits which, in conjunction with rising capacity utilisation, would have helped to lift business fixed investment by 8.4% q-o-q SAAR in Q4, the fastest increase in two years.

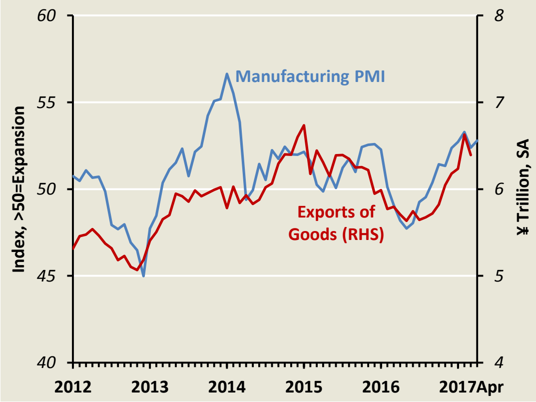
In 2017, Japan's GDP growth is expected to pick up slightly, compared to 2016, underpinned by expansionary fiscal policy. Domestic demand will be shored up by the stimulus package, which includes new infrastructure spending and consumption-boosting measures. Moreover, exports are expected to improve further on the back of stronger external demand, including from China, and the current upswing in the tech cycle. Indeed, recent economic indicators such as the manufacturing PMI and exports suggest that economic activity is likely to have strengthened in Q1 2017. (Chart 1.8) However, unlike in the US and Eurozone, private consumption is not expected to contribute much to growth this year as nominal wage increases remain tepid despite a tight labour market. (Chart 1.9) On balance, Japan's GDP growth is expected to come in at 1.3% in 2017, before slowing to 1.0% in 2018 due to the fading of the effects from the fiscal stimulus.

A divergence between upbeat economic sentiment and elevated policy uncertainty.

In addition to the country- and region-specific factors, a number of forward-looking indicators suggest that the cyclical upturn in the advanced economies will likely continue in the near term. (Chart 1.10) In February 2017, the OECD Composite Leading Indicator advanced to 100, its highest reading in 17 months. (A reading of 100 signifies growth similar to the long-term average.) Meanwhile, the global manufacturing PMI rose from its trough in early 2016 to 53.0 in March 2017, indicating support for industrial production in the next few months.

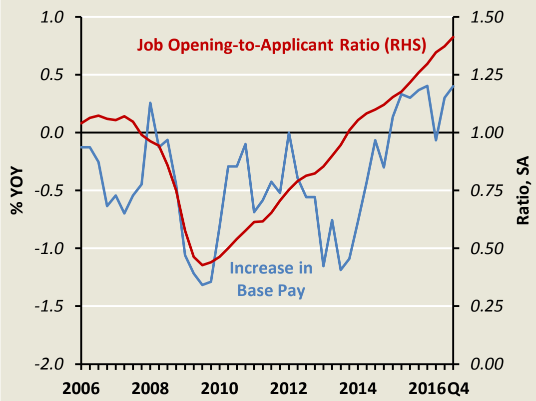
These improvements have been accompanied by a discernible rise in measures of economic sentiment—including surveys of consumer and business confidence, as well as stock prices. Nevertheless, this rekindling of "animal spirits"—which could catalyse increased spending, business expansion and risk-taking—have coincided with rising levels of global economic policy uncertainty, as measured by the index developed by

Chart 1.8
Japan's Manufacturing PMI and Exports of Goods



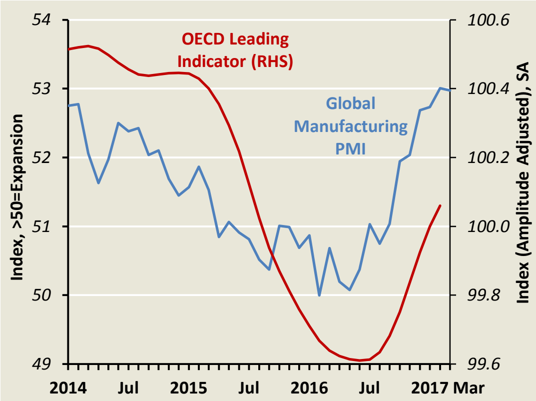
Source: Haver Analytics

Chart 1.9
Japan's Nominal Wage Growth and Job Opening-to-Applicant Ratio



Source: Haver Analytics and EPG, MAS estimates

Chart 1.10
Global Manufacturing PMI and OECD Leading Indicator

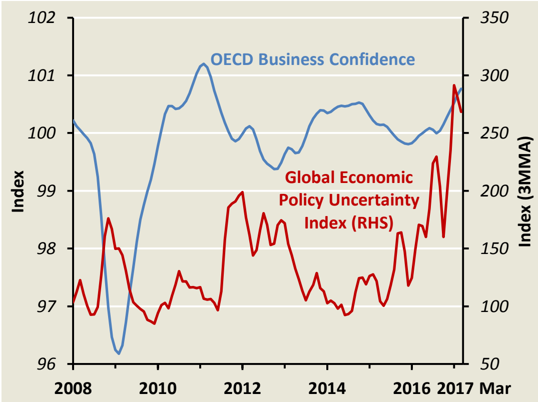


Source: Haver Analytics and JPMorgan

Baker *et al.* (2016).[3] (Chart 1.11) Historically, episodes of positive co-movements between business confidence and policy uncertainty are rare. For instance, Rodrik (1989)[4] argued that economic policy uncertainty would reasonably be expected to dent private investment, since physical investment is essentially irreversible, and firms would typically withhold long-term spending commitments until residual uncertainty is eliminated.

