

1 The International Economy

Global Growth Will Remain Below Trend In 2017

The global economy expanded at a modest pace in Q2 2016, as an improved performance by Asia ex-Japan provided a counterweight to sluggish G3 growth. Economic activity in most regions was underpinned by private consumption, although rising public investment in parts of Asia provided further support. For the G3 as a whole, growth is projected to pick up for the rest of the year, led by the US. However, this is not expected to boost Asia's exports substantially, as most of the improvement will be on account of household consumption, which is less import-intensive than business investment. In the absence of a stronger impetus from any large economy or the special factors that boosted growth in the 2000s—including widespread trade liberalisation, China's economic ascent and the commodities boom—regional growth will continue to be dependent on the sustainability of domestic demand.

The global economy is expected to expand at a steady but still mediocre pace in 2017. Business investment has been sluggish in the major economies, despite loose monetary policy, due to elevated economic uncertainty and lower expectations of potential GDP growth, alongside slower-growing populations. The slump in private capex in the advanced economies (AEs), coupled with reduced fixed capital formation growth in emerging market economies (EMEs), has been a key contributory factor to the weakness in global trade flows since 2012. Other structural changes, including China's rapid climb up the value-added chain, has accentuated the decline in intra-regional trade in intermediate goods. All in, global growth is projected to come in at 3.7% in 2016, and edge up to 3.8% in 2017. (Table 1.1) Underlying inflationary pressures will rise due to the fading of disinflationary effects from low global oil prices, but continue to be restrained by softness in economic activity.

Table 1.1
Global GDP Growth

	Q1 2016	Q2 2016	2015	2016F	2017F
	q-o-q SAAR		y-o-y		
Total*	3.5	4.2	4.0	3.7	3.8
G3*	1.6	1.2	1.9	1.3	1.6
US	0.8	1.4	2.6	1.5	2.2
Japan	2.1	0.7	0.5	0.6	0.9
Eurozone	2.1	1.2	1.9	1.6	1.3
NEA-3*	0.5	3.9	1.9	1.5	1.9
Hong Kong	-2.1	6.5	2.4	1.3	1.7
Korea	2.1	3.2	2.6	2.6	2.6
Taiwan	3.4	0.2	0.6	1.0	1.7
	y-o-y				
ASEAN-4*	4.5	4.6	4.6	4.5	4.6
Indonesia	4.9	5.2	4.8	5.0	5.3
Malaysia	4.2	4.0	5.0	4.1	4.3
Philippines	6.8	7.0	5.9	6.5	6.1
Thailand	3.2	3.5	2.8	3.2	3.3
China	6.7	6.7	6.9	6.6	6.3
India**	7.9	7.1	7.2	7.6	7.7

Source: CEIC, Consensus Economics, Oct 2016 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 2016 to March 2017.

1.1 G3 Economies

Growth Supported By Consumption

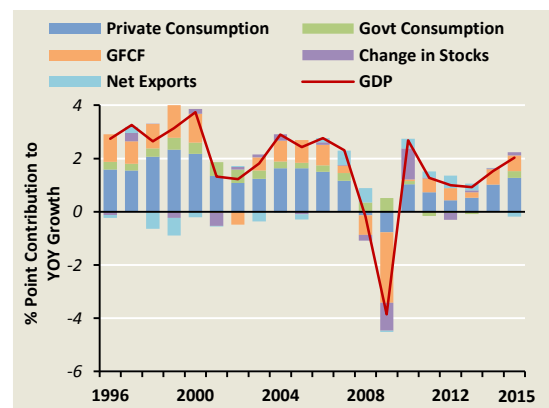
The G3 economies appear to be converging to a more subdued pace of growth. Underlying growth has hovered around 2% in the US and 0.7% in Japan, even as the actual growth outturn has been erratic from one quarter to the next. US growth is set to pick up in H2 2016 after a dismal performance in the first half of the year, while Japan and the Eurozone should remain on their modest growth trajectories. Consumption spending, underpinned by improvements in the labour market, is a key support for growth in the US and the Eurozone. Private investment in the G3 has remained weak despite substantial corporate cash holdings and unprecedentedly low interest rates, reflecting heightened uncertainty about the future and pessimism about growth and profitability. With monetary policy already overburdened, fiscal policy may need to do more of the heavy lifting to support the economy. An increase in public infrastructure investment in conjunction with structural reforms could therefore be useful to spur short-term growth, while simultaneously raising medium-term growth potential.

G3 growth has been held back by weak investment.

Average G3 growth has slowed significantly from 2.5% in the decade before the GFC to 1.6% after the crisis (2010–15), alongside a moderation in virtually all major expenditure categories. Private consumption, which accounted for an average of 1.6% points to G3 GDP growth prior to the crisis, retracted significantly as household deleveraging got underway, with its contribution to growth cut by half amid heightened unemployment. (Chart 1.1) More recently, despite growing more slowly, consumption has provided the key support to the ongoing recovery in the G3, expanding by 2% on average, in 2015 and H1 2016.

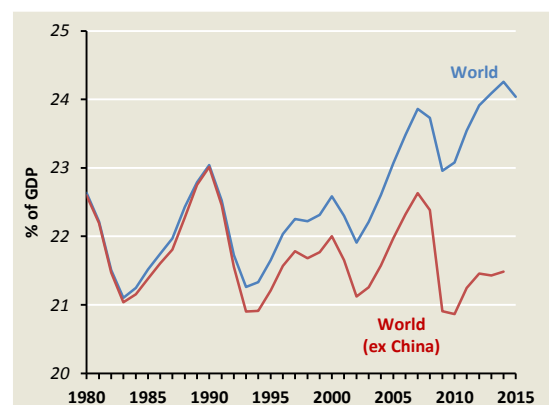
In comparison, investment (gross fixed capital formation) contributed just 0.4% point to G3 GDP growth from 2010–15, compared to 0.7% point in the pre-crisis period. Furthermore, recent investment growth has been anaemic, due in part to the slump in the global oil and gas sector. However, this also reflected a rise in economic policy uncertainty and downbeat investor expectations, owing to the lacklustre growth environment that has prevailed since the GFC. The weak investment upturn is a key factor holding back a faster recovery in the G3 and a major cause of the downshift in global trade flows. Typically, recoveries that follow past recessions were led by a strong investment revival that sets in motion a virtuous cyclical upswing. This time round, however, there are signs that excluding China, global investment had generally softened even before the GFC, suggesting the possibility of a structural decline in supply-side growth potential. (Chart 1.2)

Chart 1.1
Contribution to G3 GDP Growth



Source: CEIC, Haver Analytics and EPG, MAS estimates

Chart 1.2
World Gross Fixed Capital Formation



Source: World Bank and EPG, MAS estimates

At the current juncture, it is useful to consider how fiscal policy—alongside structural reforms—could play a bigger role in lifting global growth. An increase in government spending, particularly if it raised the public capital stock, could help to spur private investment and lead to a turnaround in the potential growth rate. Overall, although some countries would need to be mindful of elevated debt levels, fiscal expansion and structural reform should be rolled out to the furthest extent possible, making full use of the window of favourable financial conditions provided by accommodative monetary policy.

