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Global Macro Briefing

Whither Wages?

As DM inflation is set to rise, the pass-through into wage dynamics will become a focus for financial markets and central bankers. Thus far, wage dynamics have been subdued for cyclical and structural reasons. A recent pick-up still leaves wage inflation below par.

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DM economies operating at full employment: On our estimates, the DM output gap has now closed and is inching into positive territory. Despite unemployment making new cyclical lows and reported labour shortages rising to new highs, our DM wage tracker only points to modest increases in wage momentum.

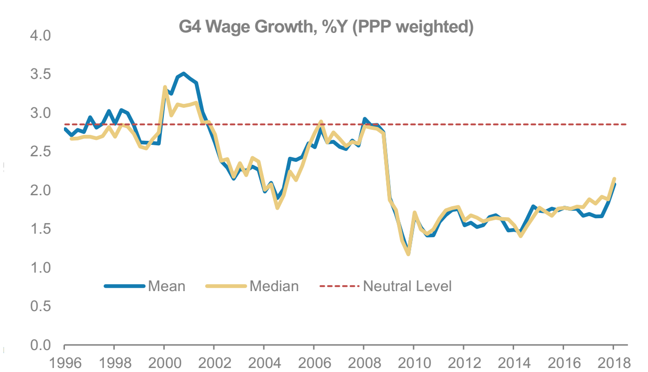
Modest wage inflation below the neutral level: Wage inflation remains below the neutral level – defined by labour productivity growth and central banks' inflation objectives. Above this level, a cost push could hit profit margins or start a price-wage spiral.

Phillips curve hints at limited cyclical pressures: While unemployment has fallen materially below its equilibrium or NAIRU level in a number of DM countries, there are few signs to date that the Phillips curve is starting to steepen. Pay rises remain below historical norms.

Wider pool of labour still available: Broader metrics of labour market slack focusing on underemployment instead of just unemployment are pointing to a considerable share of workers across DM that would like to work longer hours than they currently do.

Structural factors weighing on wage inflation: Several secular trends should keep wage inflation in check, including intense global competition, faster technological change, a shift towards temporary and part-time work and a rise in services and/or female employment.

Exhibit 1: DM wage growth starting to pick up but still staying below the neutral level



Note: The most recent data point is based on partial monthly data to the extent that they are available.
Source: National sources, IMF, Morgan Stanley Research

Exhibit 2: Morgan Stanley forecasts at a glance

	2017E	2018E		2019E	
	MS	MS	Cons.	MS	Cons.
GLOBAL	**3.7**	**3.9**	**3.9**	**3.8**	**3.8**
G10	**2.2**	**2.2**	**2.4**	**1.9**	**2.0**
US	2.3	2.6	2.8	2.1	2.4
Euro Area	2.5	2.1	2.4	1.9	2.0
Japan	1.6	1.3	1.3	1.5	1.0
UK	1.7	1.1	1.5	0.8	1.5
EM	**4.7**	**5.0**	**4.9**	**5.0**	**4.9**
China	6.9	6.5	6.5	6.3	6.2
India	6.3	7.5	7.3	7.7	7.4
Brazil	0.7	3.1	2.6	3.4	2.7
Russia	1.5	2.3	1.8	1.8	1.8
MW Global*	**3.2**	**3.3**	**3.3**	**3.1**	**3.1**

Source: Morgan Stanley Research forecasts; *Refers to global GDP weighted by long-term market exchange rates instead of PPP weights, given for comparison.

Key Macro Risk Events

THURSDAY, MAR 22 - GER IFO Business Climate, EUR PMI Composite, GBP BoE Rates Decision, JPY CPI
FRIDAY, MAR 23 - USD Durable Goods Orders, EUR EU Council Meeting

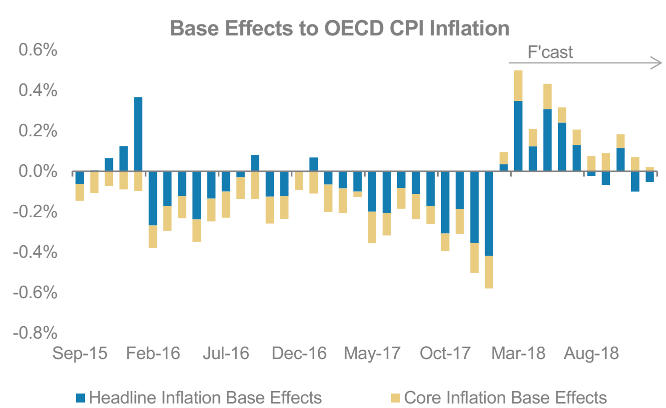
What's Inside

Whither wages?

