

July 11, 2018



# Nigeria Strategy Report

H2 2018

## Global Economy and Markets

### Supportive global monetary policy to consolidate growth over 2018

#### Executive Summary

The year 2018 started with worries that the high base of 2017 and protectionism rhetoric between US and China would have a reverberating effect on global growth. Over H1 2018, the duo of stronger growth across emerging markets – relaying the still elevated commodity prices, especially for oil exporting countries – and growth resilience in advanced economies have re-shaped the landscape with consensus global growth now far exceeding the view at the start of the year.

For the rest of the year, we are more optimistic on growth across advanced and emerging economies, reflecting improvement in consumer and business sentiment, supportive global monetary policy stance and fiscal stimulus. Consequently, global economy is now forecast to increase by 3.9% YoY. While reasons abound for investors to be cautious going into the second half of the year with the trade protectionism tariffs now in effect, we believe the impact would be a switch in trade from one region to another, without any major impact on overall global growth. In advanced economies, growth is projected to peak at 2.5% YoY in 2018, while growth in EMs is projected 10bps higher than 2017 reading at 4.9% YoY, a reflection of the still elevated commodity prices, improved confidence in the region and a stronger projected growth in the middle east and Latin America over 2019.

***In this report, we look at the major themes that dominated the global economic and financial landscape in H1 2018 as well as our outlook for the rest of the year***

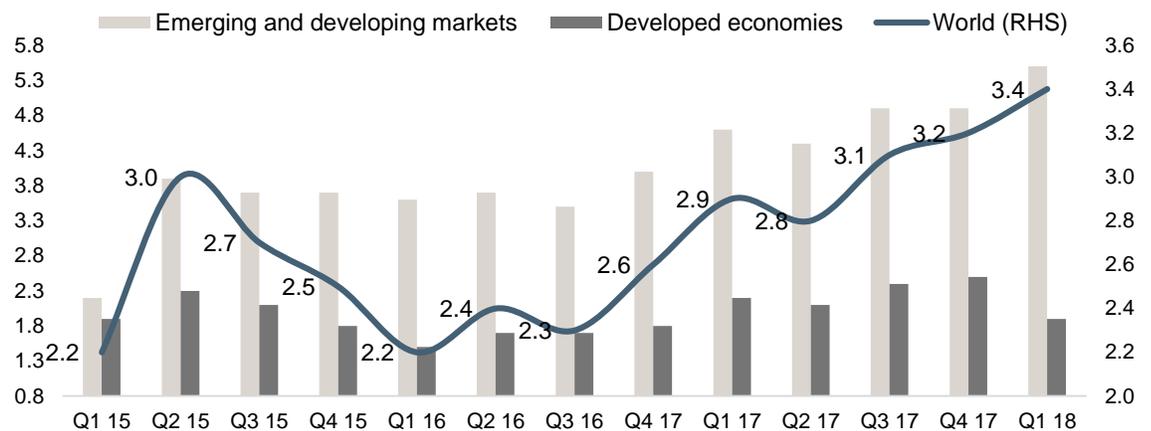
**Table 1: Economic Highlight**

|                    | Monetary Policy Action | Q1 GDP | CPI    | Equity Return | Currency Change | Unemployment |
|--------------------|------------------------|--------|--------|---------------|-----------------|--------------|
| Advanced Economies |                        |        |        |               |                 |              |
| US                 | +50 bps to 2.0%        | 2.0%   | 2.80%  | 4.40%         | 1.56%           | 4.00%        |
| EU                 | Unchanged              | 2.50%  | 1.90%  | -1.40%        | -1.31%          | 8.40%        |
| UK                 | Unchanged              | 1.20%  | 2.50%  | -0.46%        | 2.30%           | 4.20%        |
| Japan              | Unchanged              | 1.10%  | 0.70%  | -2.02%        | -1.70%          | 2.20%        |
| Emerging Markets   |                        |        |        |               |                 |              |
| China              | Unchanged              | 6.80%  | 2.00%  | -13.90%       | -1.69%          | 3.89%        |
| India              | +25 bps to 6.25%       | 7.7%   | 4.65%  | 4.00%         | -7.20%          | 5.78%        |
| Turkey             | +125 bps to 17.75%     | 7.4%   | 11.54% | -16.60%       | -20.80%         | 10.51%       |
| Russia             | Unchanged              | 1.30%  | 2.32%  | 8.80%         | 8.88%           | 4.70%        |
| Mexico             | +25bps to 7.75%        | 1.10%  | 4.65%  | -3.43%        | 1.27%           | 3.20%        |
| Brazil             | Unchanged              | 0.40%  | 4.39%  | -4.76%        | -17.20%         | 12.70%       |

