

# 亚洲经济分析

研究报告

## 2018年展望：亚洲出口型经济体面临资本开支方面的新利好

- 2018年亚洲出口型经济体（韩国、台湾、马来西亚、新加坡）前景依然良好，实际增速将保持在个位数中段。我们的贸易模型显示，尽管中国资本开支放缓，全球资本开支增长和新兴经济体货币总体走强有望带动外需强劲。此外，亚洲科技产品出口构成显示，资本开支向高科技和无形支出倾斜的新趋势愈发突出，应会有利于亚洲的科技产品出口型经济体。倘若资本开支增速像前几轮周期经常出现的那样高于预期，明年亚洲出口型经济体增速有望加快（但这并非我们的基本假设）。
- 2018年内需形势应会更为有利。我们预计大多数经济体的消费增速将因福利支出和工资增长而好于去年。各经济体的特殊因素可能会导致资本开支情况走势不一，其中马来西亚、新加坡和泰国的资本开支增速将放缓但依然强劲，韩国资本开支增速将放缓，台湾将走弱。虽然经常项目顺差应会随着内需走强而有所下降，但顺差幅度可能依然庞大（包括马来西亚，若油价持续高企则该国将会收益）。
- 随着经济体中的过剩产能减少，我们预计通胀压力将随着经济扩张而小幅上升，油价上涨和大多数亚洲出口型经济体的工资上涨和增税将令这一情形加剧。我们预计各经济体央行将在经济增长稳健、通胀上行和美国利率持续上升之际开始加息，首先是韩国将很快采取行动，随后马来西亚和台湾在2018年、泰国在2019年。倘若决策层对于金融状况失衡的担忧加剧，则利率可能会上升至高于预期的水平。在这样的宏观背景下以及在大选等特殊因素影响下，亚洲出口型经济体的货币应会总体走强。
- 在各项风险因素中，我们不再认为美联储加息是一项不稳定因素，因为亚洲出口型经济体的对外贸易净差额走强，资本流入相对少于新兴经济体，而且欧元区和日本的货币状况仍十分宽松。贸易保护主义仍是一项潜在的结构不利因素，但目前看似一项较低风险，而北朝鲜相关的地缘政治风险也在逐渐减弱。我们认为亚洲出口型经济体面临的一项较大风险是通胀上升和中国政策平衡过程中拿捏失当。

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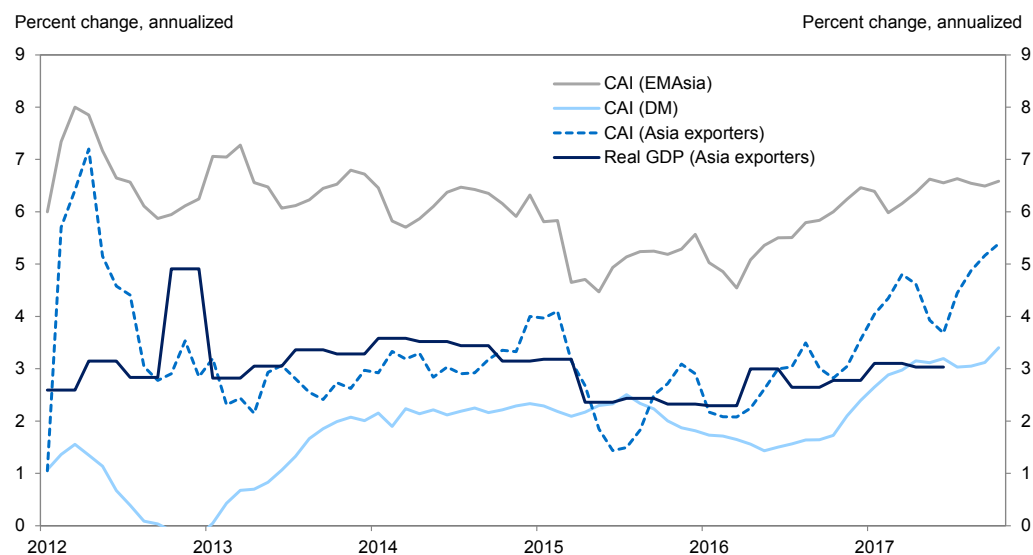
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Asia exporters had solid and stronger-than-expected growth in 2017 due to improving activity of major trading partners. Domestic demand was also robust in most economies, supported by government spending and job creation. Our aggregate CAI for five export economies, including Korea, Malaysia, Singapore, Taiwan and Thailand, shows 5.4% growth in October on a 3-month moving average basis up from 4.4% in July and real GDP growth of 3.0% for Q2 (USD GDP weighted) (Exhibit 1). Core inflation remained benign at below 2%, with no policy rate hike this year, as expected.

**Exhibit 1: Activity of Asia exporters has recently rebounded along with global cyclical strength**



Source: Haver Analytics, Goldman Sachs Global Investment Research

## Strong exports outlook on a global capex upturn

The outlook for Asia exporters should remain positive in 2018 given the ongoing expansion of the world economy.<sup>1</sup> The GS macro research team expects global economic growth to accelerate to 4.0% next year, notably higher than consensus, from an estimated 3.7% this year (see our *"As Good As It Gets," Global Economics Analyst*, November 15, 2017). All three major DM economies, the United States, the Euro Area and Japan look set to continue to grow above potential rates. In particular, US growth is likely to accelerate to 2.5% in 2018 from 2.2% this year, on favorable financial conditions, tax cuts and post-hurricane reconstruction. EM growth will likely accelerate on recovery in India, Brazil and Russia, while we expect the Chinese economy to slow again, to 6.5%, after a modest rebound to 6.8% this year from 6.7% in 2016.

<sup>1</sup> Exports of these five economies exceed 40% of their respective GDPs, higher than other economies in the region including China, Japan, India, Indonesia and the Philippines.

For our five export economies, we expect exports to remain strong in 2018, growing in mid-single digits in real terms though with modest deceleration. Demand from DM will likely be robust, especially US demand, although uncertainties seem to persist on the impact of trade protectionism (see "[Implications of possible US trade protectionism on production in Asia](#)," *Asia Economics Analyst*, Jan 20, 2017). Demand from EM will also likely remain strong on positive spillover from DM growth and broad EM currency strength, despite slowing Chinese capex. Our projections show a robust export outlook for EM Asia next year, with growth outperforming other regions and slightly more optimistic than those of multilateral institutions and our regional trade model based on activity of trade partners (GDP and capex) (Exhibit 2).