Hence, households and firms' more sanguine expectations can only be maintained if some of the prevailing uncertainties and risk factors dissipate. Notable among these are the lack of clarity associated with the Brexit process, the outcomes of major elections in Europe, and US policies on trade, taxes and immigration. The ability of the US administration to enact the pro-growth fiscal stimulus that is anticipated by investors will also be critical in determining whether investment spending continues to pick up in H2 2017. Therefore, the sustainability of the global expansion is by no means assured.

Chart 1.11
Global Economic Policy Uncertainty and OECD Business Confidence



Source: Global Economic Policy Uncertainty Index and Haver Analytics

3 The Global Economic Policy Uncertainty Index was featured in the October 2016 issue of the *Review*. See also Baker, S R, Bloom, N and Davis, S J, (2016), "An Index of Global Economic Policy Uncertainty", www.policyuncertainty.com.

4 Rodrik, D (1989), "Policy Uncertainty and Private Investment in Developing Countries", *NBER Working Paper* No. 2999.

1.2 Asia

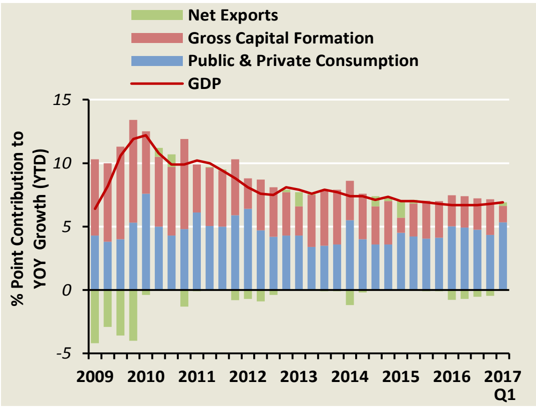
A Trade Recovery Is Underway

Growth in Asia ex-Japan surprised slightly on the upside in 2016, as a year-end boost to production and trade lifted GDP in the export-oriented economies. Specifically, restocking dynamics in the global electronics industry, coupled with rising demand for mid-range smartphones in China, benefited the Asian economies which are plugged into regional supply chains. While prospects for a longer-term trade revival remain muted, a cyclical upswing in external demand can serve as an additional growth driver for the region in the near term, helping to buttress still-resilient domestic demand. The recovery in corporate profits could also help to galvanise investment in the region. Hence, despite uncertainties in the global economy, the Asia ex-Japan region is projected to expand by a stronger 4.8% in 2017 and 4.7% in 2018.

China's underlying growth is gradually firming.

In China, the cumulative effects of policy stimulus throughout last year lifted GDP growth to 6.8% y-o-y in Q4, which was higher than the average pace for the preceding three quarters, bringing full-year growth to 6.7%. The year-end pick up is attributable to faster growth in gross capital formation, which offset a slowdown in both public and private consumption. (Chart 1.12) At the same time, net exports subtracted from headline growth for the sixth consecutive quarter. Policy support to the Chinese economy in 2016 took several forms and included a rapid expansion in household credit as well as a relaxation of some property cooling measures, which contributed to a boom in property transactions. This real estate upturn, together with strong growth in infrastructure investment, generated positive spillovers to the construction and heavy materials industries. A cut in the car purchase tax also spurred auto sales towards end-2016.

Chart 1.12
Contribution to China's GDP Growth



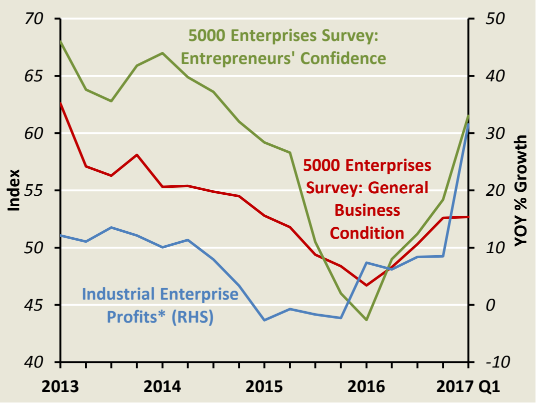
Source: CEIC and EPG, MAS estimates

In addition, the state sector played a key role in boosting China's investment demand, amid sluggish capex by the private sector. In Q4 2016, the state sector's fixed asset investment (FAI) surged by 18.7% y-o-y year-to-date (YTD), while private FAI rose by a comparatively smaller 3.2%. Accordingly, private firms' share of services sector FAI for the whole of 2016 fell by 4.2% points to 48.5%, while their share of manufacturing FAI declined by a smaller 0.5% point to 87.2%.