***Commodity-led expansion in EMs drives stouter Global growth***

At the start of the year, we had estimated a 10bps expansion in global GDP growth to 3.7% over 2018, reflecting our prognosis of improved output in emerging and developing economies (EMs) which will offset slower growth in advanced economies (DMs). The basis for our views was hinged on a recovery across EMs with support stemming from a rebound in commodity prices, doused political uncertainty as well as strong momentum in trade and consumption. Expectedly, first quarter economic numbers across the globe came out strong, with growth tracking higher relative to prior quarter (+20bps to 3.4% YoY), following stronger than expected growth in EMs (+60bps QoQ to 5.5%) which offset the slower growth in DMs (-60bps QoQ to 1.9%). The sturdy growth in EMs was largely underpinned by the knock-on effect of higher commodity prices and improved global trade on consumer spending and stronger private capital investment across the region. On the other hand, the sluggish growth in advanced economies emanated from slowdown in personal consumption expenditure and currency induced contraction in external demand.

**Figure 1: Trend in Global GDP Growth (%)**



Source: World Bank, ARM Research

***Lower outlay falters growth in advanced economies***

In the US, real GDP growth slowed in the first quarter of 2018 to an annualized pace of 2.0%, the slowest in the last four quarters. One key reason for the slower growth rate was personal consumption expenditure which grew by 1.1% YoY (relative to 4.0% in Q4 17), the slowest pace in the last 18 quarters. Also, government spending grew at just 1.2% annualized clip (relative to 3% in Q4 17) on the back of a slowdown in national defense spending (1.8% vs. 5.5% in Q4 17). Consequently, despite the strong growth in private domestic investment of 7.3% YoY (+260bps from prior quarter), the impact of lower government and consumer spending drove the slow economic growth relative to prior quarter. That said, leading indicators guides to a pick-up in Q2 2018 as preliminary

estimates of the labor market, retail sales and industrial production have continued to reflect the pass-through of tax reform on after-tax household incomes. For context, over Q2 2018, the unemployment rate firmed to 3.8% YoY from 4.1% at the end of Q1 2018. More so, we think the Q4 17 growth of 4% YoY was more of an outlier as the strong numbers in consumer spending reflected strong auto sales following the hurricane which drove replacement spending in the period.

Elsewhere, growth decelerated in the Euro area in the first quarter of 2018 to an annualized rate of 2.5% (vs. 2.8% in prior quarter). The slowdown is attributable to contraction in government expenditure (-10bps from prior quarter to 1.2% YoY) and external trade (-210bps from prior quarter to 4.5% YoY) – a fallout of temporary factors including extensive union activities in France, unseasonably cold weather in Germany, and short-term bottlenecks in other nations. Unbundling the region revealed that growth slowed in five countries which combined accounts for ~96% of the region's GDP. Specifically, France (-70bps to 2.2%), Germany (-60bps to 2.3%), Spain (-10bps to 3.0%), Italy (-20bps to 1.4%) and UK: -20bps to 1.2%) all contributed to the slow growth in the region. However, recent events over Q2 2018 appears to have overshadowed the slowdown in Q1 2018. For context, EU's unemployment data in the month of May showed improvement to 8.4%, the lowest rate recorded since December 2008 (vs. 8.5% in prior month and 9.2% in May 2017). To add, within the Euro area, the lowest unemployment rate was observed in Czech Republic (2.3%), and Germany (3.4%). Furthermore, the external sector strengthened over the first four months of 2018, with the Euro area recording trade surplus of €64.4 billion (vs. €58.7 billion same period in 2017), as export of €738.2 billion (\$711.5 billion in January-April 2017) more than outweighed imports of €673.8 billion (\$652.8 billion in January-April 2017).

Still in Europe, UK economy stuttered in Q1 18, rising by 1.2% YoY vs 1.4% recorded in the last quarter of 2017. Going by trend, this is the slowest pace of growth since Q3 12 owing to muted growth in services category<sup>1</sup> (1.2% YoY vs 1.1% in Q4 17) which offset sturdy growth seen in industrial production<sup>2</sup>. On services, the slowdown mirrors activities in financial services (1.7% YoY) which has been decelerating since the start of 2017, while the TS&C<sup>3</sup> and DHR<sup>4</sup> sectors grew by 2.8% and 0.7% YoY respectively. In addition, construction and agricultural sector which jointly accounts for 7% of GDP contracted by 3.3% and 1.3% YoY respectively due to slowdown in consumer spending. On the flipside, industrial production grew by 2.2% YoY (vs. 1.9% YoY in Q4 17) buoyed by improved activities in the

---

<sup>1</sup> This category accounts for 79% of overall growth in the economy.