### Exhibit 2: Our exports projections point to a robust outlook for Asian exporters next year

(Real export growth; percent change, year-on-year)

	2011	2012	2013	2014	2015	2016	2017E	2018F
<b>G7</b>	5.0	2.2	2.2	4.5	1.9	0.5	3.5	2.9
<b>EM Asia</b>	9.7	5.8	7.0	4.5	-0.4	1.7	6.7	6.5
<b>Asia Exporters</b>	10.3	3.0	3.6	3.0	0.3	1.9	5.3	5.1
<b>Korea</b>	15.1	5.1	4.3	2.0	-0.1	2.1	4.0	5.5
<b>Malaysia</b>	4.2	-1.7	0.2	5.1	0.2	1.1	8.5	3.7
<b>Singapore</b>	4.3	0.3	3.5	5.8	-0.2	1.9	4.3	3.9
<b>Taiwan</b>	9.5	4.9	2.6	0.1	0.7	2.1	7.6	5.7
<b>Thailand</b>	6.5	1.5	5.7	4.0	2.6	1.6	4.9	4.7
<b>Latin America</b>	6.4	1.6	1.1	0.2	4.6	2.0	3.1	4.0
<b>Memorandum item:</b>								
<b>Global exports growth</b>								
<b>OECD*</b>	7.4	3.1	3.6	3.7	2.7	2.4	4.6	3.8
<b>IMF*</b>	6.9	2.8	3.8	3.7	3.1	2.3	4.1	3.9
<b>EM Asia exports growth</b>								
<b>OECD (Dynamic Asia)</b>	5.3	2.9	5.5	3.4	2.0	2.2	4.5	4.2
<b>IMF (EM Asia)</b>	11.8	4.3	7.1	4.6	-0.9	2.5	5.6	4.2
<b>GS Asia trade model**</b>	9.7	5.8	7.0	4.5	-0.4	1.7	7.1	6.8
<b>of which: exporters</b>	10.3	3.0	3.6	3.0	0.3	1.9	5.4	4.6

\*Weighted by USD values of trade

\*\*Average of 8 ARMA regression estimates, based on expected growth rates of trader partners' real GDP, USD GDP, and real capex (weighted by value-added in trade)

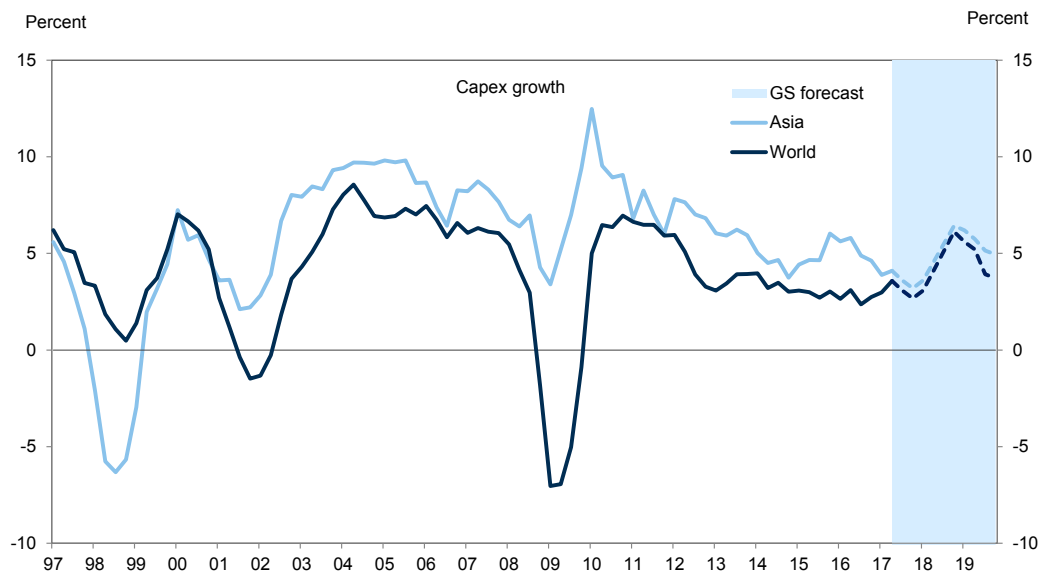
Source: Haver Analytics, Goldman Sachs Global Investment Research, IMF, OECD

### The return of a global capex up-cycle

Asian exporters should benefit from a global capex upturn. The global capex cycle has been improving, especially in the United States. Our macro team forecasts entail an acceleration in global capex from 3.1% in 2017 to 4.6% in 2018 (PPP-weighted), in part boosted by solid [capex growth](#) in the United States exceeding the late-cycle norm of 3-4%, and despite a capex slowdown in China from 5.1% in 2017 to 4.6% in 2018 (Exhibit 3). Given that capex tends to overshoot expectations during inflection periods both on the upside and the downside, capex growth could surprise on the upside if the global economy remains on a solid expansion path as currently reflected in consensus expectations (see [GS Capex Tracker: Light at the End of the Capex Tunnel](#), October 30, 2017). Capex tends to boost trade more than consumption does, given its relatively high imports contents (see "[Three Chinese structural headwinds to Taiwanese exports](#)," *Asia Economics Analyst*, Dec 14, 2015), exhibiting high correlation with trade of goods. Imports contents in China's investment is as high as 29%, compared with 18% for consumption. In DM countries such as Japan, the United States and Europe, imports

contents are generally lower but the gap is still present (share is 15-16% for investment and 9-10% for consumption). A sequential moderation of Asian export momentum in recent months as observed in our [Asia trade tracker](#) has coincided with a weakening of capex momentum in the United States, Japan and several Euro Area countries.

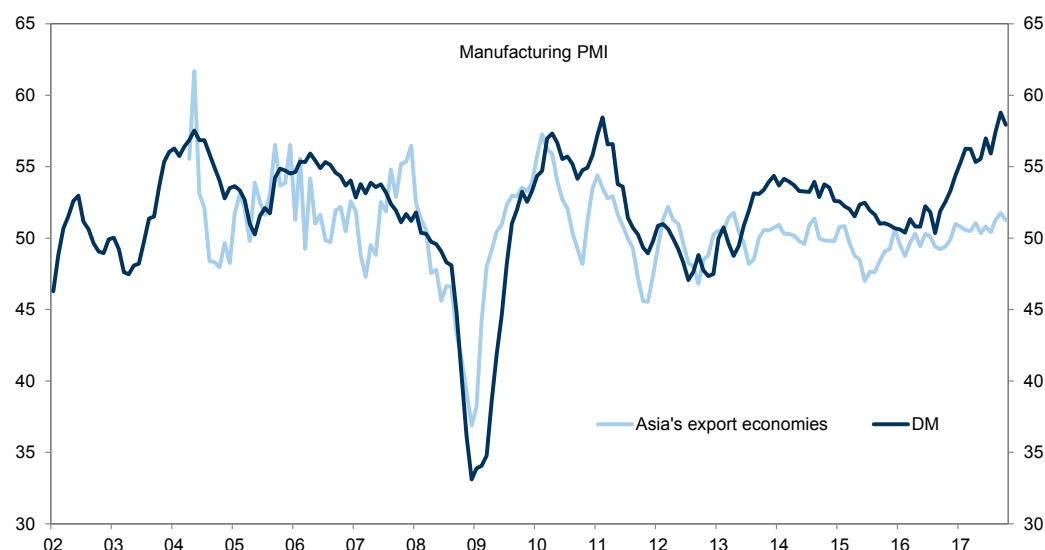
**Exhibit 3: We expect a further rise in global capex and a recovery in Asian capex next year**