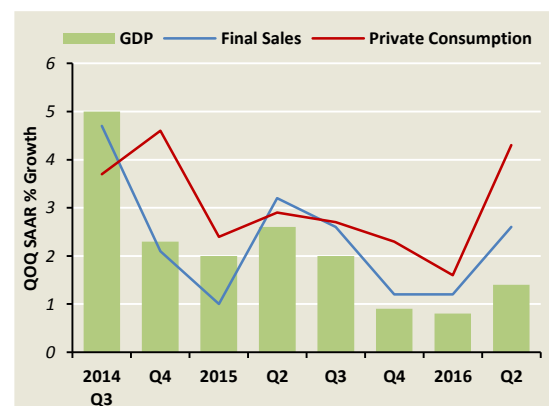
US growth in Q2 was weighed down by inventory destocking and continued tepid investment ...

Despite a rebound in household spending, US GDP growth in Q2 2016 came in below expectations at 1.4% q-o-q SAAR, only a modest improvement from the 0.8% in the previous quarter. Inventory drawdowns exerted a stronger drag on growth than anticipated and subtracted 1.2% points from GDP growth in that quarter, with final sales (real GDP net of inventories) expanding by a creditable 2.6% q-o-q SAAR. (Chart 1.3) Notably, private consumption growth was robust at 4.3% q-o-q SAAR—the fastest in six quarters.

In contrast, weak investment spending continued to weigh on the US economy in Q2 2016. Despite healthy hiring by firms and strong spending by consumers, non-residential fixed investment has been muted in recent quarters. Apart from the pullback in capex in the energy sector towards the end of 2014, caused by falling oil prices, a number of factors could have been behind the broad-based weakness in US business investment, including a shift towards asset-light business models by technology firms and the subdued economic recovery from the GFC. Indeed, EPG’s econometric analysis found that the “accelerator” model can, to a large extent, explain the slowdown in US private non-residential investment. In particular, the results show that the ratio of real business investment to the capital stock has evolved in line with output movements, suggesting that weak capex is primarily a symptom of restrained economic activity.¹ (Chart 1.4)

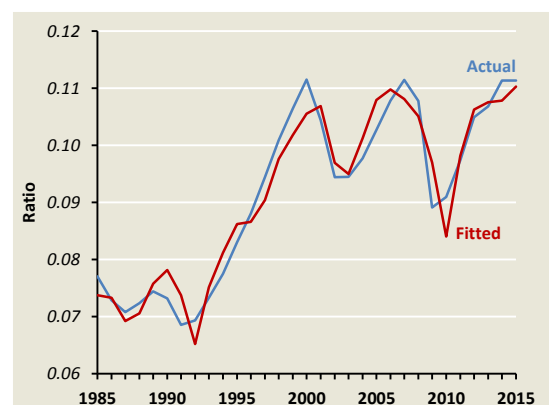
Nonetheless, firms typically consider the prospects for future sales, and hence profitability, to be the main determining factor behind their current investment

Chart 1.3
US GDP, Final Sales and Private Consumption



Source: Haver Analytics and EPG, MAS estimates

Chart 1.4
Accelerator Model for US Real Business Investment



Source: BEA and EPG, MAS estimates

Note: The chart shows the actual and fitted investment-to-capital stock ratios from an accelerator model, with lags of output change as explanatory variables.

¹ The methodology used by EPG, applied on annual data from 1985–2015, is based on the International Monetary Fund (2015), “Private Investment: What’s the Holdup?”, Chapter 4 of the *World Economic Outlook*, April.

decisions. Therefore, another possible explanation for the US investment slump could be lower expectations of trend (or potential) economic growth, which have reduced the scope for profitable long-term investment.

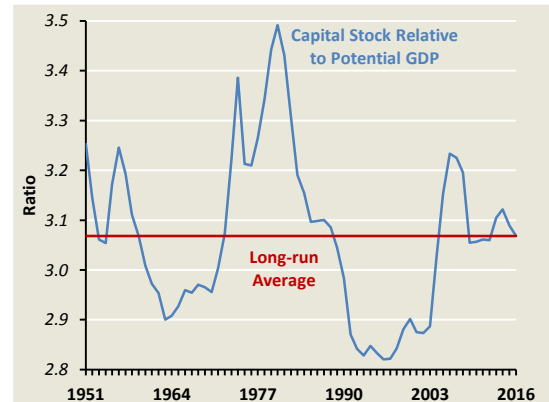
Future potential growth is, in turn, dependent on the sum of the growth of labour input and technical progress.² The Bureau of Labour Statistics has projected that the US labour force will grow by an average of 0.5% per annum from 2014–2024, slower than the 0.6% in the previous decade, and 1.2% in 1994–2004. Furthermore, productivity growth has stalled, with output per hour worked growing by a mere 1.2% annually from 2006–15, compared to 3% during 1996–2005. Given the slowdown in potential output growth, the US capital-to-output ratio has, in fact, stayed close to its long-run average over the past few years. (Chart 1.5) Therefore, slower US investment growth could simply reflect the fact that the labour force, adjusted for technical progress, is expanding less rapidly.

**... but earlier drags on growth should fade
in the second half of the year.**

Looking ahead, the factors that dampened US economic growth in early 2016 are likely to dissipate as the year progresses. After five consecutive quarters of inventory drawdown, destocking has largely run its course and is not expected to pose a significant constraint on growth in the quarters ahead. Moreover, a mild recovery in business investment spending may materialise, led by energy firms, as oil prices appear to have bottomed out in the first quarter of 2016. Indeed, a rise in the rig count in Q3 2016 suggests that the investment slump in the US oil and gas sector may be coming to an end. (Chart 1.6)

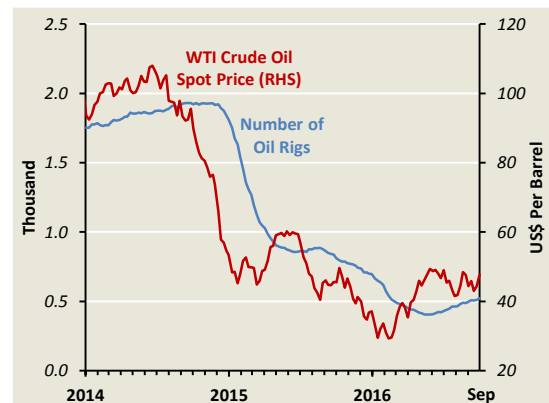
Private consumption will continue to underpin growth, fuelled by rising wages. Employment has been gathering momentum, adding 192,000 non-farm payroll jobs, on average, in July–September. Nonetheless, the growth forecast for the whole of 2016 has been lowered to 1.5% on account of the weak outturn in H1 2016, compared to 2.0% in the previous *Review*. That said, the economy is expected to pick up pace to 2.2% in 2017, as the US reverts to its trend growth path, underpinned by consumption spending and a gradual recovery in business investment. Public investment will also likely receive a fillip, with both presidential candidates promising to boost infrastructure spending.