In Q1 2017, headline GDP growth accelerated to 6.9% y-o-y, amid a recovery in fixed investments and net exports. Notably, private investment growth rose further to 7.7% y-o-y on the back of robust orders and rebounding industrial profits. Industrial production grew by 6.8% y-o-y, buoyed by a solid performance in high-technology categories such as semiconductors and industrial robots, as output in these segments rose by 11% and 55%, respectively.

Looking ahead, a number of factors should provide the impetus for a self-sustaining recovery in domestic demand that would enable the authorities to scale back policy stimulus and state-led investment, and focus on containing financial vulnerabilities. First, rising new orders and improving profit margins in recent months should set off a virtuous circle of stronger business confidence, capital spending, and wage increases. Industrial profits in China surged by 31.5% y-o-y in Jan–Feb 2017 on average, signalling a decisive rebound from the sluggish earnings in 2015–16. (Chart 1.13) Second, robust activity in the property-related sectors will likely be maintained, on the back of buoyant sales. Even though cooling measures have restrained the real estate boom in the largest Chinese cities, there are signs that investor appetite has shifted towards the lower-tier cities in Q1 this year, with sales of floor space up 21.6% y-o-y nationwide. (Chart 1.14) On balance, China's growth is projected to come in at 6.5% this year, before slowing to 6.2% in 2018.

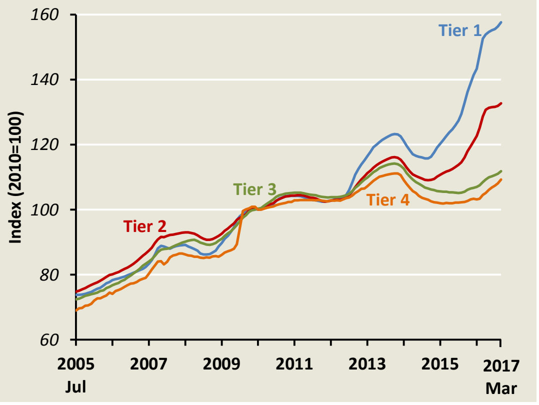
Chart 1.13
China's Industrial Enterprise Profits and Sentiment Indicators



Source: CEIC and EPG, MAS estimates

* The Q1 2017 reading for industrial profits refers to the average for Jan–Feb.

Chart 1.14
China's Property Prices by City Tiers

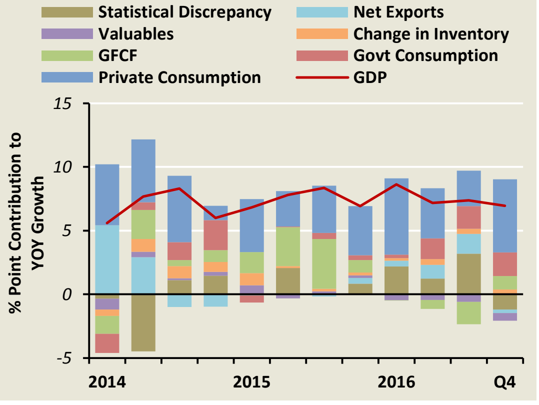


Source: CEIC and EPG, MAS estimates

In India, growth surpassed expectations as consumption held up despite demonetisation.

India's GDP grew by a stronger-than-expected 7.0% y-o-y in Q4 2016, contrary to predictions of a sharp slowdown precipitated by the demonetisation exercise carried out in November. (Chart 1.15) Private consumption growth, which doubled to 10.1% y-o-y in Q4, accounted for four-fifths of the expansion. Meanwhile, strong state spending and the disbursement of wage increases for civil servants kept government consumption elevated for the third consecutive quarter. Gross fixed capital formation turned around after three quarters of contraction, even as still-strained corporate balance sheets continued to weigh on business investment. By sector, agriculture benefited from a favourable monsoon, trebling its growth contribution from Q3. Not surprisingly, the cash-dependent services sector slowed in Q4, with the financial, real estate and business services sectors experiencing the most significant pullbacks.