Source: Haver Analytics, Goldman Sachs Global Investment Research

That said, the capex upturn is unlikely to generate a large upswing in regional trade next year. Capex in China is nearly US\$5 trillion at current exchange rates and contributes some half of global capex increases in PPP terms. However, ongoing “supply-side reforms” (the government plan of curtailing excess capacity in traditional sectors such as steel and coal) and environmental clean-up may further reduce capacity in select industries such as steel or aluminum (see [“A new discipline: Clean air goal reshapes supply outlook,”](#) China Basic Materials, Nov 20, 2017) and create an overhang that limits an upside to Asian exports.<sup>2</sup> In addition, capex these days might not generate as much trade as before due to an apparent trend shift to intangibles, away from machinery and construction. In the United States, for example, investment in intellectual property products accounted for 27% of total fixed capital investment in 2017, up from about 22% a decade ago. The trend shift to intangible capex is similar to the European Union (20% from 15% over the same period) and advanced EM countries like Korea and Singapore. The ongoing shift might help explain relatively subdued PMI of Asian exporters (compared to their pre-crisis levels and those of DM), consistent with our global market team’s [view](#) that we are still in early innings in the EM recovery (Exhibit 4).

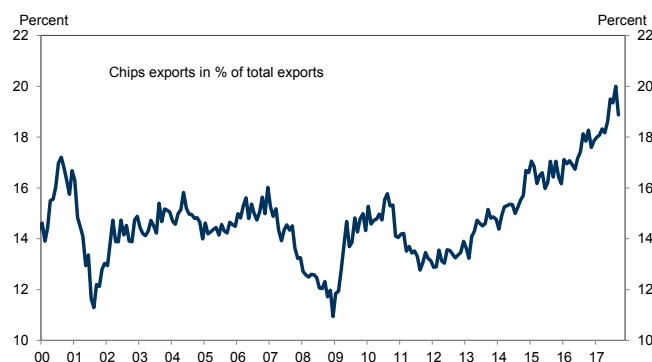
<sup>2</sup> Global capex’s contributions to global growth is recovering, likely reaching 1.0 ppt next year. But if we exclude China, the contribution would be limited to some 0.5ppt, about half of that before the global financial crisis.

**Exhibit 4: PMI of Asian exporters indicates expansion but still below DM and pre-crisis peaks**

Source: Haver Analytics, Goldman Sachs Global Investment Research

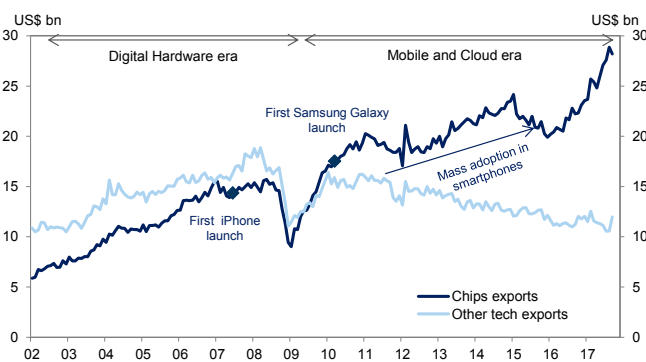
Asia exporters' semiconductor exports have rebounded sharply since late last year, increasing their export share to a record high. Chips exports from Korea, Singapore, Taiwan, Malaysia and Thailand have increased nearly 30% from a year ago, reaching almost US\$30bn and accounting for 20% of total exports, an historic high (Exhibit 5). This stellar performance contrasts with that of other tech exports, which have been sluggish since 2010, since when hardware products like PC and feature phones have started to converge to smartphones (Mobile and Cloud era) (see "[Samsung Electronics 2025: Life after Smartphone](#)", April 11, 2016) (Exhibit 6). With Asia representing 80% of semiconductor production and 40% of related materials and post-production work globally through supply chains involving design, production, processing, packaging and testing, the sharp rebound in chips exports, together with anemic other tech performance, could reflect fundamental changes in global tech demand. Semiconductors nowadays explain 30% of total exports growth in nominal terms, compared with less than 1% by other tech exports (mostly consumer appliances and handsets). Given strong annual trend growth of nearly 20% in chip volume expansion, we estimate that semiconductors have contributed almost two-thirds of real exports growth in export economies.

**Exhibit 5: Microchips have reached a record high share in total exports of 5 Asian exporters**



Source: Haver Analytics

**Exhibit 6: Strengthening trends in high-tech capex: chips exports have surged amid stagnation of other tech exports**  
(Exports from Asian exporters in US\$bn)



Source: Haver Analytics

Within the semiconductor sector, the memory chip business, where Korea is a dominant player globally, has been particularly strong. Korean chip exports rose 56% year-on-year in the first 10 month of this year, outpacing those of other exporters, boosted by strong demand and limited global supply. Profit margins of the memory business in Korea have remained higher than 40% since Q2 2017. The extraordinary strength has been due not only to limited supply from the oligopolistic industry (only 3 major DRAM producers globally and 6 in NAND) but also to upturns in corporate high-tech capex, which has led to a major expansion in memory capacity amid intense competition in the digital revolution entailing artificial intelligence, internet of things, intelligent robots, cloud computing, and autonomous vehicles (see "DRAM & NAND update: Introducing 2018 supply/demand estimates," July 13, 2017).<sup>3</sup> Enterprise demand for NAND increased sharply from 3% share (of total demand for NAND) in 2012 to 15% in 2017, and is projected to rise to 25% by 2020 as PC demand and more recently smartphone demand became saturated (see Samsung Electronics: Less cyclical, more shareholder friendly, July 14, 2017). The case is similar to DRAM, where server demand from corporates rose from 11% in 2012 to 16% in 2017.