Chart 1.5
US Capital Stock Relative to Potential GDP



Source: BEA, CBO and EPG, MAS estimates

Chart 1.6
US Total Active Rig Count and Crude Oil Prices



Source: EIA and Baker Hughes

² Pinto, E and Tevlin, S (2014), "Perspectives on the Recent Weakness in Investment," *FED Notes*, 21 May.

The Eurozone economy slowed in Q2 due to easing domestic demand.

Eurozone GDP growth fell back to 1.2% q-o-q SAAR in Q2 2016 after an unusually strong 2.1% in the preceding quarter as domestic demand, which has anchored growth over the past three quarters, retreated. Private consumption growth moderated in the region's major economies, despite improvements in the labour market and relatively low oil prices. Fiscal spending also slowed, especially in Germany, and contracted outright in both Italy and Spain as they attempted to rein in their budget deficits.

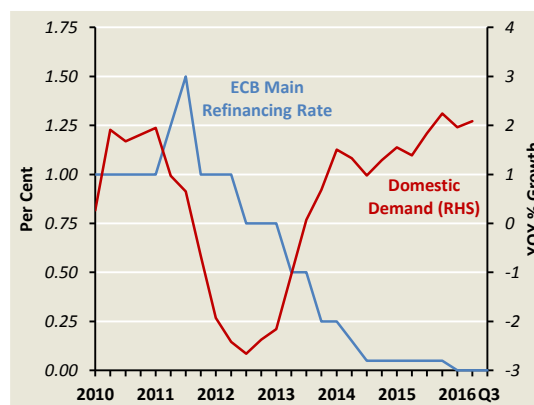
Policy uncertainty is clouding the Eurozone's investment prospects.

Looking ahead, growth in the Eurozone will hinge on improved employment prospects and an expansion in domestic demand—supported by a positive fiscal impulse and monetary accommodation. (Chart 1.7) Downside risks include elevated levels of public and private sector debt, a banking sector weakened by non-performing loans, and significant uncertainties associated with Brexit.

The recent announcement by the UK government that it will initiate the country's exit from the EU by March 2017 underscores the economic uncertainty that has continually beset the bloc since the sovereign debt crises of the early 2010s. As Chart 1.8 shows, after subsiding in 2013 and 2014, policy uncertainty in Europe has risen recently with the Brexit vote and is set to remain elevated as negotiations between the relevant parties over Britain's access to the single market get underway.³ Given the 'irreversible' nature of investment spending, this could induce firms in both the UK and the Eurozone to take a 'wait-and-see' approach to corporate capital spending. The region is also not immune from negative spillover effects through the trade and financial channels. Notably, the Eurozone's exports to the UK, at around 14% of total merchandise exports, would be adversely affected if UK demand softens and the pound weakens further.

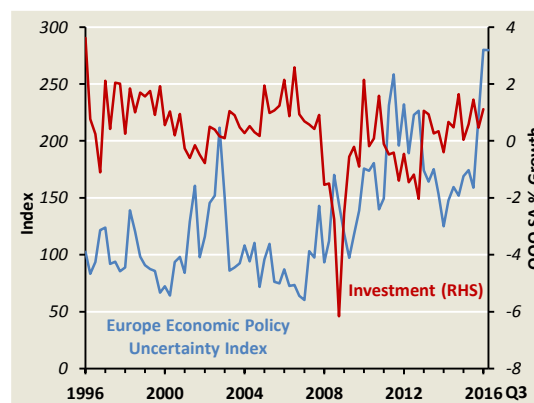
In the wake of the Brexit vote, the Bank of England eased monetary policy in August to lend support to the economy. In the Eurozone, monetary policy has likewise

Chart 1.7
Eurozone Domestic Demand and Key Policy Rate



Source: Haver Analytics, Eurostat and EPG, MAS estimates

Chart 1.8
European Economic Policy Uncertainty Index and Investment



Source: "Measuring Economic Policy Uncertainty" by Scott R. Baker, Nicholas Bloom and Steven J. Davis at www.PolicyUncertainty.com

³ See Special Feature B for a description of the corresponding Global Economic Policy Uncertainty index.

been highly accommodative, although it appears to be running into diminishing returns. Furthermore, an overhang of non-performing loans and difficulties in raising capital in European banks may have reduced the supply of credit and restrained investment. Arguably, governments need to shift away from strict fiscal austerity towards a more flexible approach that allows public spending to play a more pro-active role in supporting growth, alongside the rollout of structural reforms. The UK Treasury has led the way by deferring deficit-reduction plans and signalling that it will implement targeted public investment in high-value infrastructure as part of a coordinated effort to boost domestic demand.

Progress on structural reforms in the Eurozone remains slow and limited. France and Italy have taken important initial steps but need to do more to address rigidities, especially in the labour market. Spain has made greater progress and has achieved faster growth, but internal devaluation measures through wage declines have yet to significantly reduce the rate of structural unemployment. In view of the economic uncertainties surrounding the near-term outlook and their potential impact on investment, growth in the Eurozone is expected to slow to 1.6% in 2016, and further to 1.3% in 2017.

**In Japan, fiscal easing should deliver
a mild boost to growth in 2017.**

Japan's GDP growth slackened to 0.7% q-o-q SAAR in Q2 2016, from 2.1% in Q1, as a result of lacklustre household spending and a decline in net exports. Private consumption growth slowed to 0.7% q-o-q SAAR, following a short-lived rebound of 2.8% in Q1. Corporate capex remained weak, contracting for the second consecutive quarter as firms maintained a cautious outlook. Nonetheless, increases in residential and public investment provided some support to Q2 growth. The stronger yen, which has appreciated by around 16% against the US\$ since the start of 2016, has also restrained the demand for Japan's exports. Coupled with depressed demand for capital goods and industrial materials from the rest of Asia, net exports subtracted 1.0% point from headline growth in Q2.