A key characteristic of the current recovery has been the muted wage pressures: Even in countries that are arguably at or beyond full employment, wage inflation has stayed subdued. There are a number of reasons for what seems to be a very flat Phillips curve at the present juncture (see Global Economics: From Deflation Scare to Reflation Run, June 22, 2015). But as DM economies continue to grow at an above-trend rate, capacity utilisation rates push beyond their normal levels and unemployment falls below the equilibrium level of jobseekers, many market economists expect and most central banks actually hope that wage inflation will start to pick up. Our new DM wage tracker suggests some pick-up in the pace of pay increases in early 2018 based on the partial data available thus far.

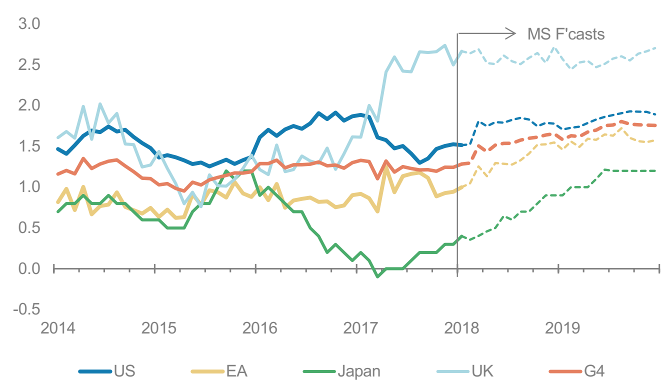
Consumer price inflation is set to rise in the coming months: It is pretty clear that headline inflation is set to rise in the coming months due to the rebound in oil prices. The less volatile core inflation is also going to rise in part due to a closing output gap, which at least reduces the downward pressure on prices. In addition, the base effects created by last year's downside inflation surprises will push core inflation rates higher across DM. Due to these base effects, inflation dynamics will likely exaggerate the underlying upward trend in core prices in the remainder of this year. On our forecasts, it will take until year-end before inflation starts to move sideways again.

Exhibit 3: Base effects likely to push inflation higher soon



Source: OECD, Morgan Stanley Research forecasts

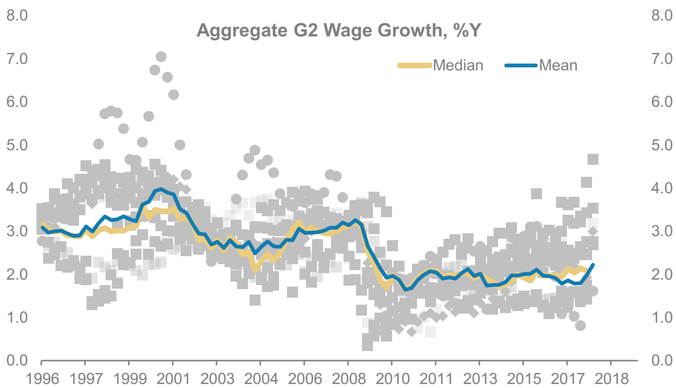
Exhibit 4: Temporary rise in core inflation until year-end