<sup>2</sup> Also referred to as the supply side of overall economic output

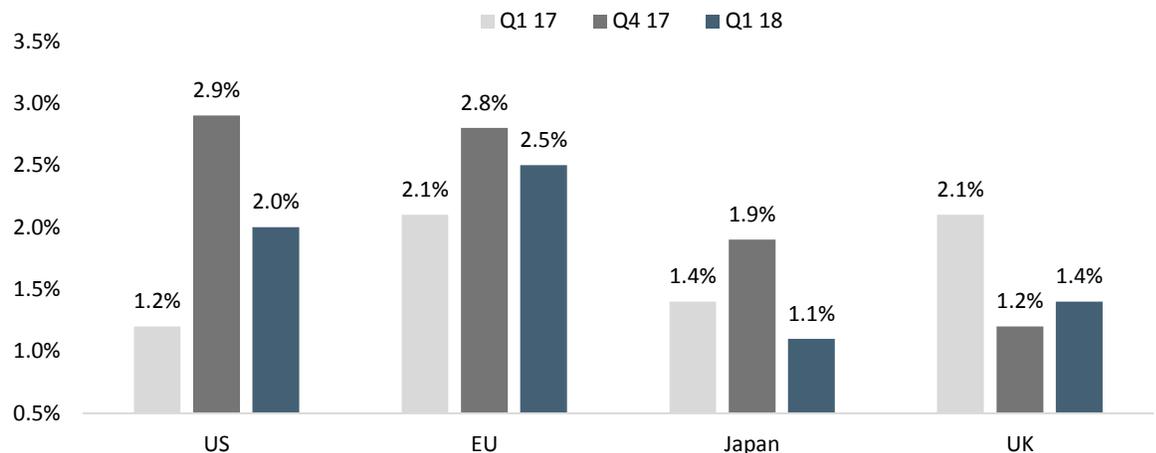
<sup>3</sup> Transport, storage, and communication sectors

<sup>4</sup> Distribution, hotel, and restaurant sector, which includes trade, motor vehicle repairs, food and accommodation activities.

manufacturing sector (+2.5% YoY) while the electricity and mining sectors grew by 2.3% and 3.5% YoY respectively. For us, we believe the tepid growth mirrors the uncertainty over business prospects in the economy ahead of Brexit which has slowed investment spending, while subdued consumer spending reflects the squeeze on consumer real income borne out of rising inflation which touched a four year high in Q4 17 at 2.8%. For context, retail sales which serves as an indicator of consumer spending has been on a downtrend since Q2 17.

The Japanese economy also grew at a slower pace in Q1 18, printing at 1.1% YoY – hinged on the slowdown in household consumption which grew by 1.1% YoY (Q4 17: 1.9%). Furthermore, the economy recorded a slower growth in export (4.8% YoY vs. 6.5% in Q4 17), government spending (0.6% YoY vs. 0.8% in Q4 17) and a further contraction of 5.4% YoY in private investment (Q4 17: -2.4%). Beyond first quarter, PMI for the month of April, May and June printed at 53.8, 52.5 and 52.8 index points respectively which speaks to an expansion in the economy. However, export orders contracted in the month of June to 49.5 index points (vs. 51.1 index points in May), a reflection that the on-going trade dispute between China and US is having a toll on the export focused economy. For context, the Chinese economy sources most of its automobile parts and electronics from Japan, with China accounting for 19.2% of total exports in 2017.