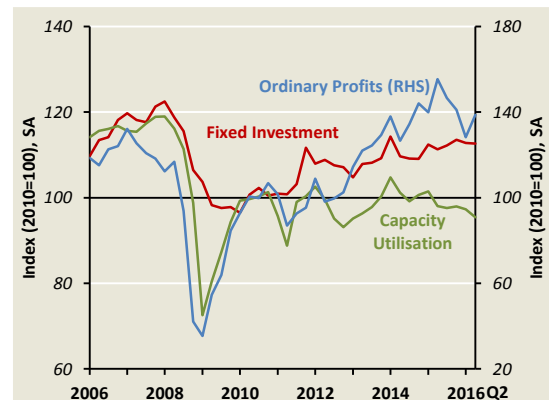
Looking back, it is apparent that the growth dividend from Abenomics (launched in December 2012) has been short-lived as GDP growth accelerated from Q1 2013 to Q1 2014, but stalled again after the consumption tax

hike in April 2014. The underlying growth momentum remains weak at present and business fixed investment has been restrained. With profits adversely affected by the yen's appreciation, and tepid global demand exacerbating the country's industrial slack, companies have been hesitant to increase capital spending. (Chart 1.9) In addition, low expectations of economic growth have dampened the anticipated return to investment. Japan's potential growth rate is estimated to have declined from an average of 0.9% in the pre-GFC period to about 0.2% in recent periods due to the contraction of the labour force and lower productivity growth. (Chart 1.10)

Against this backdrop of weak domestic demand and below-target inflation outcomes, the BOJ adopted a negative interest rate policy in January 2016, and in September shifted its monetary policy target from the monetary base to the yield curve under a new operating framework called "Quantitative and Qualitative Monetary Easing (QQE) with Yield Curve Control". Under this new regime, the BOJ will adjust its purchases of Japanese government bonds (JGBs) in order to keep the 10-year JGB yield at around 0%, while continuing to set the short-term policy interest rate. The BOJ has also committed to expanding the monetary base until inflation is stable above the 2% target.

On the fiscal policy front, the Japanese government deferred the planned consumption tax hike to October 2019 from April 2017 and unveiled a new stimulus package in August 2016. The slew of measures, to be phased in over several years, includes grants to boost consumption as well as new infrastructure spending in the form of improvement works on ports and airports, an earlier rollout of new Shinkansen railway lines, and earthquake reconstruction initiatives. However, given the implementation lags, the boost to domestic demand is not expected to materialise strongly until 2017. Largely as a result of the fiscal stimulus, Japan's GDP growth should pick up from 0.6% this year to 0.9% in 2017.

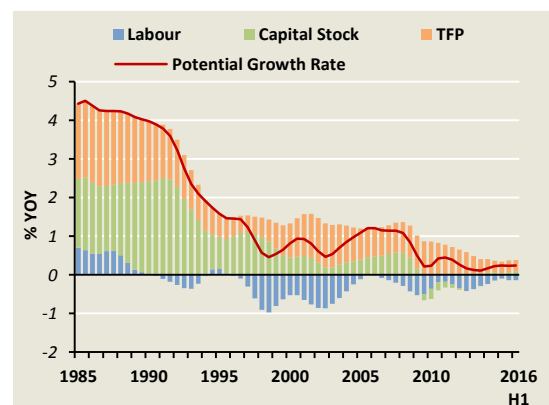
Chart 1.9
Japan Fixed Investment, Profits
and Capacity Utilisation



Source: CEIC and EPG, MAS estimates

Note: "Ordinary profits" refer to pre-tax profits excluding extraordinary items.

Chart 1.10
Japan's Potential Growth Rate



Source: BOJ

1.2 Asia

Domestic Demand Will Support Growth In 2017

Growth in Asia ex-Japan regained its footing in Q2 2016, after a slippage in the preceding quarter caused largely by a poor performance in the NEA-3 economies. In China, strong policy support has brought about stable headline growth, as a credit-driven real estate boom stimulated activity in industries further upstream and compensated for weakness in private sector investment in general. Elsewhere in the region, household spending and public investment have cushioned growth as net exports generally stayed tepid. Over the longer term, external trade is not expected to contribute to Asia's growth as strongly as in the 2000s, in light of structural shifts in cross-border production networks and a consequent pullback in intra-regional trade. The absence of a positive impulse from trade implies that growth over the next few years will be predominantly domestic-driven. As such, the short-term economic outlook for Asia ex-Japan will remain stable but sub-par compared to the pre-crisis period, with growth expected at 4.5% in 2016 and 4.6% in 2017.

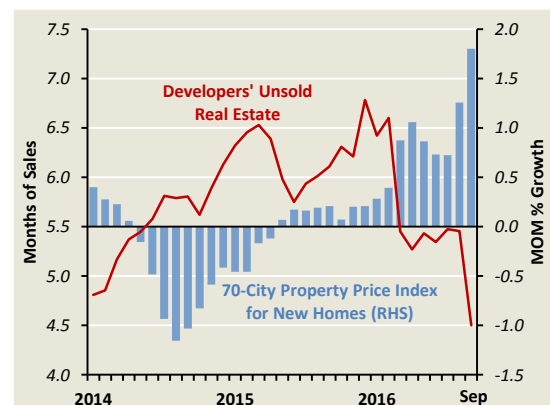
China's near-term growth will be shored up by policy measures.

In China, vigorous policy support kept GDP growth stable at 6.7% y-o-y in the first two quarters of 2016. Sequentially, economic activity expanded by a faster 1.9% q-o-q SA in Q2 this year, compared with 1.2% in the first quarter. Headline growth was led by a resurgence in mortgage-financed real estate transactions, alongside a ramp up in public infrastructure spending. Amid rising prices, brisk sales by developers helped to reduce previously elevated inventories of unsold properties and encouraged new construction. (Chart 1.11) This in turn spurred demand for building materials and contributed to the pickup in industrial output growth to 6.1% y-o-y in Q2, from a seven-year low of 5.8% in the previous quarter.

Nevertheless, growth in overall fixed asset investment in China decelerated during the first half of 2016, reflecting investor pessimism and flagging returns on assets. (Chart 1.12) Robust investment by the state sector has only managed to partially offset slower growth in private enterprise fixed asset investment. Meanwhile, retail spending in H1 held firm despite a slowdown in China's real disposable income growth, as reduced car purchase taxes lifted demand for automobiles.