Source: National sources, IMF, Morgan Stanley Research forecasts

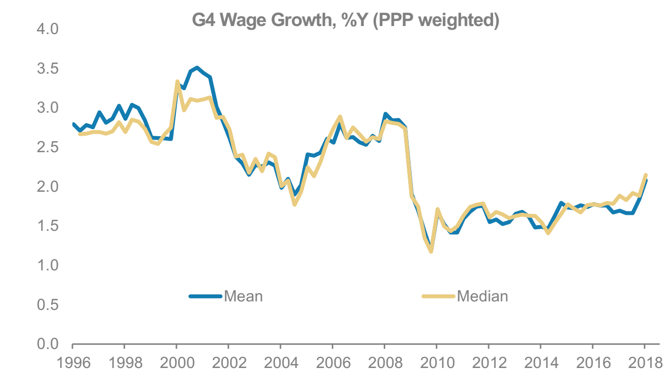
On our forecasts, G3 inflation will settle near and probably below central bank targets in 2019: Whether this is too benign a view and whether instead we should be bracing for inflation overshoots will strongly depend on wage inflation and profit margins, i.e., the pricing power of workers and companies. The pass-through of the higher consumer price inflation into wage increases will determine whether this year's inflation spurt has legs or whether it turns out to be a one of normalisation. On balance, we forecast a modest uptick in pay, sufficient for central banks to maintain near-target inflation.

Exhibit 5: While wage metrics show some decent dispersion...



Source: National sources, IMF, Morgan Stanley Research

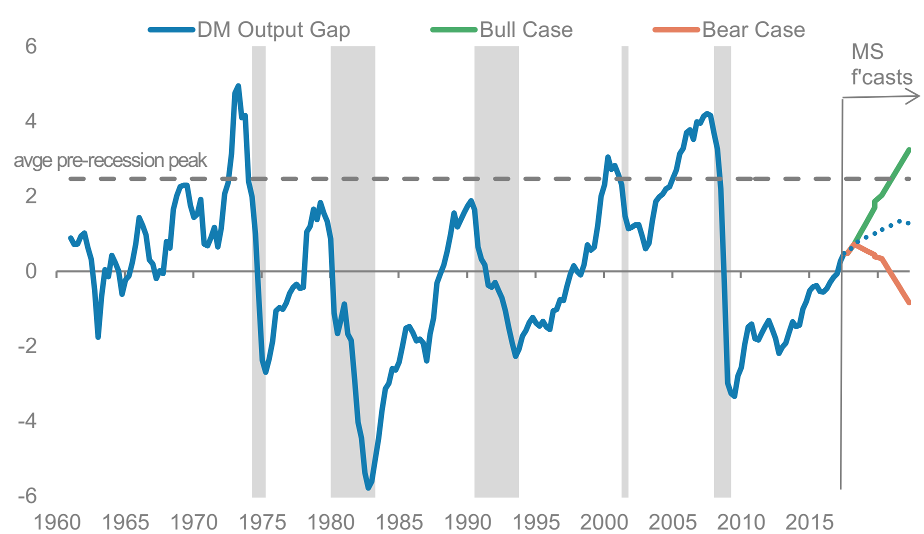
Exhibit 6: ...DM wage growth is starting to show an uptrend



Source: National sources, IMF, Morgan Stanley Research

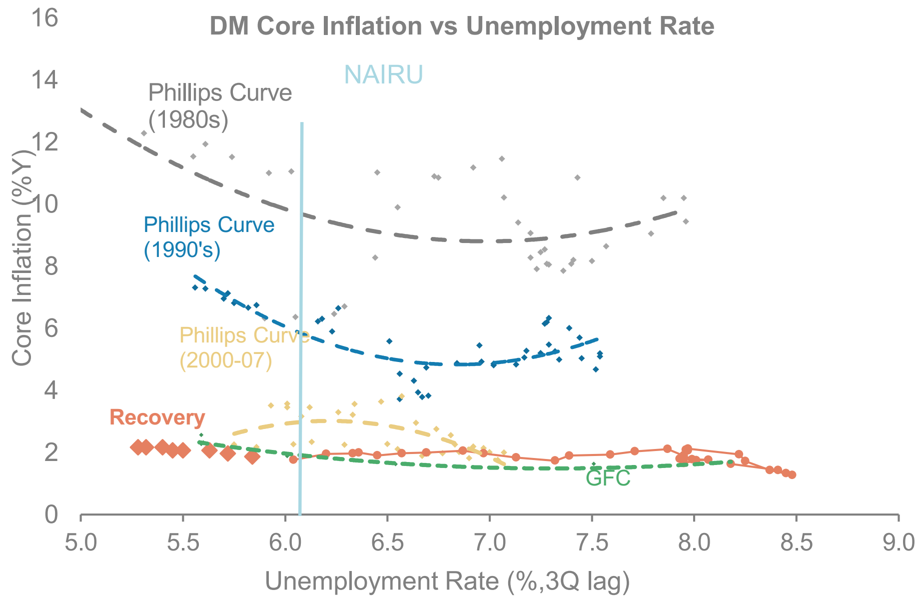
The output gap has moved into positive territory and is likely to climb further into positive territory, pointing to rising pressures on capacity utilisation. Equally, the standard harmonised unemployment rate has dropped below its full employment levels in many major DM economies and looks set to fall further over the forecast horizon. Hence, the Phillips curve, which summarises the relationship between the degree of slack in the economy or the labour market versus either wage inflation or consumer price inflation, could start to re-steepen. Thus far, however, the re-steepening of the Phillips curve has remained elusive and wage increases remain below their cyclical norms.