**Figure 2: GDP growth in developed economies (%)**



Source: World Bank, Bloomberg, ARM Research

***Monetary policy in DMs, still a dovish flow***

Across DMs, the monetary policy environment remained broadly accommodating save for US – wherein tighter labor market and sustained uptrend in inflation rate led the FED<sup>5</sup> to continue its

<sup>5</sup> US Federal Reserve

interest rate normalization, hiking its benchmark rate by 25bps at its March and June meeting, leaving the range of its target fund rate at 1.75% - 2.00%. In EU and UK, contrary to expectation of rate hikes in the wake of inflationary pressure<sup>6</sup>, the respective central banks<sup>7</sup> left rates unchanged following weak economic growth reported in the first quarter of 2018. However, the tone of the policy committee suggests a shift in the months ahead contingent on favorable economic data and inflation outlook. Specifically, in EU, the ECB reiterated its resolve to reduce its bond purchase program (QE) to €15 billion starting October, from €30 billion currently, and then fully unwind its QE program in December. While in reaction to possible drag from Brexit, the BoE decided to maintain its stock of investment grade corporate bonds at £10 billion and U.K government bonds at £435 billion. In Japan, owing to a slow rise in inflation (May: 0.7% YoY) towards its target level of 2%, the bank of Japan left its monetary policy rate unchanged at -0.1% and voted to maintain its government bond purchases till it's able to push its government 10-year bond yield close to zero.

### ***Robust consumption boosts EM growth***

Across EMs, economic growth in China held onto its steam in the first quarter of 2018 with GDP printing at 6.8% YoY—the same rate as the previous two quarters—on the back of robust consumption and private investment. Precisely, retail sales printed solid at 9.8% YoY (Q1 18: 9.8%, Q4 17: 9.9%) reinforced by higher disposable income, and a tight labor market. Also, fixed investment maintained its growth rate of 7.5%. Irrespective, net exports declined due to a faster growth in imports with China recording its first current account deficit in almost two decades in March. Consequently, China's economy gradually shifted from an investment fueled economy to consumption fueled, with consumption accounting for 77.8% of growth. On monetary stance, the PBOC<sup>8</sup> surprisingly left its key rates unchanged at its last meeting due to concerns of economic slowdown based on recent data on retail sales<sup>9</sup> and investment<sup>10</sup> which pressured the PBOC to ignore its previous tactic of raising rates in tandem with the Fed. Elsewhere on China's political clime, the National People Congress scrapped the term limit on the president's term in office making President Xi Jinping rule indefinitely (after winning the March 2018 election).

In line with our expectation of a sustained pick-up in India's economy, output growth expanded 7.7% YoY in the first quarter (Q4 17: 7.0%) on the back of solid growth in government and private investment spending. For context, government spending grew 16.8% YoY (Q4 17: 6.8%) while private capital investment expanded 14.4% YoY (Q4 17: 9.1%).

---

<sup>6</sup> Backdrop of a probable wage growth in EU and currency depreciation impact in UK

<sup>7</sup> European Central Bank (ECB) and Bank of England (BoE)

<sup>8</sup> People's Bank of China

<sup>9</sup> Retail sales growth slowed to 8.5% in May from 9.4% in April.

<sup>10</sup> Investment rose 6.1% between Jan-May compared to a 7% growth in the same period last year.

Further supporting the growth picture is household consumption which accelerated by 6.7% compared to 5.9% in Q4 17. On inflation, India's annual CPI rose to a 4-month high in May at 4.87% YoY (Q1 18: 4.60 %) amid rising prices of food and fuels on the back of higher crude oil price<sup>11</sup>. Consequently, the Reserve Bank of India (RBI) responded by raising its benchmark policy rate by 25bps to 6.25%<sup>12</sup>, alluding to upside risks of higher oil prices on inflation and uncertainty in global financial markets.

Over in Brazil, consolidating on its impressive run since exiting the historic recession in Q1 17, Brazil's economy improved – up 20bps to 0.4% YoY in Q1 18, reflecting resilience on the demand and supply side of the economy. On the demand side, the growth emanated from private consumption (+0.5% YoY), private capital outlay (+0.6% YoY) and exports (+1.3% YoY). Similarly, the supply side strengthened as commerce, public administration, real estate, mining and agriculture expanded over Q1 18. However, in Q2 18, PMI plunged from a 2018 high of 53.4pts in March to 49.8pts in June 2018 which guides to slowdown in economic activities over the period. This followed a two weeks trucker's strike which plagued major sectors of the economy, as private truck drivers protested over hike in energy<sup>13</sup> prices, which cascaded to higher prices and pushed inflation to a 15-month high in June (4.39%). In addition, the currency depreciated (12% YTD), on the back of capital flight ahead of the presidential elections in Q4 18. Consequently, the apex bank (*Banco de Brasil*) retained the Selic rate at 6.5% to strike a chord between subpar headline inflation, currency stability and economic growth.