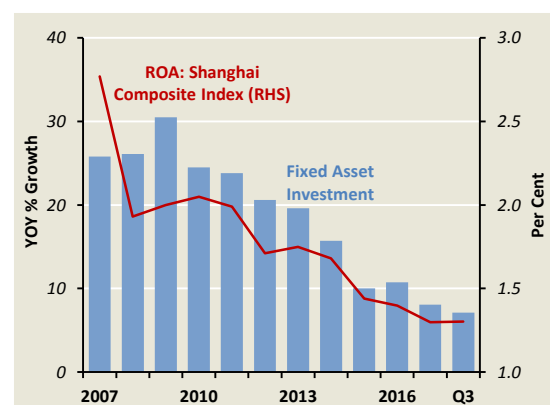
In Q3, China's GDP growth held steady at 6.7% y-o-y. (Chart 1.13) Economic activity was again underpinned by a buoyant housing market, alongside a 34.9% rise in personal home loans, as well as a strong rebound in car manufacturing. Nonetheless, to the extent that segments of heavy industry still face considerable excess

Chart 1.11
China's Residential Property Price Index and Real Estate Inventories



Source: CEIC and EPG, MAS estimates

Chart 1.12
China's Fixed Asset Investment and Return on Assets



Source: CEIC, Bloomberg and EPG, MAS estimates

capacity, the incentive for firms to make new investments will be blunted. More generally, structural reforms are needed in China to revive business confidence. Continued progress on planned reforms to open up market access to the services industries, deregulate prices and improve the efficiency of financial intermediation would also help to incentivise private sector investment, thus raising labour productivity and supply-side potential.

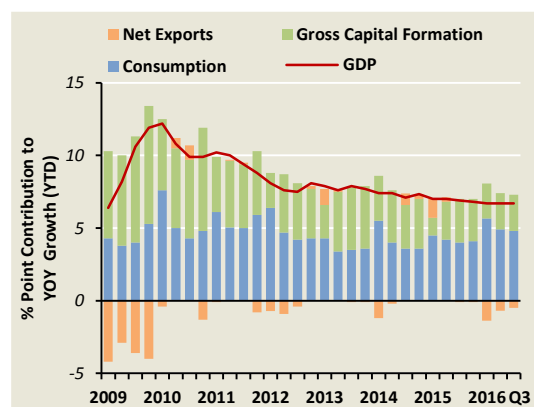
In the meantime, China's domestic demand is expected to remain steady on account of supportive policies, even as capacity cuts in over-supplied industries continue. Fiscal spending has risen by more than 12% in the first nine months of 2016 and is projected to stay high, facilitated by a larger targeted deficit as well as increased local government bond issuance. All in, China's economy is projected to grow by 6.6% in 2016, before slowing to 6.3% next year.

The Indian economy slowed in Q2 2016, amid flagging investment.

India's GDP rose at a slower pace of 7.1% y-o-y in Q2 2016, down from 7.9% in the preceding quarter. (Chart 1.14) A surge in government consumption—as the Indian authorities frontloaded spending at the start of the new fiscal year—helped to offset the tapering in private consumption growth. However, gross fixed capital formation contracted for a second consecutive quarter by 3.1% y-o-y in Q2 after falling by 1.9% in Q1, as corporates and state-owned banks continued to repair their balance sheets. Meanwhile, exports increased for the first time in six quarters, resulting in a boost of 2.1% points to headline growth from net exports.

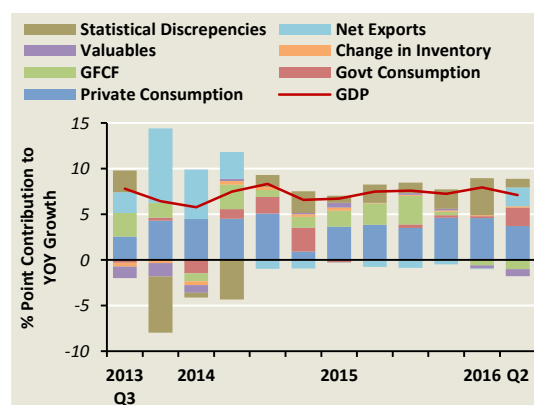
The Indian economy is expected to bounce back from the relatively weaker Q2 outturn and expand moderately in the next few quarters on the back of robust private consumption. A bumper harvest following a good monsoon season will support rural demand while urban demand will be buttressed by the disbursement of wage increases for civil servants. However, the recovery in investment is anticipated to remain gradual amid ongoing corporate deleveraging, even as the government embarks on higher infrastructure spending and revives stalled investment projects. (Chart 1.15) The passage of the broad-based Goods and Services Tax (GST) Bill should deliver efficiency gains. Accordingly, India's GDP growth is projected to come in at 7.7% in FY2017, up slightly from 7.6% in the previous year.

Chart 1.13
Contribution to China's GDP Growth



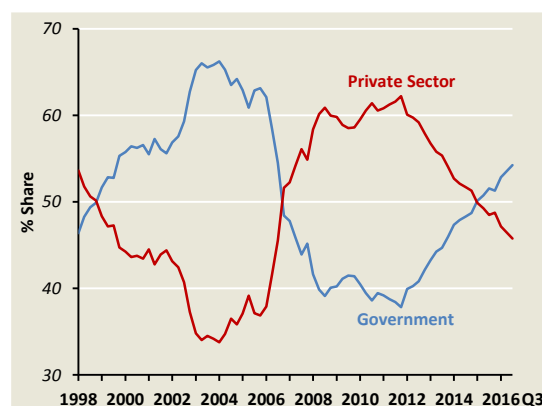
Source: CEIC

Chart 1.14
Contribution to India's GDP Growth



Source: CEIC and EPG, MAS estimates

Chart 1.15
Public and Private Share of Investment Projects Under Implementation



Source: CMIE and EPG, MAS estimates

**The growth outlook for the NEA-3
has weakened further.**

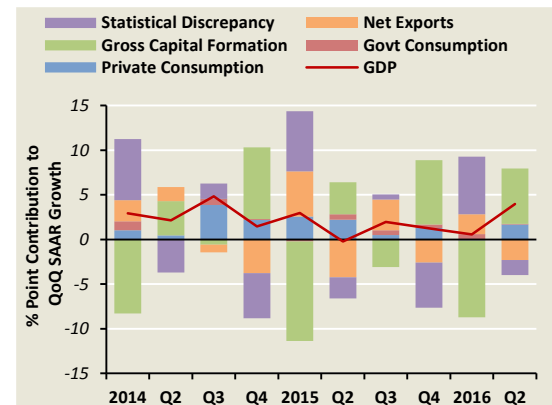
Growth in the trade-oriented NEA-3 economies recovered to 3.9% q-o-q SAAR in Q2 2016 from 0.5% in the preceding quarter, as buoyant domestic demand offset generally subdued net exports. (Chart 1.16) The Hong Kong economy staged a robust 6.5% q-o-q SAAR rebound on the back of stronger private consumption and investment spending, reversing a 2.1% contraction in Q1. Korea's GDP growth picked up to 3.2% q-o-q SAAR from 2.1% in Q1, as fiscal policy measures fuelled consumption spending and construction activity. In comparison, a cutback in government expenditure and an anaemic net export performance weighed on Taiwan's growth, which decelerated to 0.2% q-o-q SAAR in Q2 from 3.4% in Q1.