Exhibit 7: DM output gap inching into positive territory



Source: OECD, Morgan Stanley Research forecasts; Note: Shaded areas denote past global recessions.

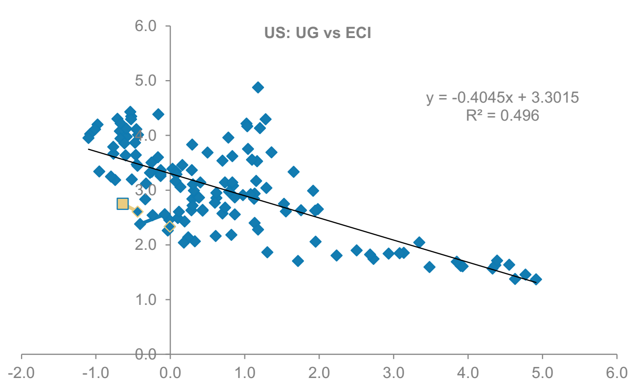
Exhibit 8: No sign of a steeper Phillips curve thus far



Source: OECD, Morgan Stanley Research

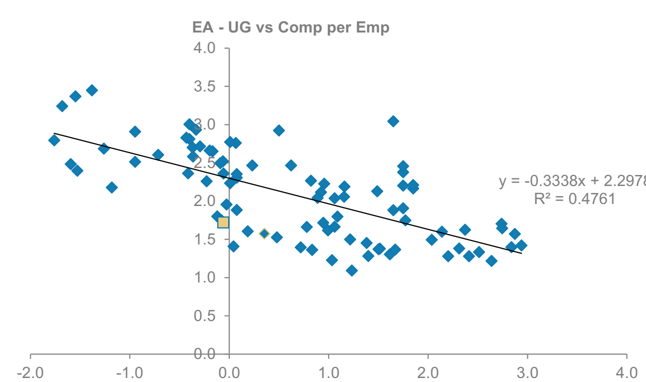
If and when wage inflation starts to rise, it is important to bear in mind that **wage inflation potentially only becomes a concern if wages start to rise faster than the threshold set by trend labour productivity growth and central bank inflation objectives.** Only once the pace of pay rises consistently surpasses this level could wage inflation start increasing producer costs, thus setting into motion a price-wage spiral, provided companies have sufficient pricing power (see European Equity Strategy: Inflation set to rise - who has pricing power? March 21, 2018). In the absence of sufficient pricing power, say in the face of strong global competition, the higher wage inflation would start to compress profit margins instead. For now, however, wage inflation in the US and the euro area remains below the levels that the historical relationship between wage pressures and labour market slack would suggest. What's more, the pace remains well below the bar set by the neutral level of pay increases.