Chart 1.15
Contribution to India's GDP Growth



Source: CEIC and EPG, MAS estimates

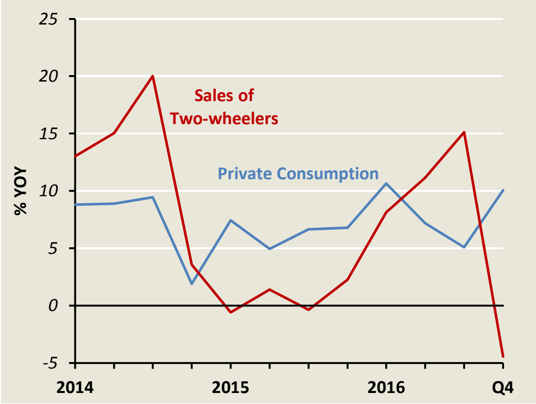
Despite the relatively benign growth outturn in Q4, the divergence between the headline GDP figure and some monthly coincident indicators of rural demand, including the sales of two-wheelers, suggests that the impact of demonetisation could be more severe in the informal sector, which is not captured directly by official GDP figures. (Chart 1.16) In the coming months, the acceleration of remonetisation should provide greater support to private consumption spending and the services sector. Although the anticipated implementation of a broad-based Goods and Services Tax (GST) later this year could pose a drag on near-term growth, it should deliver efficiency gains in the medium term. All in, India's GDP growth is projected to come in at 7.3% in FY2017 and 7.6% in FY2018.

Growth prospects for the NEA-3 have been buoyed by the tech cycle.

The NEA-3 economies turned in a mixed performance in Q4 2016. As a whole, GDP growth inched up to 3.3% q-o-q SAAR in Q4 from 3.2% in the preceding quarter. (Chart 1.17) Despite soaring exports, Taiwan's GDP growth fell to 1.8% q-o-q SAAR from 4.0% in Q3 due to a surge in imports and a pullback in government consumption. In contrast, Korea's economy expanded at a marginally faster rate of 2.0% q-o-q SAAR in Q4, as strong semiconductor demand lifted exports, even as weak consumer sentiment depressed private consumption and residential investment. Hong Kong's growth also accelerated, to 4.8% q-o-q SAAR from 3.3% in the prior quarter, on account of robust private consumption and investment spending.

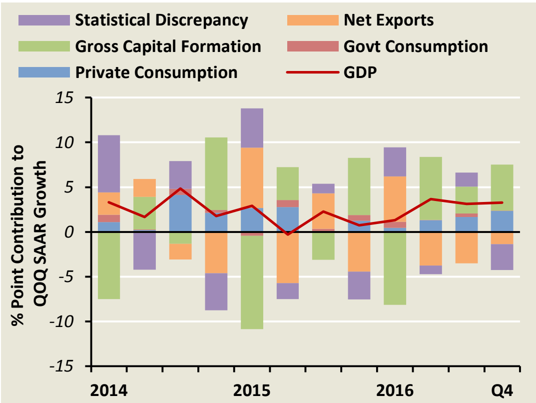
Despite variations in quarterly outturns, growth in the NEA-3 last year had surprised on the upside, buoyed by a stronger recovery in external demand in H2 2016 than previously envisaged. Correspondingly, the near-term outlook for the NEA-3 has improved amid a tech cycle upswing driven by inventory restocking and the rollout of highly-anticipated consumer electronics products. The resultant increase in demand for IT parts and components has fuelled activity across the entire electronics supply chain. Accordingly, electronics exports in Taiwan and Korea surged by 19.2% and 47.1% y-o-y, respectively, in Q1 2017, following an extended period of sluggish performance. (Chart 1.18) In addition, stable economic growth in China is likely to provide further support to external demand, as shown by the recovery in NEA-3 exports to China over the last two quarters. Given these considerations, the growth forecast for the NEA-3 stands at 2.2% in both 2017 and 2018, compared to the outcome of 2.0% last year.

Chart 1.16
Growth in India's Private Consumption and Sales of Two-wheelers



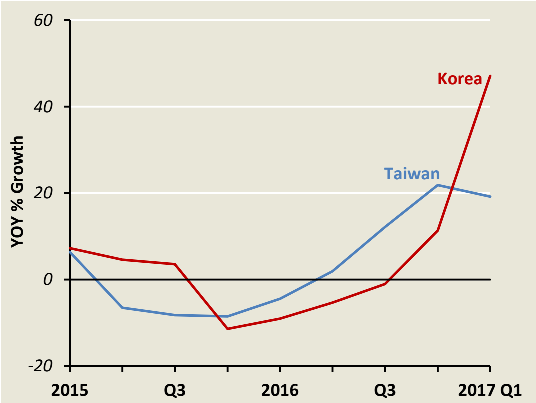
Source: CEIC and EPG, MAS estimates

Chart 1.17
Contribution to NEA-3 GDP Growth



Source: CEIC and EPG, MAS estimates

Chart 1.18
Electronic Components Exports in Taiwan and Korea



Source: Haver Analytics and EPG, MAS estimates

Domestic drivers took a backseat in ASEAN-4 as external demand recovered.