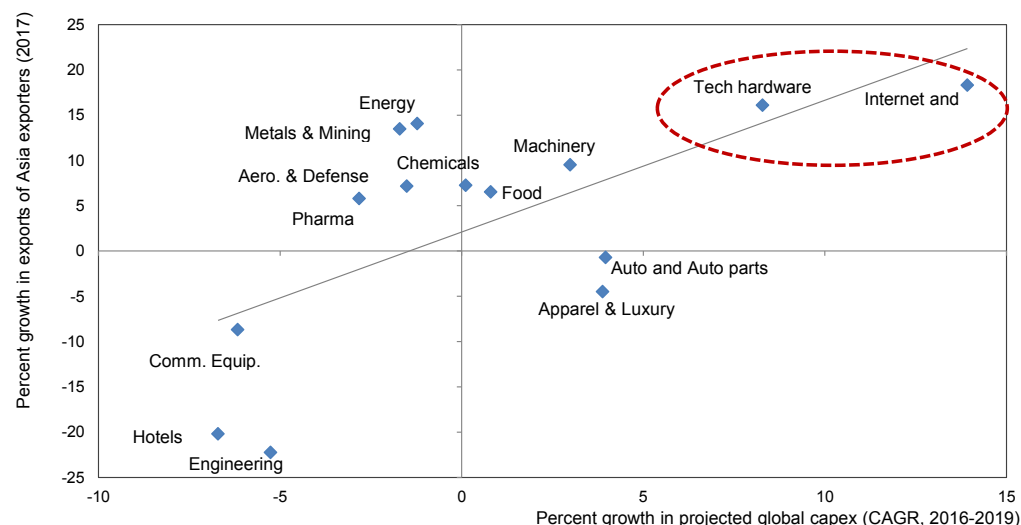
The near-term outlook for the existing memory producers remains strong, due to technological difficulties in increasing supply substantially in the face of strong server and mobile phone demand, according to our Asia technology research.<sup>4</sup> There are also indications that the cycle could be extended beyond the historical maximum range of 9 quarters even with downturns in conventional capex. Capex plans by "new industry companies" (including internet, e-commerce, tech hardware, software, and IT services

<sup>3</sup> DRAM (Dynamic Random Access memory) and NAND (a logical operator, equivalent to NOT AND) are two distinct types of memory chips. The former is a volatile form of memory used as a form of buffer memory in electronic devices, while the latter is a non-volatile form of memory that does not require power to retain data and is mainly used for data storage.

<sup>4</sup> The semiconductor industry faces increasingly challenging technological barriers following an exponential reduction in costs over the last six decades, often called Moore's Law (see Hutcheson, G. Dan, "The Economic Implications of Moore's Law", High Dielectric Constant Materials, Springer Series in Advanced Microelectronics, Volume 16, Springer-Verlag, No. 106, 2004). In the paper, a transistor price in 1953 was 64 million times more than in 2005, which would translate to a decline of memory costs by one billionth over the last six decades, considering further cost reduction over the last decade.

companies), estimated by our industrial analysts, show the largest capex increases over 2016-2019 (topped by 80% for internet and 70% for e-commerce) among about 2500 companies covered by GS research (see "[Capex Complex: Seeking a rival in global capex](#)", *Fortnightly Thoughts*, October 30, 2017).<sup>5</sup> These are sectors where Asia export economies' exports have grown the most in 2017 in USD terms (Exhibit 7), with the strongest double-digit growth registered in exports of semiconductors and other electronic components.

**Exhibit 7: Exports of Asian exporters grew more in high-tech sectors where large capex expansion is planned**



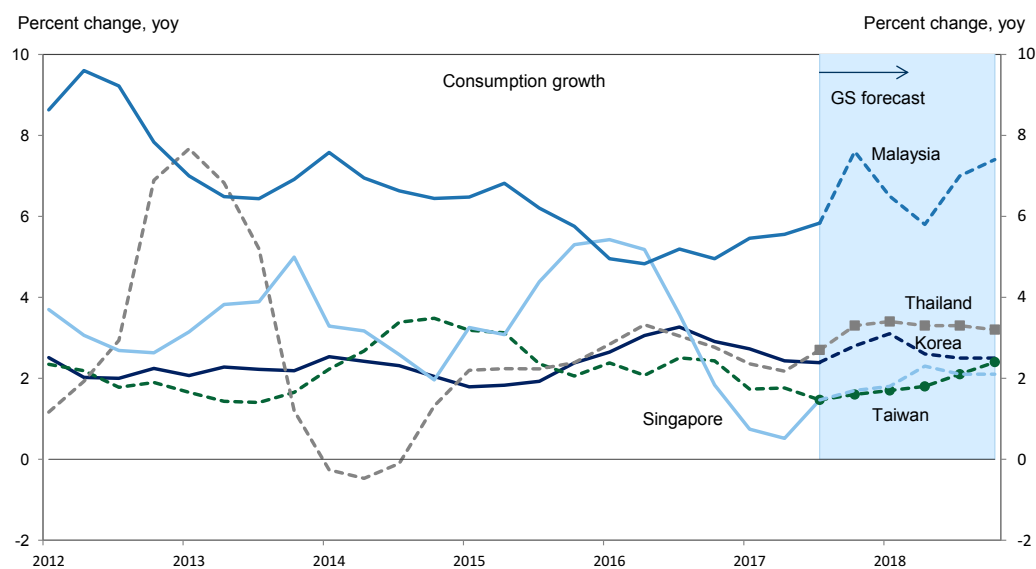
Note: \*includes Internet, Ecommerce, Software and IT Services

Source: Haver Analytics, Company data, Goldman Sachs Global Investment Research

### Domestic demand and external balances

Domestic demand in Asian exporters should be incrementally more supportive next year. Consumption is set to grow faster than in 2017 in Korea, Singapore, Taiwan and Thailand and remain strong in Malaysia. We expect Malaysia to see the fastest consumption growth rate, boosted by tax cuts for middle-income households, higher government wages, more welfare spending and strong labor markets (Exhibit 8). In comparison, consumption will likely be subdued in Thailand and Singapore on household debt overhangs and weak job markets, but is likely to be boosted by increased subsidies, social transfers and recovering housing markets in Thailand and hikes in government and basic wages in Taiwan. In Korea, private consumption could gain from normalizing relations with China, in particular from a rebound in tourism spending after bilateral strains associated with the deployment of [an anti-missile battery](#), as well as a subsidized [minimum wage hike](#) next year.