Exhibit 9: US wage inflation still below what the unemployment gap implies



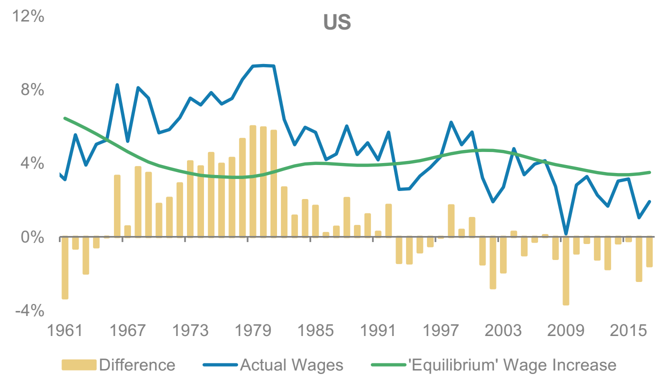
Source: OECD, BLS, Morgan Stanley Research

Exhibit 10: EA wage inflation also falling short of what the unemployment gap implies



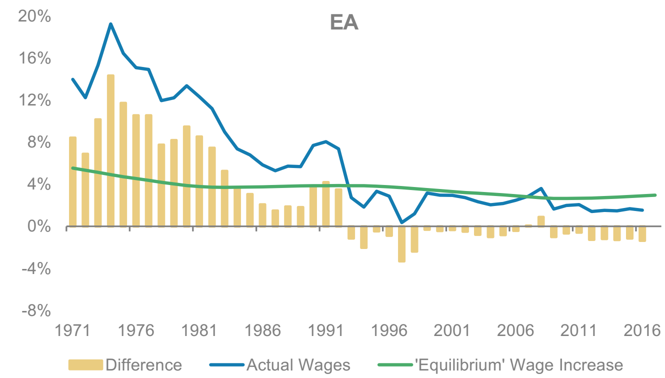
Source: OECD, Eurostat, Morgan Stanley Research

Exhibit 11: US actual wage inflation vs. cost-neutral level



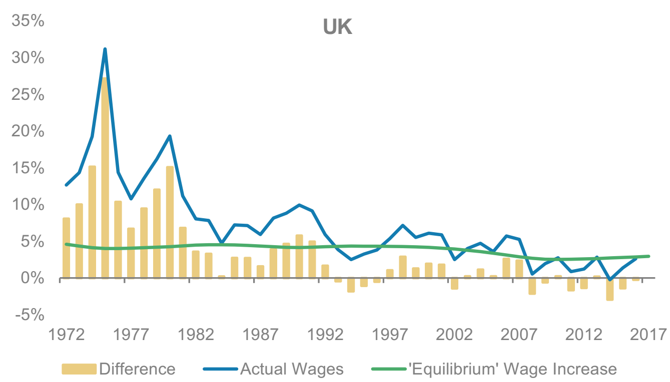
Source: OECD, Morgan Stanley Research estimates

Exhibit 12: EA actual wage inflation vs. cost-neutral level



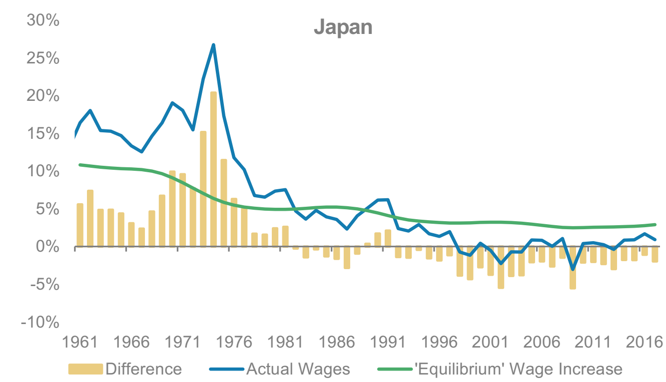
Source: OECD, Morgan Stanley Research estimates