GDP growth in the ASEAN-4 was sustained at an average of 4.6% y-o-y in Q4 2016, unchanged from a quarter ago. In the first reversal of roles since the GFC, an improvement in external demand provided the impetus (Chart 1.19), while growth in domestic demand pulled back slightly owing to fiscal constraints. Except for Malaysia, which registered stronger headline y-o-y growth in Q4 compared to Q3, the other regional economies recorded mild slowdowns.

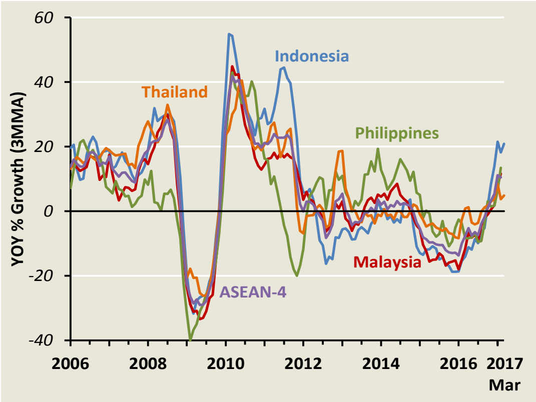
Shipments of IT goods and commodities rose in Malaysia and net exports contributed 0.5% point to growth. However, public sector spending was scaled back to meet deficit targets amid weak revenues. Likewise, in Indonesia, a broad-based rebound in non-oil & gas exports was counterbalanced by a pronounced cut in government spending. Meanwhile, favourable labour market conditions in the Philippines supported private consumption, while in Thailand, the mourning period after the King's passing led to a temporary retraction in consumer spending.

The ASEAN-4 economies as a whole are projected to expand by 4.7% in both 2017 and 2018. External demand is set to make a larger contribution to overall growth and complement domestic demand, which has been the mainstay of ASEAN growth since the rebound from the GFC. The turnaround in exports witnessed at the turn of the year is likely to continue, benefiting both commodity- and tech-producing countries. In particular, the electronics upturn is expected to boost growth in Malaysia and Thailand. On the domestic front, investment, especially in infrastructure, will remain an important growth driver for the ASEAN-4. (Chart 1.20) However, private investment may take longer to revive given the prevailing global uncertainties and a likely further tightening of financial conditions as the US Federal Reserve continues to normalise policy in the coming quarters.

Information and communications technology can be an important enabler of growth in Asia.

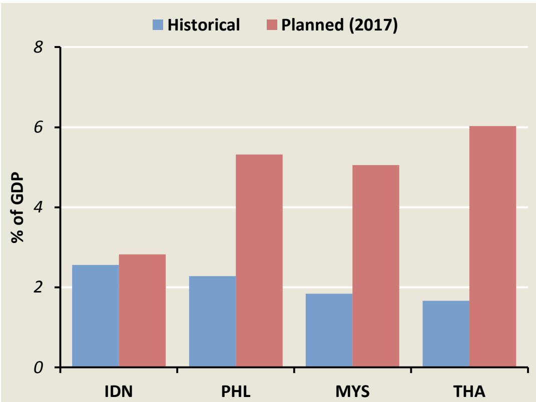
Meanwhile, there is significant scope for information and communications technology (ICT) to bolster economic growth in the region. Beyond basic infrastructure, investment in ICT is increasingly critical in the knowledge-based economy. As a "general purpose technology", ICT can raise productivity

Chart 1.19
ASEAN-4 Merchandise Exports



Source: Haver Analytics and EPG, MAS estimates

Chart 1.20
ASEAN-4 Infrastructure Investment



Source: Country sources, Asian Development Bank and IMF World Economic Outlook

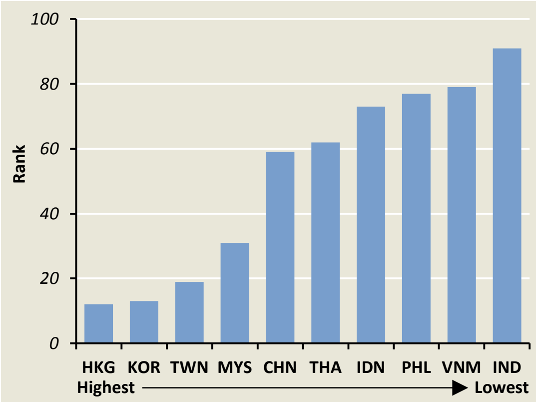
Note: The time periods used for averaging the historical data are 2016 for Indonesia, 2010–14 for Malaysia and 2011–14 for the Philippines and Thailand.

and lower costs not only in the sectors producing related goods but also in other sectors of the economy through increased deployment of computer hardware, software, and telecommunications equipment.[5]

Estimates from The Conference Board show that the contribution of ICT capital inputs to Developing Asia's growth over 1990–2010, at about 5%, remained far below the 28% in the US. Accelerated diffusion of ICT and its efficient incorporation into production technologies, including in the non-tradable sector, will thus help to raise productivity growth. This is especially true for services industries, such as retail & wholesale trade and financial services.