Economic growth remained resilient in Mexico, with Q1 18 growth up 60bps to 1.1% YoY. Bulk of the expansion emanated from both the agriculture (5.1% YoY) and services (3.1% YoY) sectors. On prices, inflation for the month of May printed at 4.51%, 151bps higher than its Central bank's (Banxico) target of 3% for 2018. This is largely due to YTD depreciation of the Peso (-2.3% to 20.11 peso/\$) as rate hikes in US and political concerns, in the run-up to the recently concluded Presidential elections, weighed on the Peso. In response, Banxico's MPC<sup>14</sup> voted unanimously to raise its benchmark interest rate by 25bps to 7.75%.

Over in EM Europe, Russia's economy improved over Q1 18, growing by 1.3% YoY (Q4 17: 0.9%), with expansion emanating majorly from the Manufacturing and Mining sectors which benefited from higher crude oil prices to offset contraction in the ICT, Health care and Transportation sectors. However, leading indicators suggest economic growth momentum slowed in Q2 18 as business conditions deteriorated in May and June with both PMI readings contracting to 49.8pts and 49.5pts respectively after 21 consecutive months of expansion. This was in part fueled by the pass-through

---

<sup>11</sup> For context, India imports over 80% of its fuel consumption

<sup>12</sup> its first hike since 2014

<sup>13</sup> diesel, fuel, and gasoline

<sup>14</sup> monetary policy committee

of western imposed sanctions on Russia. In response, the Bank of Russia<sup>15</sup> cut interest rates further by 50bps to 7.25% at its monetary policy meeting, in a bid to support growth.

Over in Turkey, the economy advanced 7.4% YoY in Q1 2018 (Q4 17: 7.3%). The growth was fueled by a jump in household consumption and fixed investment, a feed-through from higher government spending and a state-backed credit guarantee fund. Meanwhile, the country's currency turned out to be one of the worst performing among the emerging markets with a 23% YTD depreciation in the Lira. The hit on the Lira reflected the global tightened monetary stance, domestic political uncertainties and worries over the independence of the Central Bank of Turkey<sup>16</sup>. As a result, inflation rose to a 6-month high of 15.39% in June (May: 12.15%). Accordingly, the central bank raised its benchmark interest rate by a total of 500 bps in H1 2018 to 17.75% to salvage the Lira.

**Table 2: Economic Highlight**

|                                      | China     | India           | Turkey            | Russia    | Mexico          | Brazil    |
|--------------------------------------|-----------|-----------------|-------------------|-----------|-----------------|-----------|
| <b>Latest Monetary Policy Action</b> | Unchanged | +25bps to 6.25% | +125bps to 17.75% | Unchanged | +25bps to 7.75% | Unchanged |
| <b>Mean Inflation: H2 2017</b>       | 1.70%     | 3.78%           | 11.41%            | 2.98%     | 6.54%           | 2.69%     |
| <b>Jan - May 2018</b>                | 2.0%      | 4.65%           | 11.54%            | 2.32%     | 4.65%           | 4.39%     |
| <b>GDP (Q1 18)</b>                   | 6.80%     | 7.70%           | 7.40%             | 1.30%     | 1.10%           | 0.40%     |
| <b>Avg Unemployment (Q1 18)</b>      | 3.89%     | 5.78%           | 10.51%            | 4.7%      | 3.20%           | 12.70%    |
| <b>Currency (H1 18)</b>              | -1.69%    | -7.20%          | -20.80%           | +8.88%    | +1.27%          | -17.20%   |
| <b>Equity Market (H1 18)</b>         | -13.90%   | 4.00%           | -16.60%           | 8.80%     | -3.43%          | -4.76%    |

***Trade protectionism: A swing in global trade***

President Trump delivered on one of his campaign promises, as the US battled with a sizeable trade deficit of \$568.4 billion in FY 17. Precisely, US imposed tariffs on imports of commodities from major trade partners – China<sup>17</sup>, EU, Canada, and Mexico<sup>18</sup>. With the value of the trade deficit with China (59% of total trade deficit) far exceeding other trade partners, the focus has been on narrowing the gap. Going by available data, the US trade position has largely been in favor of major trade partners, with the size getting bigger as consumption pickups in the US. Precisely, in 2017, total imports to US from China was valued at \$523 billion, relative to exports to China valued at \$188 billion, thus creating balance in favor of China to the tune of \$335 billion. Accordingly, the US imposed 25% and 10% tariffs on steel and aluminum imports from China with a total value estimated at \$34 billion