The near-term outlook for the NEA-3 is mixed. The launch of new consumer tech products is likely to lend some support to Taiwan's economy, particularly its electronics exports. Electronics shipments from Taiwan rose for the first time in Q2 after contracting for a year, and surged by 16% y-o-y in Q3. (Chart 1.17) In comparison, Korea had seen larger falls in its exports of electronics products up until early 2016. Following a slight recovery in Q2, these exports contracted again in Q3 due in part to safety issues affecting smartphones, as well as stiff competition from lower-cost Chinese producers. In Hong Kong, the recent stabilisation in the Chinese economy may provide a brief respite, but the number of mainland tourists resumed its year-long fall in August after a brief uptick in July. Given these headwinds, consensus growth forecasts for the NEA-3 have been lowered further to 1.5% in 2016 and 1.9% in 2017, from 1.8% and 2.3% respectively in April.

**The ASEAN-4 economies will grow at
a steady though unremarkable pace.**

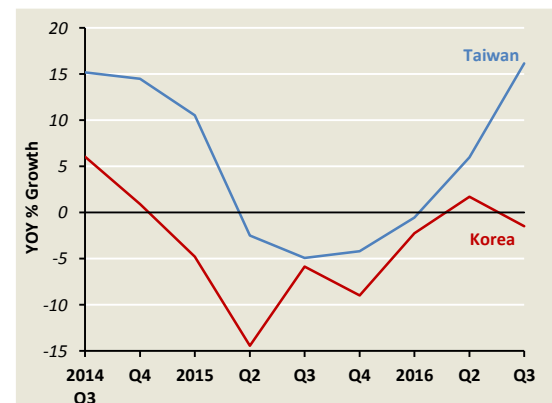
The ASEAN-4 region turned in a generally stable performance in Q2, with GDP growth firming slightly to 4.6% y-o-y, from 4.5% a quarter ago. A strong pickup in domestic spending more than compensated for the continued softness in the region's exports. Supported by steady labour market conditions, private consumption has remained a lynchpin of growth in Indonesia and the Philippines. In Malaysia, household spending was bolstered by government measures to raise disposable incomes, while healthy wage gains, particularly in the

**Chart 1.16
Contribution to NEA-3 GDP Growth**



Source: CEIC, Haver Analytics and EPG, MAS estimates

**Chart 1.17
Electronics Export Volume for
Taiwan and Korea**



Source: CEIC and EPG, MAS estimates

services sectors, drove private consumption higher in Thailand. (Chart 1.18) Meanwhile, investment activity in ASEAN-4 has picked up this year, supported by strong public capital spending. Net exports, however, subtracted from GDP growth as anaemic global demand weighed on exports, while import growth was buoyed by strong demand for capital and consumer goods.

Over the next few quarters, the ASEAN-4 region will continue to expand at a moderate pace on the back of resilient domestic demand and some improvement in commodity prices. Across the region, public investment spending will stay firm, although growth will slow from the elevated rates seen earlier this year. (Chart 1.19) Governments in the region have ramped up development spending strongly over the past 1–2 years as part of structural reforms to address infrastructure deficits.

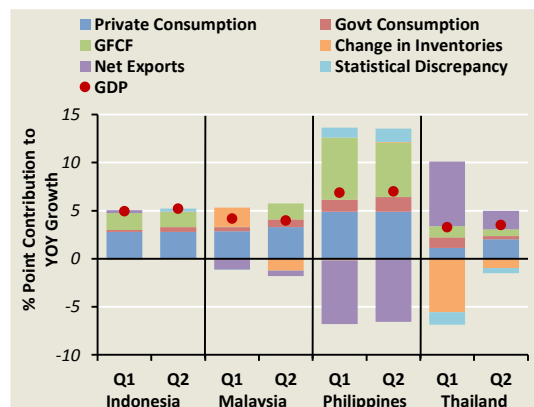
However, there will be considerable variation in GDP outturns across countries. The extended weakness in global demand will affect Thailand and Malaysia most significantly, given their greater reliance on trade in goods and services. In Indonesia, growth will be underpinned by sustained strength in domestic demand, reflecting positive economic sentiment and the effects of Bank Indonesia's monetary easing earlier this year. Growth in the Philippines will accelerate for the rest of 2016, before easing in 2017 as the boost from election spending fades. Overall, GDP growth in the ASEAN-4 is forecast to decline slightly from 4.6% last year to 4.5% in 2016, before rising marginally back to 4.6% in 2017.

The deceleration in global trade reflects more than a cyclical downturn.

As the region and China continue to rebalance their economies towards domestic demand, it appears unlikely that trade growth will return to its pre-crisis pace. Indeed, world trade growth has decelerated sharply in the last few years but there is a need to distinguish between global trade flows in nominal and real terms. In nominal terms, the decline in trade has been much sharper, reflecting across-the-board declines in commodity prices. (Chart 1.20) For instance, global fuel prices plunged by 44% in 2015 and 30% y-o-y in H1 2016.

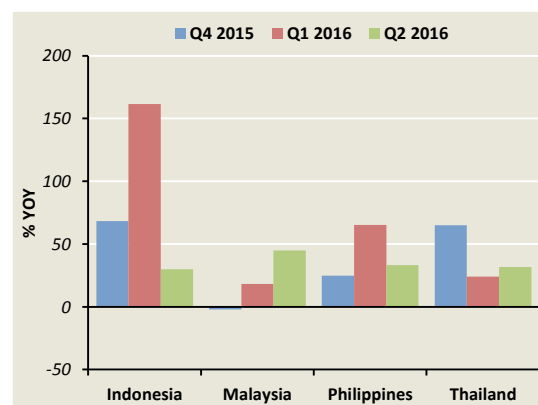
While real trade volumes have not fallen as much as might be implied by the nominal export data, the growth in global goods and services trade volumes approximately halved from an average of 6.8% p.a. in