The World Economic Forum's Networked Readiness Index also highlights the wide disparity among Asian countries in their ability to tap into growth-enhancing ICT. (Chart 1.21) It appears that the NEA-3, Malaysia, China and Thailand, whose governments are heavily committed to the digital agenda, are relatively ahead in the Asian rankings. Recent initiatives taken in these economies include the creation of e-payment systems, efforts to encourage ICT adoption and the promotion of digital start-ups. In comparison, India, the Philippines, Vietnam and Indonesia are in an earlier phase of ICT adoption.

Chart 1.21
Networked Readiness Index (2016)

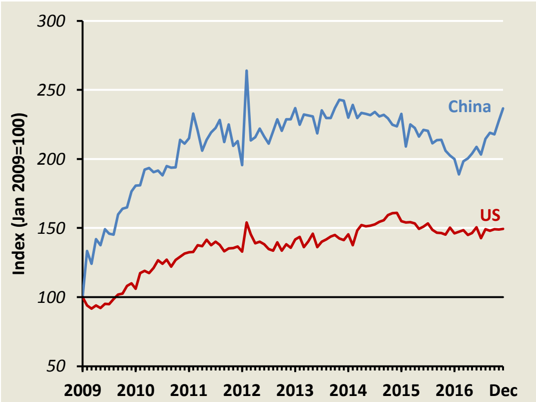


Source: World Economic Forum

External demand has re-emerged as a growth driver for Asia.

Over the last three years, growth in the Asia-8 economies (namely, ASEAN-4, NEA-3 and India) has been sustained by resilient domestic demand, while external demand played a diminished role. The contraction in goods and services exports in the four quarters from Q2 2015 was the first time since the GFC that the region experienced such a prolonged slump in external demand. The cyclical causes of this trade step-down include a sluggish economic recovery in the advanced economies, which constrained their imports of consumer and capital goods. In particular, weak capital spending and lacklustre private consumption generated less trade. In addition, industrial supply overhangs in China had dented its imports of commodities as well as intermediate and capital goods from the Asia-8. (Chart 1.22)

Chart 1.22
Asia-8 Nominal Goods Exports to China and the US



Source: CEIC and EPG, MAS estimates

Note: Asia-8 refers to Hong Kong, Taiwan, Korea, Malaysia, Thailand, Indonesia, the Philippines and India.

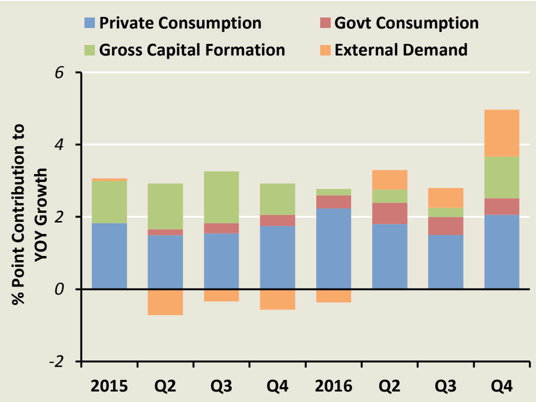
[5] Jorgenson, D and Stiroh, K (1999), "Information Technology and Growth", *American Economic Review*, Vol. 89(2), pp. 109–115.

However, since Q2 2016, demand for Asia-8 goods and services exports has turned around and ceased to subtract from total demand growth (Chart 1.23). Led by recovering exports from the NEA-3, external demand for the Asia-8 rose by an average of 2.2% y-o-y over Q2–Q4 2016, reversing a fall of 1.4% in the previous four quarters. In fact, external demand accounted for nearly half of the NEA-3's total demand growth in H2 2016, after subtracting from it in H1. The export uplift, coupled with a year-end rebound in fixed investment and inventories among the Asia-8 economies, boosted the region's total demand by 5% y-o-y in Q4 2016. In terms of trade destination, the bulk of the improvement in Asia-8 exports over Q2–Q4 2016 was due to increased intra-regional demand including from China (almost 90%), with the remainder attributable to the G3 economies.

By product category, the strong export performance of the ASEAN-4 and NEA-3 in H2 2016 was driven largely by the rebound in fuels and other commodity exports. The recovery in global oil and commodity prices partially unwound the large adverse terms-of-trade shock experienced by commodity exporters in 2014–15. Machinery and electrical machinery exports from the ASEAN-4 and NEA-3 also saw an uptick, in line with the increase in industrial production. Given the extensive production networks in the region, the export upturn was matched by an increase in intermediate goods imports, which helped to further expand regional trade flows. (Chart 1.24)

While structural factors are likely to hold back a more vigorous secular boom in trade, the ongoing recovery in the major global economies should underpin Asia-8's external demand in the near term. First, firmer G3 growth, particularly if capex-driven, bodes well for the region's exports. Second, China has made progress in whittling down its industrial inventory and cutting excess production capacity, which in turn kick-started an inventory restocking cycle and a revival in its imports of manufacturing inputs and capital equipment. Third, the global electronics industry is in the midst of a cyclical upturn, and this should support trade across the various nodes of the region's production networks.