<sup>5</sup> 2500 stocks under GIR coverage (covering major regions such as the US, developed Europe, China, Japan, Korea, Taiwan and others) as of October 9, 2017, and with estimates/forecasts for 2016 to 2019 are considered.

**Exhibit 8: Consumption is expected to accelerate further next year in most export economies**

Source: Haver Analytics, Goldman Sachs Global Investment Research

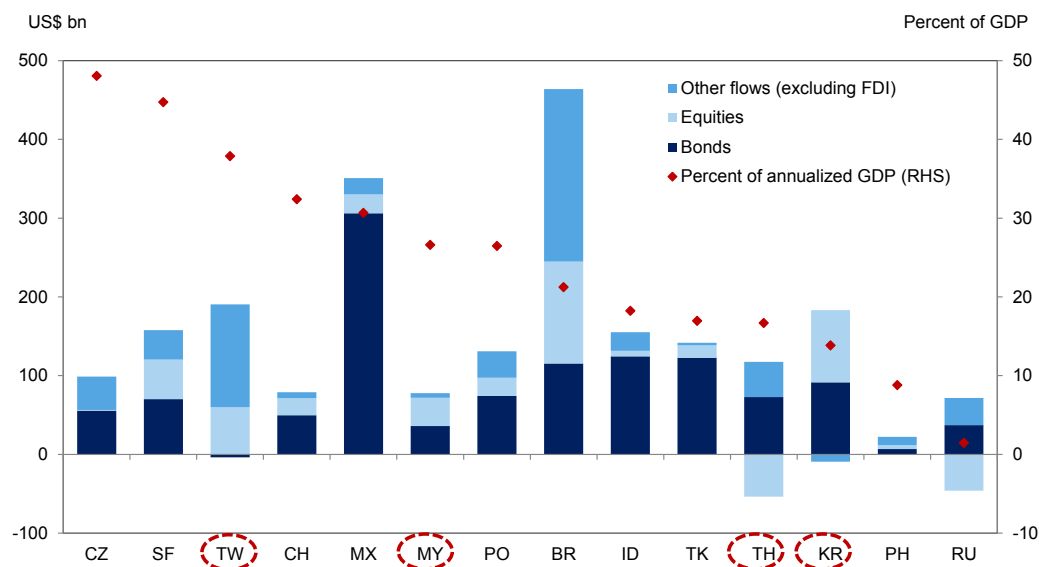
Fixed investment will likely moderate but stay robust in most economies, except in Taiwan. Singapore's fixed investment is expected to rebound sharply from a dip this year, as public project spending continues to support the construction sector. In contrast, construction activities should decelerate significantly in Korea with budget cuts in infrastructure and cooling real estate markets. We expect construction to remain a drag in Taiwan on subdued private investment, although with modest improvements on the back of progress in the government's infrastructure plan.

While stronger domestic demand may weaken current account balances, the surpluses will likely remain sizeable. Malaysia would benefit the most from higher oil prices, should they persist, with its net energy exports representing 6% of GDP (see "[Lower oil prices and EM](#)—Asia is likely to benefit the most, on higher domestic demand", *EMMD*, Jan 5, 2015). In contrast, Korea, Taiwan and Thailand are all large importers of energy, bound to spending more on imported energy by 0.6-1.1% of GDP for a US\$10 rise in oil prices from the US\$50 average in 2017, based on our estimates. An additional drag on Thailand would be moderating tourism revenue growth from a high base this year. That said, for Korea, the strong memory chip cycle as well as warmer relations with China should help maintain the surplus at around 5% of GDP. We expect Korea's semiconductor exports alone to rise to nearly US\$120bn in 2018 up from \$60bn in 2016, and \$90bn in 2017.

On external capital accounts, sustained US rate hikes in 2018 are unlikely to be destabilizing given relatively modest capital inflows to Asian exporters. Cumulative securities inflows since 2009 were the largest in Korea, totaling some US\$180bn, evenly split between equities and bonds (Exhibit 9). The inflow composition is similar in Malaysia, which received about \$70bn, followed by Taiwan with virtually all \$60bn inflows in equities. Thailand had large outflows in equities, intensified since 2013, with

total portfolio inflows limited to \$20bn. Cross-border loans, trade credits and other short-term flows (volatile at times of liquidity crunch), were the largest in Taiwan (\$130bn) followed by Thailand (\$45bn), more than twice that of securities inflows in both. These cumulative inflows in export economies are not large relative to the size of the economies and those in other EM countries. The trends have largely been similar so far in 2017.

**Exhibit 9: Cumulative inflows to Asia's export economies are not large compared with other EM countries**  
(Cumulative flows since 2009)

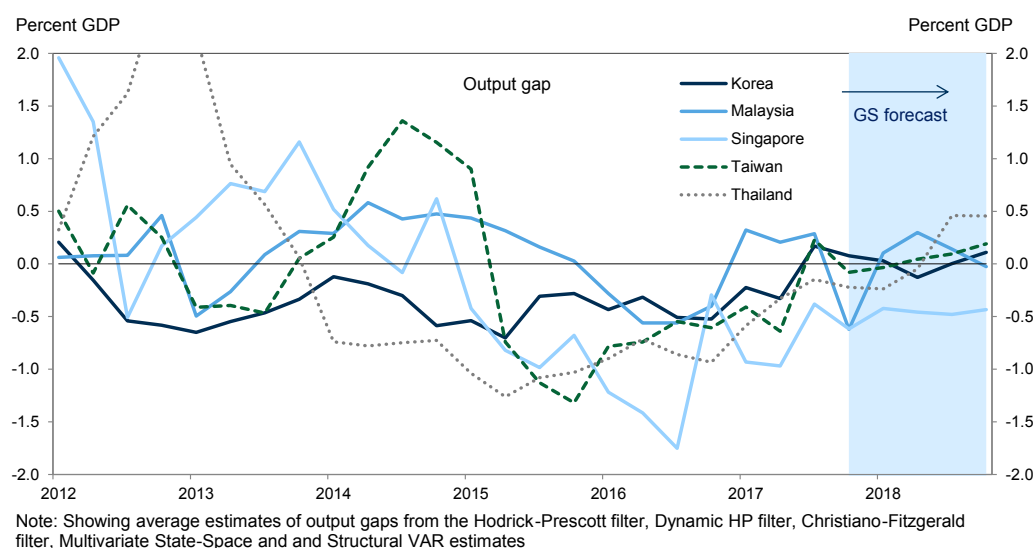


Source: Haver Analytics, Goldman Sachs Global Investment Research

**Inflation, policy rates and forex outlook**

With less slack in Asia exporters, inflation looks set to rise modestly towards the middle of target ranges or above recent trends. Moving past Q3 2017, we estimate the output gap in Malaysia will likely turn back positive in H1 2018.<sup>6</sup> Output gaps in Korea and Taiwan have recently turned positive, and will likely stay slightly positive throughout most of 2018. Output gaps may stay negative for a sustained period in Singapore, while turning positive in Thailand in late 2018 mostly on upturns in export-oriented sectors (Exhibit 10).