<sup>15</sup> Central Bank of the Russian Federation

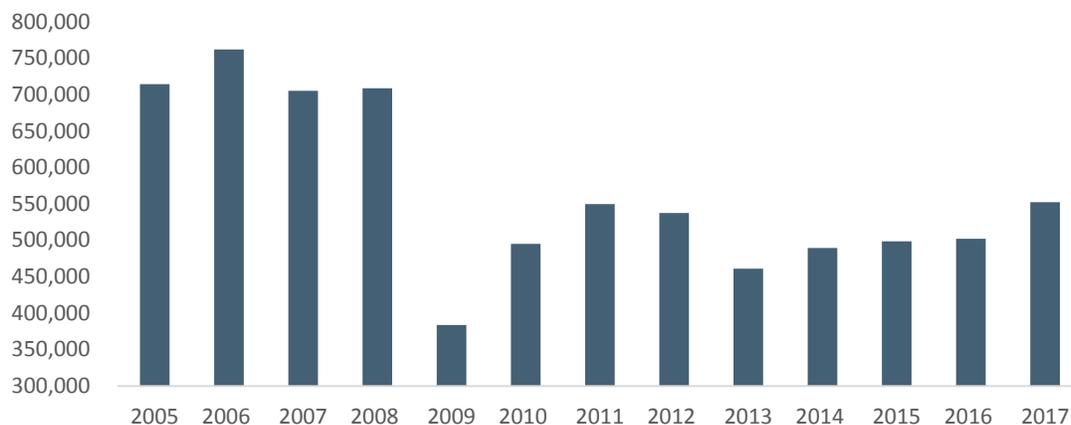
<sup>16</sup> President Erdogan has consistently opposed the hiking of rates by the CBRT, preferring lower rates to boost the economy.

<sup>17</sup> China accounts for 26% of total US imports

<sup>18</sup> Tariffs on EU, Canada and Mexico is yet to take effect.

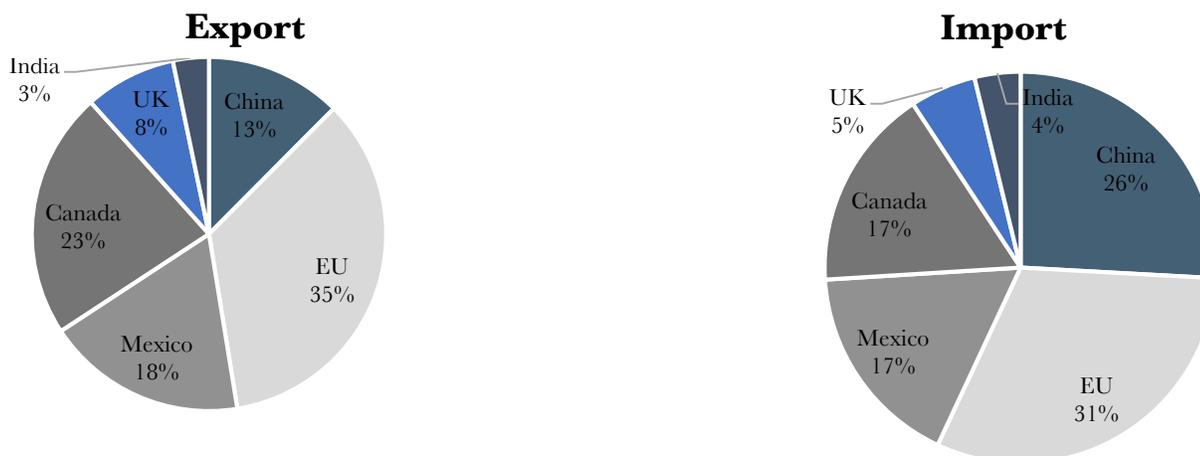
which commenced since Friday 6th July 2018. In a move further escalating the trade war, the Chinese government retaliated with a tariff of commensurate worth on imports from US. While a higher tariff would jolt the price level in the US, it is likely to have far more telling impact on export demand for Chinese goods as demand shift to regions with far more cheaper substitutes. However, when the tariff on EU, Mexico and Canada takes effect, this would put the US at the losing end.