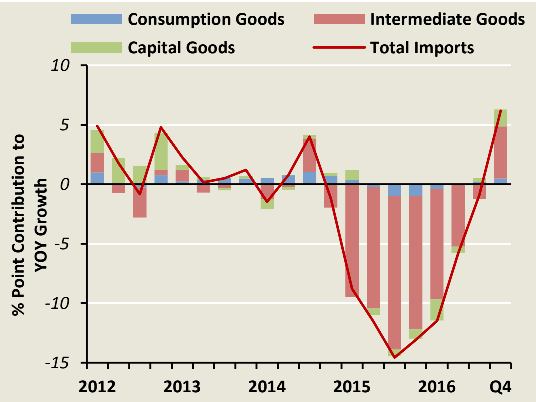
Chart 1.23
Contribution to Asia-8 Total Demand Growth



Source: CEIC and EPG, MAS estimates

Note: Asia-8 refers to Hong Kong, Taiwan, Korea, Malaysia, Thailand, Indonesia, the Philippines and India.

Chart 1.24
Contribution to NEA-3 and ASEAN-4 Import Growth



Source: CEIC and EPG, MAS estimates

1.3 Global Inflation

Commodity Reflation Lifts Consumer Prices

Global headline inflation has been on an upward trajectory, as the prices of food, energy and metals recovered from their troughs in early 2016. (Chart 1.25) The rise in CPI inflation was more apparent in the G3 economies, where inflation rates picked up discernibly in Q4 2016. In Asia ex-Japan, idiosyncratic factors, such as favourable monsoons, capped food cost increases, limiting the rise in headline inflation even as broader producer prices surged. Looking ahead, global CPI inflation is expected to climb to 2.3% in 2017 from 1.3% last year, owing mainly to base effects from the oil price increase. Nevertheless, it will remain anchored by stable inflation expectations and continuing slack in the global economy.

G3 inflation rose mainly on account of higher global oil prices.

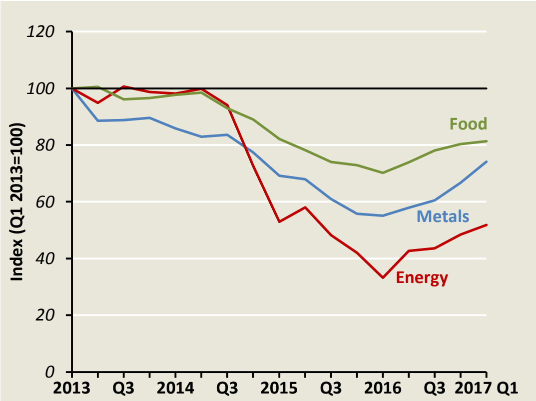
In the G3 economies, CPI inflation has risen steadily from being flat in 2015 to 2% in Jan–Feb 2017, primarily due to an uptick in energy prices, as global crude oil prices were around 60% higher than a year ago. (Chart 1.26) In contrast, core inflation has edged up at a milder pace, due to lingering industrial slack in the Eurozone and Japan. On average, G3 inflation is projected to rise to 1.9% in 2017, from 0.7% last year.

In the US, headline CPI inflation surged to 2.5% y-o-y in Q1 2017 from 1.8% in Q4 2016, reflecting the turnaround in energy prices. Core CPI inflation, however, remained broadly stable at 2.2%. Nonetheless, as labour market conditions continue to tighten in 2017, higher wage inflation is expected to impart a stronger impetus to underlying price pressures. (Chart 1.27)

In the Eurozone, headline CPI inflation picked up to 1.8% y-o-y in Q1 2017 from 0.7% in Q4 2016, and is projected to rise further this year, due mainly to increases in energy and, to a lesser extent, food prices. Meanwhile, core inflation remained unchanged at 0.8% in Q1 2017. In the medium term, core inflation is expected to rise gradually as the economic recovery gathers pace.

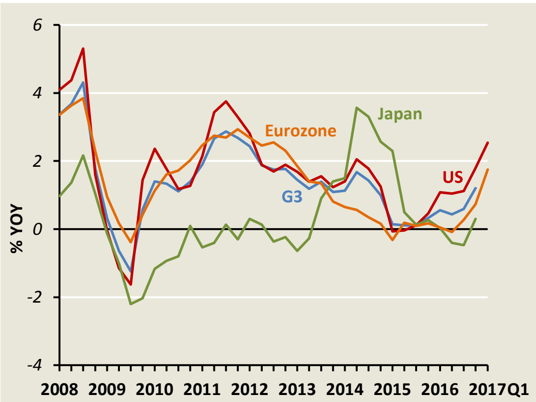
In Japan, headline inflation rose to 0.3% y-o-y in Q4 2016, from −0.5% in Q3, largely due to a weather-related spike in fresh food prices. In Jan–Feb this year, core inflation declined to 0.0% y-o-y, but the inflation rate excluding fresh food ticked up to 0.2% y-o-y, the first positive reading since Q4 2015. Nonetheless, the BOJ's policy to control the yield curve could exert further downward pressure on the yen, in turn pushing up core inflation.