<sup>6</sup> See "How much slack: Measuring output gaps in emerging Asia," Asia Economics Analyst, Sep 19, 2014 for details to output gap estimation methodologies.

**Exhibit 10: Output gaps should turn positive in Malaysia, Korea and Taiwan**

Note: Showing average estimates of output gaps from the Hodrick-Prescott filter, Dynamic HP filter, Christiano-Fitzgerald filter, Multivariate State-Space and and Structural VAR estimates

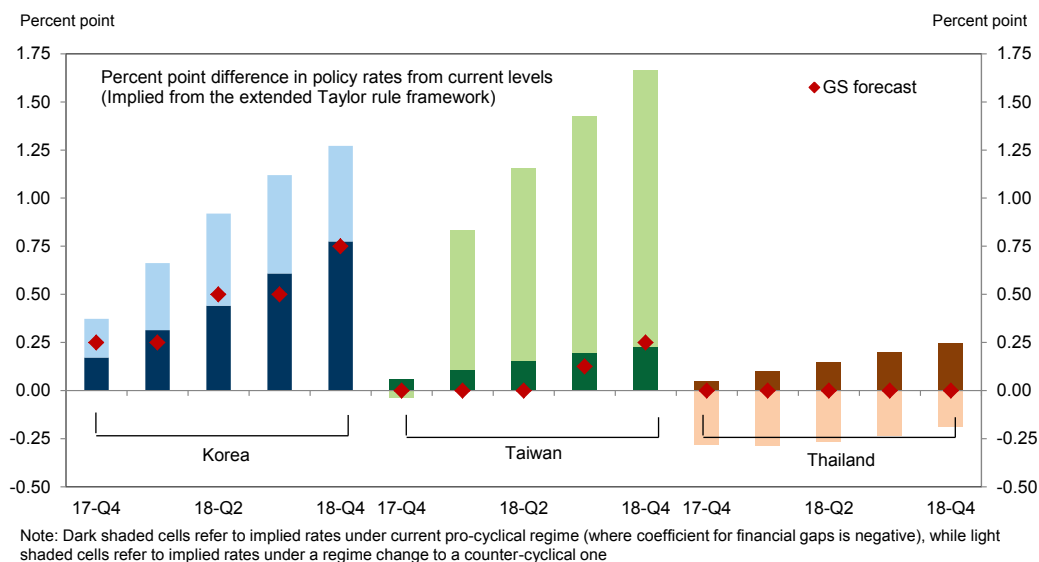
Source: Haver Analytics, Goldman Sachs Global Investment Research

Idiosyncratic factors are also pointing mostly to the upside for inflation. Excise tax hikes and tighter regulations on migrant workers could push up inflation in Thailand. Minimum wage hikes of 16.4% in Korea and basic wage hikes of 5% in Taiwan (together with government wage increases of 3%) are also likely to add inflation pressures if, as we expect, slack dissipates over time. Oil prices, if sustained for long at current elevated levels, would also add an upward pressure on inflation, especially in Thailand and Malaysia, given their high auto fuel shares in consumption (7.8% in MY and 11.8% in Thailand), compared with 4.4% in Korea, 3.5% in Taiwan and 3.4% in Singapore. Housing electricity and gas could also be affected but those prices are regulated except in Taiwan, not affecting inflation as meaningfully as auto fuel prices. Indirect usage of oil and gas through electricity and heating is relatively small as other energy sources like hydrogen and nuclear energy are used for electricity generation. That said, currency appreciation would help limit inflation pressure from imported energy, with the strongest impact in Korea, in our detailed inter-industry linkage analysis.

We expect most central banks in our five export economies to begin raising interest rates next year. We currently expect the Bank of Korea to raise the policy rate first, most likely in the November MPC meeting, followed by Malaysia and Taiwan in Q3 next year, and Thailand probably in 2019 (Exhibit 11). We also expect MAS of Singapore to tighten policy in H2 2018. The lift-off after a multi-year period on hold would reflect robust growth and continued US rate hikes and to a lesser extent, in our view, on headline inflation, which is expected to remain benign. Among the Asia export economies, we expect Malaysia to post the highest headline inflation rate in the coming year, 3.0% but moderating from 3.7% expected for 2017, followed by Korea at 2.0%, which is still around the central bank target level. Our extended Taylor rule framework including a financial gap estimate (showing deviation from long-term trends in household debt and housing prices), as well as standard output gap and inflation gap estimates, shows implied policy rates to be broadly in line with our forecasts. However, in the event of a

shift in central bank stances on financial imbalances, policy rates could go higher than we anticipate currently for Korea and Taiwan, and lower in Thailand (see “Monetary policy and financial stability in export economies: Implications of a regime-switching Taylor rule”; *Asia Economics Analyst*, Nov 13, 2017).

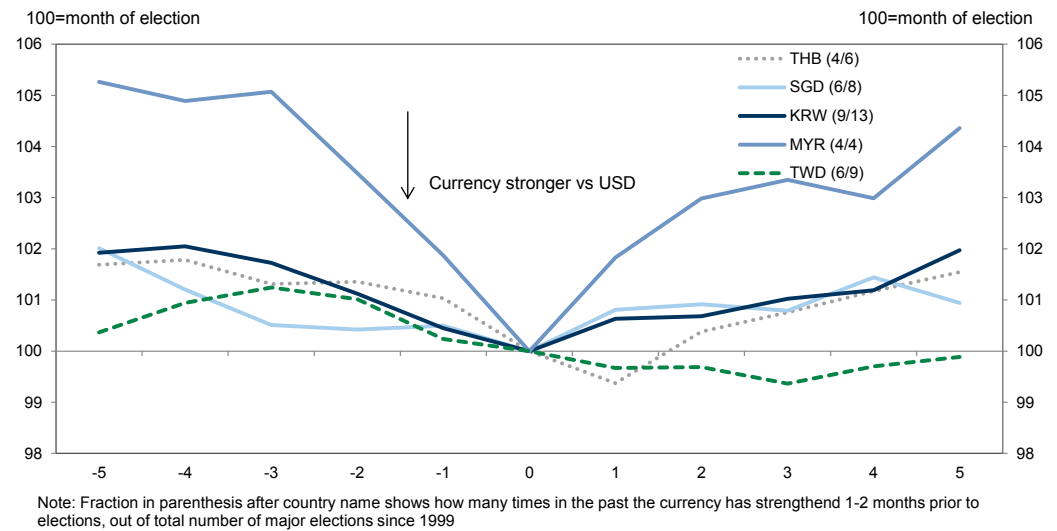
**Exhibit 11: Our policy rate forecasts are broadly in line with rates implied by the extended Taylor rule framework**