**Figure 3: US goods and services deficit (\$ million)**



Source: BEA, ARM Research

**Figure 4: US major trade partners in 2017**



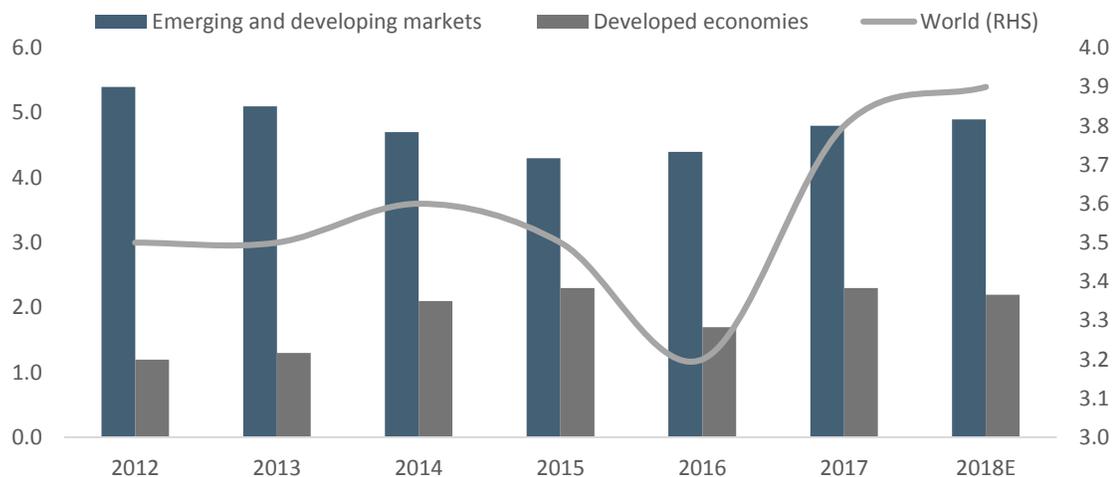
Source: BEA, ARM Research

***Supportive global monetary policy to consolidate growth over 2018***

For the rest of the year, we are more optimistic on growth across advanced and emerging economies, reflecting improvement in consumer and business sentiment, supportive global monetary policy stance and fiscal stimulus. Consequently, global economy is now forecast to increase by 3.9% YoY, according to IMF. That said, the major risk to global growth over 2018 and 2019 remains the ongoing trade protectionism. However, we believe the impact would be a switch in trade from one

region to another, without any major impact on overall global growth. Specifically, in advanced economies, growth is projected to peak at 2.5% YoY in 2018 before decelerating in 2019 to 2.2% YoY, while growth in EMs is projected 10bps higher than 2017 reading at 4.9% YoY with a further uptick over 2019 (5.1% YoY), a reflection of the still elevated commodity prices, improved confidence in the region and a stronger projected growth in the middle east and Latin America over 2019.

**Figure 5: Trend in global growth and projection (%)**



Source: World Bank, ARM Research

### ***Stronger consumption demand to propel growth in DMs***

In US, growth has been revised 60bps higher to 2.9% YoY following stronger data over Q2. Specifically, robust external demand, consumer spending, and positive labor data have reinforced outlook for a stronger growth over 2018. Also, positive data on construction expenditure for May further buttressed the shift in construction spending relative to Q1 18<sup>19</sup>. That said, reflecting the improved wage rate and consequent impact on personal consumption expenditure (+2.3% YoY) in May, headline inflation rose 30bps MoM to 2.8%. Accordingly, the FED at its June meeting signaled a fourth-rate hike during the year with expectation of 25bps hikes in its September and December meetings now more realistic.

Elsewhere, growth in the Euro area has been revised higher by 50bps to 2.4% YoY in 2018 (previous: 1.9%, 2017: 2.3%), reflecting stronger-than-expected domestic and external demand across the euro area and still supportive monetary policy. However, in the months ahead, while the ECB is expected to dial back on its QE program with possible extinction at the end of the year, the Governing Council still plans to keep rates unchanged over Q1 2019.

<sup>19</sup> residential construction GDP declined 2% YoY in Q1 18

In UK, we expect a slight slowdown in economic activities over 2018 as consumer spending and business investment are expected to remain weak due to Brexit uncertainties. Consequently, IMF forecasts a slowdown in economic growth to 1.6% in 2018 (FY 2017: 1.8%). Nonetheless, with the expectation of a rise in wages, which points to further inflationary pressures, we perceive the BOE would raise its policy rates before the end of the year. On the political front, having signed the EU withdrawal bill, which repeals the 1972 European communities Act, the concern remains what would be the terms of future relationship between the UK and EU. Japan economy is projected to moderate to 1.2% YoY in 2018 owing to the duo of slower domestic consumption and the impact of the on-going trade dispute between US and China which creates a cloud around the scope of external trade. Accordingly, the Bank of Japan is expected to sustain its accommodative policy.