Chart 1.18
Contribution to ASEAN-4 2016 GDP Growth



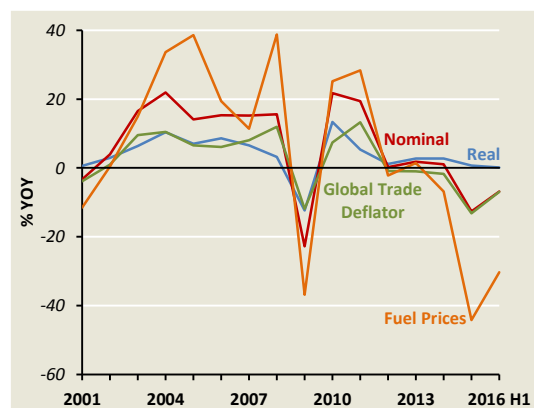
Source: CEIC and EPG, MAS estimates

Chart 1.19
Growth in ASEAN-4 Public Capital Expenditure



Source: CEIC and EPG, MAS estimates

Chart 1.20
Global Merchandise Trade Growth, Real and Nominal



Source: CPB and EPG, MAS estimates

1998–2007 to 3.2% in 2012–15. Asia ex-Japan saw an even sharper slowdown with volume growth falling from 13.3% to 4.2% over the same period. Moreover, higher-frequency data on merchandise trade also suggests that global flows stagnated in H1 this year, while Asia ex-Japan exports and imports shrank. (Chart 1.21) The WTO has forecast that global trade volume will expand by 1.8–3.1% in 2017, up from a projected 1.7% this year, but still significantly below the average for the decade before the GFC.

It is evident that the slowdown in global trade, over and above what might be expected given the weak recovery of the AEs from the GFC, has been partly driven by structural factors. Recent IMF research suggests that up to three quarters of the decline in global real goods imports during 2003–07 and 2012–15 was due to subdued economic activity, particularly lacklustre investment growth.⁴ At the same time, there is evidence to suggest that the intensity of trade relative to income has weakened in recent years. EPG's estimates indicate that the ratio of global merchandise trade to GDP in real terms has levelled off at about 47% between 2010 and 2015, after climbing steadily from 39% in 2001 to a high of 48% in 2008. (Chart 1.22) With respect to trade in goods and services, the OECD arrived at a similar finding that the ratio of world trade volumes to GDP has trended sideways at an elevated level of about 60% over the last few years.⁵ The sharp trade expansion in the 1990s and the 2000s prior to the GFC appears, therefore, to be a one-off occurrence that is unlikely to be repeated, reflecting an unusual confluence of factors such as China's entry into the WTO in 2001 and the intensification of cross-border production networks.

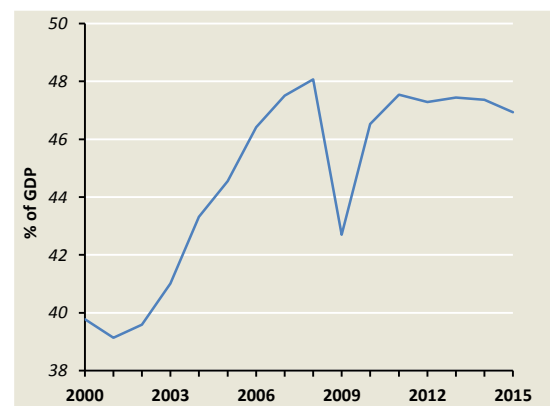
In recent years, a key factor behind the decline in Asia ex-Japan export growth can be traced to developments in China, which plays a central hub role in the region's production networks. Over the past decade, there have been signs of increased vertical integration of production processes within China, which likely contributed to a defragmentation of regional supply chains. This phenomenon can be seen in the sharp pullback in intra-regional trade post-GFC. Growth in intra-regional export growth of intermediate goods (which account for about 60% of intra-regional shipments) fell from 16% p.a. in 2001–07 to 8% in

Chart 1.21
Goods and Services Trade Volumes



Source: Haver Analytics and EPG, MAS estimates

Chart 1.22
Real World Merchandise Trade to GDP Ratio



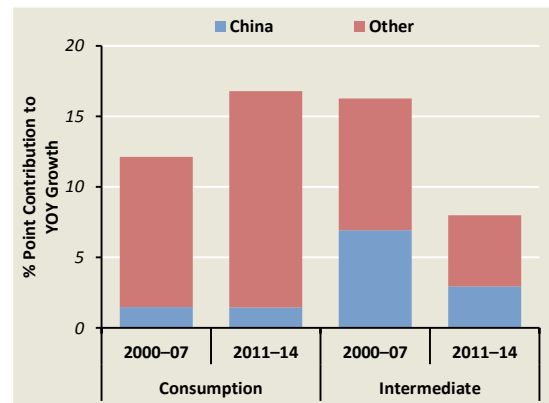
Source: IMF, World Bank and EPG, MAS estimates

⁴ IMF (2016), "Global Trade: What's Behind the Slowdown?", *World Economic Outlook*, September.

⁵ Haugh, D, Kopoin A, Rusticelli, E, Turner, D and Dutu, R (2016), "Cardiac Arrest or Dizzy Spell: Why is World Trade So Weak and What Can Policy Do About it?", *OECD Economic Paper* No. 18, September.

2011–14, of which about half can be attributed to weaker exports to China. This stands in contrast to an increase in exports of consumer goods over the same period. (Chart 1.23) In line with these results, the IMF found that increased onshoring of intermediate goods production in China has displaced imports from trade partners, with the effect being strongest in recent years.⁶ Similarly, Special Feature A in this issue of the *Review* finds that China’s role in regional supply chains has evolved over the years as it moved into more upstream production. Nonetheless, these developments will also open up new opportunities for the region’s exporters to re-position themselves along a vast array of existing and new supply chains.

Chart 1.23
Asia Ex-Japan Intra-regional Exports, Nominal



Source: UN Comtrade and EPG, MAS estimates

⁶ IMF (2016), “China’s Evolving Trade with Advanced Upstream Economies and Commodity Exporters”, *Regional Economic Outlook: Asia and Pacific*, April.

1.3 Global Inflation

Headline Inflation Is Expected To Rise Mildly In 2017

Global inflation has been exceptionally muted in 2016. Low food and oil prices have dampened headline inflation while producer prices remain depressed on account of the industrial slack in major economies. With the expected levelling off in energy prices in the quarters ahead, global CPI inflation is projected to edge up next year. However, subdued global GDP growth will cap demand-pull price pressures and keep the rise in CPI inflation modest. Accordingly, consensus forecasts project that global inflation will rise to 1.2% in 2016 and pick up further to 2.0% in 2017.

Inflation has diverged among the G3 economies, reflecting varying degrees of slack.