Source: Haver Analytics, Goldman Sachs Global Investment Research

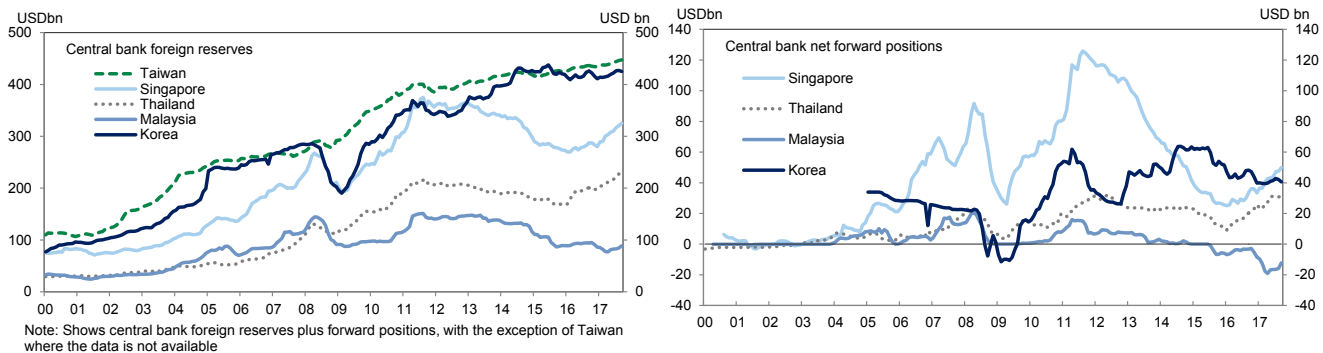
The policy rate outlook, together with robust current account balances as discussed above, underpins our positive view on Asian exporter currencies from macro and policy perspectives (see “2018 outlook and trade ideas”; *EM Asia FX/Rates Views*, Nov 20, 2017). Elections could also have effects on currencies depending on policy platforms of political parties and government policies in the run-up to elections. In Malaysia, general elections should take place by August 2018, although they might be called as early as March. A general election is also due in Thailand (November 2018), although the timing could be postponed again. Korea faces nation-wide regional and municipal elections in June, electing governors of districts including the Mayor of Seoul. We find that the MYR tends to be most sensitive to election timelines, with USDMYR falling on average 5% before elections since 2000, largely regardless of changes in international reserves (Exhibits 12-13). Given that short-USD forward positions of BNM, a major hurdle for MYR appreciation, have been declining, down to US\$12.3bn at end-September, MYR could outperform in the near term (Exhibit 13).

**Exhibit 12: Asia's export economies tend to have currency strengthening ahead of elections**



Source: Haver Analytics, Goldman Sachs Global Investment Research

**Exhibit 13: Reserves including net forward positions have started to rise in recent months in most Asian exporters**



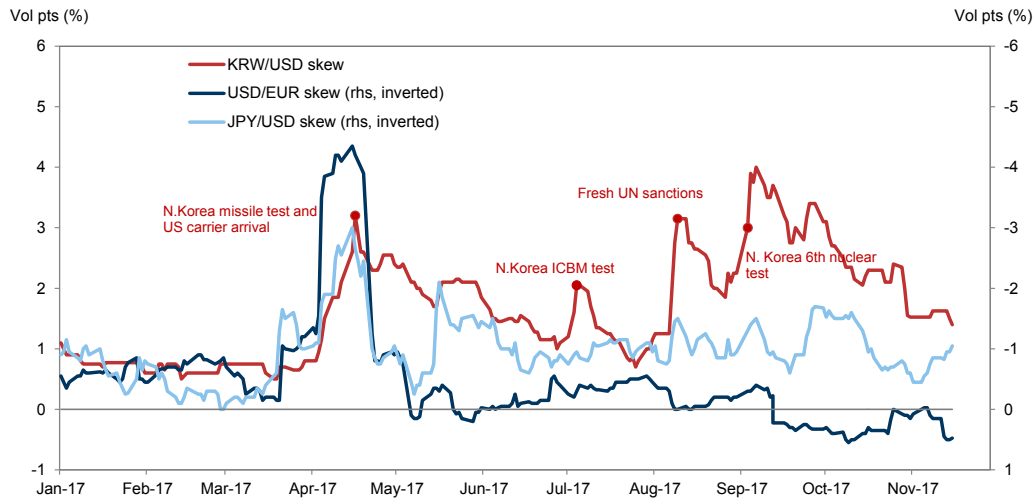
Source: Haver Analytics, Goldman Sachs Global Investment Research

**Risk factors**

The impact of Fed tightening should be manageable for Asia exporters, given large current account surpluses and capital inflows that are not excessive relative to other economies, as discussed above. Trade protectionism remains a potential structural headwind although seemingly at a low risk for now, and perceived North Korea risks are also dissipating with USDKRW skew, the most sensitive to Korea-related geopolitical risks, falling gradually since the September peak following North Korea's 6th nuclear test (Exhibit 14). The impact of geopolitical tension on KRW volatility will likely be reduced, as the recent establishment of bilateral liquidity swap arrangements with the Bank of Canada, without limits or expiry, would provide support to the currency even under unanticipated risk-off scenarios. Bigger risks to our Asia export economies would be China slowdown/disruptions (see "China 2018 Outlook: The post-Congress balancing act", *Asia Economics Analyst*, Nov 16, 2017), an inflation pickup and a hawkish turn of

central banks' view on policy rates given relatively large domestic leverage in export economies.