Chart 1.25
World Food, Energy and Metals Prices



Source: IMF, UN Food and Agriculture Organisation and EPG, MAS estimates

Chart 1.26
G3 CPI Inflation



Source: CEIC and EPG, MAS estimates

Asia ex-Japan headline inflation has remained stable, despite a rebound in producer prices.

In Asia ex-Japan as a whole, CPI inflation has held remarkably steady at between 2 and 3% over the past 10 quarters, despite large swings in producer prices. (Chart 1.28) The weak pass-through may be explained partly by the offsetting effects of the services items in the region's CPI basket.

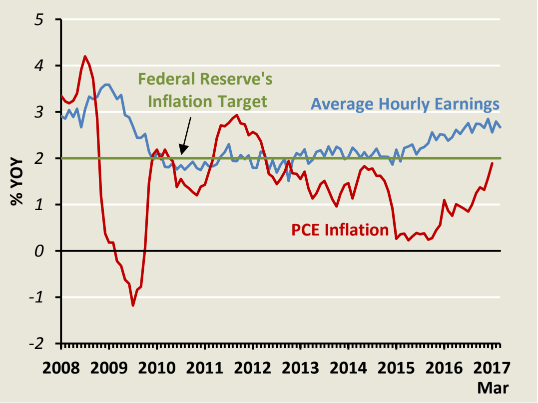
In China, CPI inflation came in at 1.4% in Q1 2017, retreating from a two-and-a-half year high of 2.2% in Q4 2016, as food costs rose at a milder pace. However, core inflation in China continued on a gradual ascent, buoyed by housing costs. At the same time, after turning positive in Q4 2016, PPI inflation surged to 7.4% in Q1 2017 as cuts to excess industrial capacity took effect. For the rest of this year, China's consumer prices will be supported by elevated housing costs and some pass-through from producer prices. Accordingly, headline inflation is forecast to increase to 2.3% in 2017, from 2.0% last year.

In India, CPI inflation moderated to 3.5% in Q1 2017 from 3.7% in Q4 2016 due to lower food prices, as favourable monsoon rains bolstered crop harvests. Nonetheless, India's CPI should step up with the implementation of the GST, which could take place as early as H2 2017. Thereafter, the RBI anticipates the pass-through effect on headline inflation to last for about 12–18 months. Consequently, CPI inflation is projected to come in at 4.8% for the fiscal year ending March 2018.

In the NEA-3, CPI inflation was largely flat, at 1.6% in Q1 2017. However, for the rest of the year it is expected to increase gradually in line with closing output gaps. For the whole of 2017, inflation in the NEA-3 is expected to rise to 1.8%.

Inflation accelerated in the ASEAN-4 economies to 3.3% in Q1 2017, from 2.5% in the previous quarter. The recovery in fuel costs from their troughs a year ago fed through to higher electricity prices in Indonesia, as well as higher petrol and diesel prices in Malaysia. While core inflation in the Philippines was pulled up by robust economic activity, inflation in Thailand was subdued, as wage growth slowed amid anaemic aggregate demand. Headline inflation across the ASEAN-4 is forecast to come in lower at 3.6% this year, with the fading of the impact from administered price hikes. Overall, headline inflation in Asia ex-Japan is projected to edge up to 2.8% this year, from 2.5% last year.

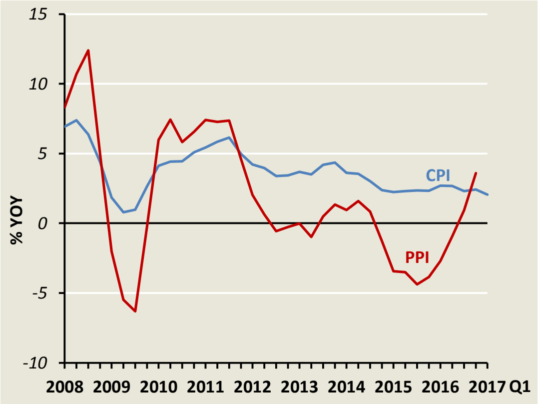
Chart 1.27
US Wage and Price Inflation



Source: Haver Analytics and EPG, MAS estimates

Note: The personal consumption expenditures (PCE) index is the Federal Reserve's preferred measure for evaluating price changes of goods and services.

Chart 1.28
Asia-ex Japan CPI and PPI Inflation



Source: CEIC and EPG, MAS estimates