In Q2 2016, inflation rates stayed relatively firm in the US, while sinking into negative territory in the Eurozone and Japan. US headline CPI inflation rose slightly to 1.1% in Q3 from 1.0% in the previous quarter, on account of a pickup in housing and medical costs. (Chart 1.24) Meanwhile, core CPI inflation was unchanged at 2.2% in Q3 reflecting, in part, the robust labour market and firm wage gains. Low oil prices continued to account for the wedge between the two inflation measures.

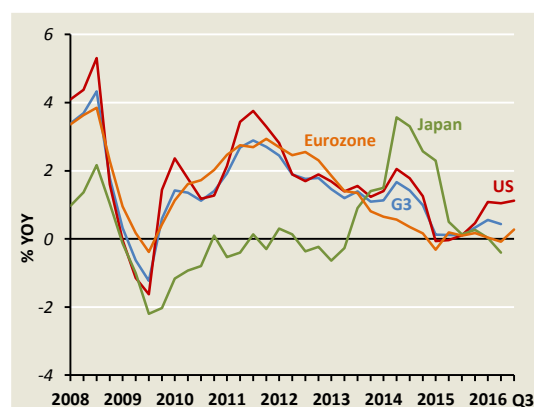
In the Eurozone, headline inflation lapsed back into negative territory in Q2, falling by 0.1% y-o-y after a flat outturn in the previous quarter. More recently, it inched up to 0.3% y-o-y in Q3, as the effects of the fall in energy prices dissipated alongside a rise in food inflation. Core inflation, however, remained muted, indicating residual economic slack.

Meanwhile, Japan's headline CPI inflation turned negative for the first time in three years, falling to -0.4% y-o-y in Q2 2016 from 0.0% in Q1. As domestic demand is expected to remain sluggish in the near term, Japan's inflation rate is projected to fall to -0.2% for the whole of 2016, before rising to 0.4% next year. Overall, G3 inflation is projected to come in at 0.6% in 2016 and 1.7% in 2017.

CPI inflation in Asia ex-Japan stayed mild, while PPI deflation tapered.

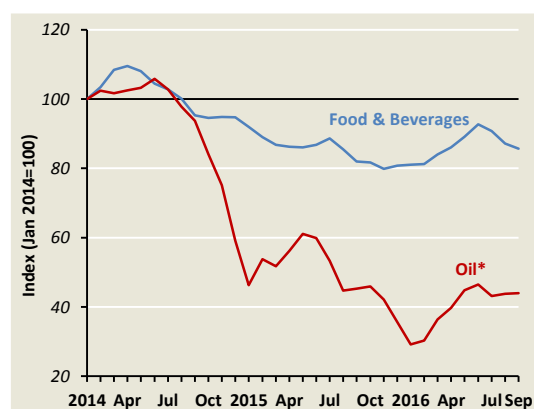
In Asia ex-Japan, CPI inflation remained largely muted in Q3, as food and oil prices stayed low. (Chart 1.25) At the same time, deflationary pressures on producer prices abated, as excess industrial capacity, particularly in China, was gradually addressed. (Chart 1.26) With oil prices levelling off in recent months, their drag on Asia's

Chart 1.24
G3 CPI Inflation



Source: CEIC and EPG, MAS estimates

Chart 1.25
Global Oil and Food Price Indices



Source: IMF

* Average of UK Brent, Dubai and West Texas Intermediate oil prices.

inflation is projected to peter out in 2017, resulting in slightly firmer consumer prices. Therefore, CPI inflation in Asia ex-Japan is expected to come in at 2.5% this year and rise mildly to 2.7% in 2017.

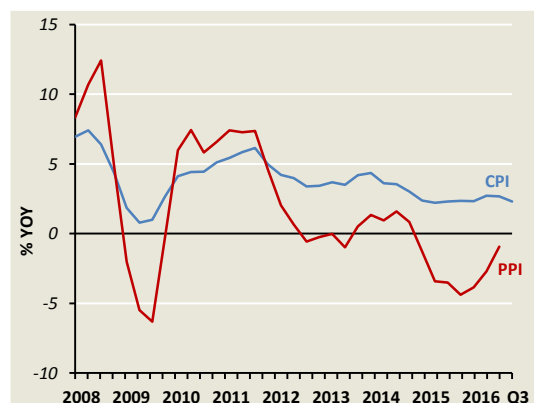
In China, CPI inflation receded in Q3 after a weather-induced spike in pork prices faded. Headline inflation fell back to 1.7%, from 2.1% in Q2. Otherwise, price pressures in China have generally been benign as income gains moderated. Hence, China's headline inflation is projected to be 1.9% this year and next year. Meanwhile, China's bout of PPI deflation, which lasted 54 months, ended in September. Producer prices rose by 0.1% y-o-y that month as capacity cuts and demand-side policy measures combined to reduce industrial slack.

Headline inflation in India dipped to 5.1% in Q3 from 5.7% in Q2, as favourable monsoon rains bolstered harvests and kept food prices down. CPI inflation is likely to stay benign, with contained food and energy prices offsetting potential inflationary pressures stemming from the civil service wage hike. Thus, for the financial year ending March 2017, CPI inflation is projected to come in at 5.1%, and register a similar pace in the following year as well.

For the NEA-3, the inflation outcome was mixed even though the headline figure fell to 1.0% y-o-y in Q3 2016 from 1.2% in the preceding quarter. Subdued energy and food prices underpinned the softer outturns in Taiwan and Korea, while in Hong Kong, the increase in price pressures was largely attributable to higher rental costs for public housing. On the whole, inflation in the NEA-3 is expected to remain relatively mild at 1.1% in 2016, before rising to 1.4% in 2017.

In the ASEAN-4 economies, CPI inflation eased further to 2.2% in Q3, from 2.5% in Q2 and a recent peak of 4.2% in Q3 last year. While inflation in Indonesia trended down on account of supply-induced declines in food and energy items, price increases in Malaysia moderated in Q2 with the tapering of GST-related effects and stayed weak in Q3 as demand-pull pressures eased. Resilient economic activity, firm food prices and the diminishing impact of low oil prices led to CPI inflation continuing on a slight uptrend in the Philippines, and positive outturns in Thailand in both Q2 and Q3. For ASEAN-4 as a whole, inflation is forecast to come in at 2.6% this year and rise to 3.5% in 2017, alongside moderate economic growth.

Chart 1.26
Asia-9* CPI and PPI Inflation



Source: CEIC and EPG, MAS estimates

* Asia-9 refers to China, India, the ASEAN-4 and NEA-3 economies. Weighted by nominal GDP.