### ***Brighter days ahead for EMs; but risks abound***

EMs outlook appears favorable over the rest of the year with IMF forecasting a 10bps YoY expansion in economic growth to 4.9% in 2018. This expectation is largely hinged on upbeat macroeconomic outlook in Emerging Asia and Europe which would more than offset possible shocks from Latin America and other Emerging economies. However, while tighter financial conditions in the US is expected to have spillover effects on EM economies, the still elevated commodity prices would more than neuter its effect on growth.

In China, the pace of output expansion is expected to decelerate to 6.6% (6.9% in 2017) as the government places tougher limits on industrial pollution, as well as regulatory crackdown on riskier lending practices which has pushed up borrowing costs and crackdown on local government spending. In addition, a potential trade war between US and China could pose a great risk to China's growth. In India, the economy is expected to grow 7.4% in 2018 fiscal year<sup>20</sup> (2017: 7.1%) on the back of strong private consumption as well as fading transitory effects of its demonetization as well as implementation of the national goods and services tax.

Elsewhere, US decision to shield Brazil from its steel and aluminum tariffs provides boost to the economy. However, we see risk springing from rising political uncertainty, as President Michel Temer scrapped his intention to seek for re-election. Over in Mexico, US tariff slam of 25% and 10% on Steel and aluminum respectively poses threat to the country's trade position over the near term. More so, the imposition of US tariff on Mexico and Canada is a pointer to likely fallout of the NAFTA negotiations between member nations. If this plays out, this could lead to confidence shock on Mexico's economy and drive short term market volatility as Mexico is heavily dependent on the US with over 75% of its exports sold to American consumers. In Turkey, growth is expected to moderate to 4.4% in 2018 as government fiscal stimulus begins to fade off following President Erdogan win in the June snap election which was supposed to hold in November 2019.

---

<sup>20</sup> April - May

## ARM Securities Contact

---

---

|                               |                  |   |
|-------------------------------|------------------|---|
| Research                      | 234 (1) 2701653  | <a href="mailto:research@armsecurities.com.ng"><u>research@armsecurities.com.ng</u></a>               |
| Institutional Sales & Trading | 234 (1) 448 8833 | <a href="mailto:trading@armsecurities.com.ng"><u>trading@armsecurities.com.ng</u></a>                 |
| Customer Service              | 234 (1) 4488282  | <a href="mailto:customerservice@armsecurities.com.ng"><u>customerservice@armsecurities.com.ng</u></a> |

Copyright © 2018 Asset & Resource Management Company Limited (“ARM”).

All rights reserved. Unauthorized use, reproduction, distribution, or disclosure of this document is strictly prohibited.

This material has been issued by Asset & Resource Management Company Limited (“ARM”), a Company regulated by the Nigerian Securities and Exchange Commission. The analyst(s) primarily responsible for preparing this research report, in whole or in part, certifies that with respect to each security or issuer covered; all of the views expressed accurately reflect his/her personal views about the subject securities and issuers and no part of his/her compensation was, is, or will be, directly or indirectly, related to the inclusion of specific recommendations or views in the report. This research report is based on information from sources that ARM, and its analysts believe to be reliable. Neither ARM nor any of its research analysts, nor any member of the ARM Group, gives any representation or warranty, express or implied, or undertaking of any kind or assumes responsibility or liability of any kind with respect to the accuracy or completeness of the information set out in this report or any third party’s use (or the results of such use) of such information. This report is provided solely for informational purposes and is not to be construed as providing advice, recommendations, or endorsements of any kind whatsoever. The investments and strategies discussed here may not be suitable for all investors; counsel of investment advisor should be obtained with regard to such investments and or strategies. This research report is not a replacement for advice from an accountant, lawyer, personal finance advisor or other category of investment advisor. The investments discussed in this report may oscillate in price or value. Opinions and information provided are made as of the date of the report issue and are subject to change without notice. This research report is not intended as an offer or solicitation for the purchase or sale of any financial instrument. Reference herein to any specific security or financial instrument does not necessarily constitute or imply its endorsement or recommendation by ARM, its directors, officers, employees, or designated agents. Members of ARM may act as broker, advisor, or lender, or make a market in any investments or issuers referenced in this report. Further information on any of the securities discussed herein may be obtained upon request to ARM. By accepting this document, you agree to be bound by the foregoing limitations.