**Exhibit 14: Perceived North Korea risks have subsided since the latest peak in September**



Source: Bloomberg, Goldman Sachs Global Investment Research

## Forecast Tables

### Real GDP Growth (year-over-year)

	2016	2017		2018		Potential Growth <sup>A</sup>
		GS	Consensus	GS	Consensus	
<b>Asia ex-Japan</b>	6.2	6.1	6.1	6.2	6.1	
China	6.7	6.8	6.8	6.5	6.4	6.0
India	7.1*	6.4*	6.8*	8.0*	7.4*	7.9
South Korea	2.8	3.2	3.0	3.1	2.8	3.0
Hong Kong	2.0	3.6	3.4	2.7	2.5	2.4
Taiwan	1.5	2.6	2.2	2.4	2.3	2.5
<b>ASEAN</b>	4.6	5.0		5.2		
Singapore	2.0	3.0	2.5	2.8	2.4	2.7
Malaysia	4.2	5.6	5.2	5.3	4.8	5.2
Thailand	3.2	3.8	3.6	3.9	3.5	4.0
Indonesia	5.0	5.2	5.1	5.8	5.3	5.8
Philippines	6.9	6.6	6.5	6.5	6.6	6.5
Japan	1.0	1.6	1.5	1.5	1.1	0.5
Australia	2.5	2.3	2.3	3.2	2.8	2.6
New Zealand	3.0	2.6	2.7	3.1	3.0	2.9
USA	1.5	2.2	2.2	2.5	2.4	1.8
Euro area	1.8	2.3	2.2	2.2	1.9	1.0

<sup>A</sup>GS estimates for annualized growth rate of potential output from 2017-21

\*Fiscal year basis (forecast), 2016 is India FY17 (April 2016-Mar 2017).

Source: Goldman Sachs Global Investment Research, Bloomberg

### Consumer Prices (year-over-year)

	2016	2017		2018		Inflation Target/Range
		GS	Consensus	GS	Consensus	
<b>Asia ex-Japan</b>	2.6	2.1	2.2	3.0	2.8	
China	2.0	1.5	1.6	2.3	2.2	3.0 <sup>A</sup>
India	4.5*	3.4*	3.5*	5.3*	4.5*	2.0-6.0
South Korea	1.0	2.0	2.0	2.0	2.0	2.0
Hong Kong	2.4	1.7	1.7	2.6	2.5	-
Taiwan	1.4	0.8	0.8	1.3	1.2	-
<b>ASEAN</b>	2.2	3.0		3.2		
Singapore	-0.5	0.5	0.8	1.0	1.2	-
Malaysia	2.1	3.7	3.8	3.0	2.5	-
Thailand	0.2	0.8	0.7	1.7	1.4	1.0-4.0
Indonesia	3.5	3.9	3.9	3.9	3.7	2.5-4.5
Philippines	1.8	3.1	3.1	3.9	3.5	2.0-4.0 <sup>^^</sup>
Japan	-0.1	0.5	0.5	1.0	0.8	2.0
Australia	1.3	2.0	2.0	2.2	2.2	2.0-3.0
New Zealand	0.6	2.0	1.9	2.0	1.9	1.0-3.0
USA	0.9	2.1	2.1	2.2	2.1	2.0
Euro area	0.2	1.5	1.5	1.2	1.4	1.9 <sup>**</sup>

\*India: Fiscal year basis (forecast).

\*\*ECB aims to maintain inflation rates "below, but close to, 2% over the medium term"

<sup>A</sup>We see the "target" as the upper band of the desirable range. <sup>^^</sup>BSP inflation target 3% +/- 1% for 2017-2018.

Source: Central banks, Goldman Sachs Global Investment Research, Bloomberg

## Forecast Tables (continued)

## Policy Interest Rates (percent)

	Current	2017				2018			
	24-Nov	1Q	2Q	3Q	4QF	1QF	2QF	3QF	4QF
<b>Asia ex-Japan</b>									
China	3.44	3.06	3.04	3.26	3.25	3.25	3.25	3.00	3.00
India	6.00	6.25	6.25	6.00	6.00	6.00	6.00	6.25	6.50
South Korea	1.25	1.25	1.25	1.25	1.50	1.50	1.75	1.75	2.00
Hong Kong	-	-	-	-	-	-	-	-	-
Taiwan	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.50	1.63
<b>ASEAN</b>									
Singapore	-	-	-	-	-	-	-	-	-
Malaysia	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.25	3.25
Thailand	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Indonesia	4.25	4.75	4.75	4.25	4.25	4.25	4.25	4.50	4.75
Philippines <sup>^</sup>	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.25	3.75
Japan	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05
Australia	1.50	1.50	1.50	1.50	1.50	1.50	1.75	1.75	2.00
New Zealand	1.75	1.75	1.75	1.75	1.75	1.75	1.75	2.00	2.00
USA	1.07	0.79	1.04	1.15	1.38	1.63	1.88	2.13	2.38
Euro area	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Policy interest rates: China: 7-day repo (intraday), India: repo rate; Korea: 7-day repo; Malaysia: overnight policy rate; Thailand: 1-day repo, Philippines: repo rate, Indonesia: 7-day reverse repo rate, Taiwan: rediscount rate; USA: Fed funds effective rate; Euro Area: Main refinancing operations: fixed rate; Japan: Overnight call rate.

<sup>^</sup>Starting from 2016 Q2, we forecast the overnight reverse repurchase facility (RRP) rate after BSP shifted to the IRC system.

We interpret this change as a purely operational change, not as a change in policy stance

Source: Haver Analytics, Bloomberg, Goldman Sachs Global Investment Research

**Exchange Rates (local currency units per USD)**

	Current	3-Month Horizon		6-Month Horizon		12-Month Horizon	
	24-Nov	Forward	Forecast	Forward	Forecast	Forward	Forecast
<b>Asia ex-Japan</b>							
China <sup>^</sup>	6.60	6.64	6.70	6.67	6.75	6.74	6.80
India	64.7	65.2	64.0	65.8	63.0	67.1	62.0
South Korea	1085	1085	1100	1084	1080	1082	1060
Hong Kong	7.81	7.80	7.85	7.79	7.85	7.77	7.85
Taiwan	30.0	29.7	30.0	29.6	29.8	29.3	29.7
<b>ASEAN</b>							
Singapore	1.35	1.34	1.36	1.34	1.35	1.34	1.35
Malaysia	4.12	4.11	4.15	4.11	4.10	4.14	4.40
Thailand	32.7	32.6	33.0	32.5	32.5	32.5	32.0
Indonesia	13503	13615	13300	13740	13100	14065	13000
Philippines	50.6	51.0	52.0	51.3	53.0	51.9	53.0
Japan	111.6	111.0	115.0	110.5	117.0	109.1	120.0
Australia	0.76	0.76	0.77	0.76	0.78	0.76	0.79
New Zealand	0.68	0.68	0.70	0.68	0.71	0.68	0.74
Euro area*	1.19	1.20	1.17	1.21	1.18	1.22	1.20

\* USD per Euro <sup>^</sup>We forecast \$/CNY fix rate. Forward rates are actual market prices.

Source: Goldman Sachs Global Investment Research

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