Exhibit 13: UK actual wage inflation vs. cost-neutral level



Source: OECD, Morgan Stanley Research estimates

Exhibit 14: JP actual wage inflation vs. cost-neutral level

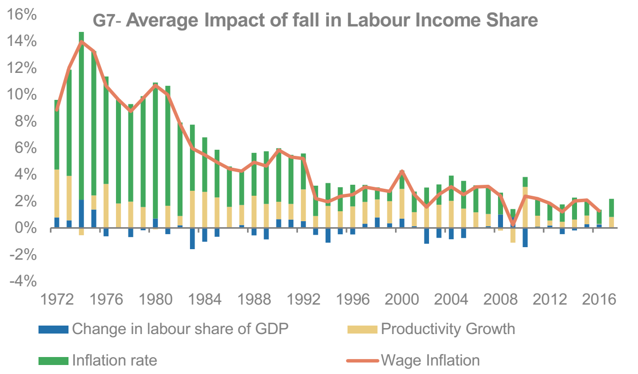


Source: OECD, Morgan Stanley Research estimates

Except for the UK, wage inflation is still falling short of the neutral non-inflationary level of wage inflation: We would estimate this neutral or equilibrium level to lie between 3.25% and 3.75% in the US, between 2.75% and 3.25% in the euro area, between 2.5% and 3.0% in Japan and between 2.75% and 3.25% in the UK. Looking at our DM wage tracker, we see most of the DM wage dynamics being below these threshold levels (Exhibit 15).

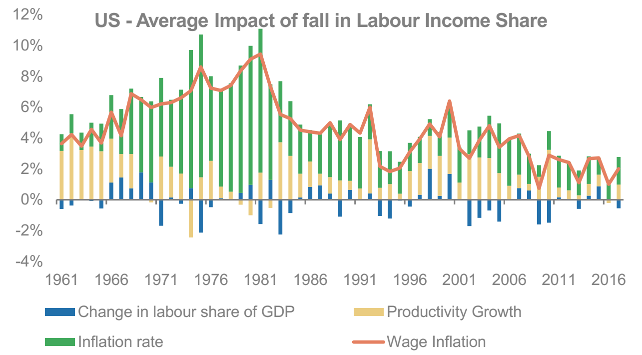
Breakdown of wage drivers points to declining labour share in national income as a key factor: In the context of the national income accounts, wages that are consistently expanding more slowly than the sum of labour productivity growth and the inflation rate will cause the labour income share to fall and the profit share to rise. If such a shortfall persists over an extended period of time, we are left with a structural shift in the income distribution away from wage income towards corporate profits. This is very much what we have seen in the last two decades. Such a shift in income shares will often be driven by structural factors such as globalisation, technology or scale economies. We find that a systematic shift in the income distribution over the last decade has shaved about 0.1pp off DM wage inflation. The impact was more pronounced in the US than it was in Germany or Japan.

Exhibit 15: DM wage dynamics dented by labour income share



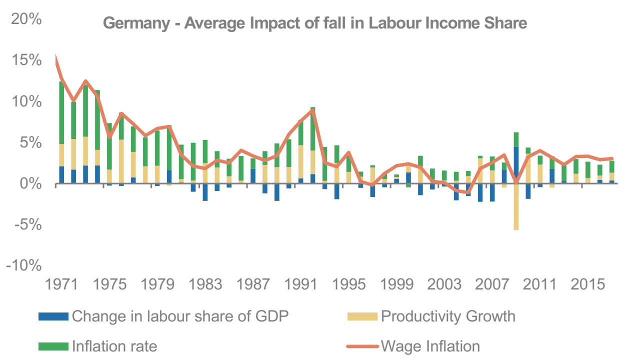
Source: OECD, ONS, StatCan, EC, Bundesbank

Exhibit 16: US rise in profit share reduced wage inflation by 0.3pp



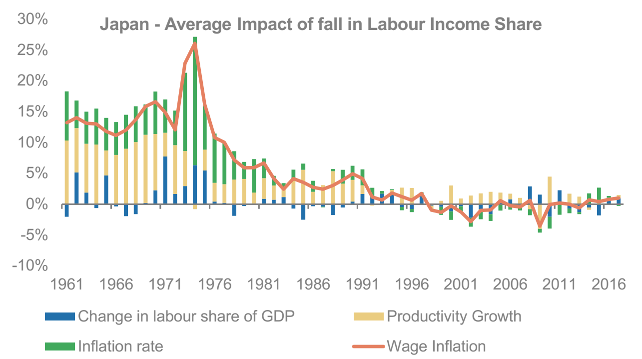
Source: OECD

Exhibit 17: GER fall in labour share reduced wage inflation by 0.1pp



Source: OECD, EC, Bundesbank

Exhibit 18: JP wage inflation dragged down by most factors



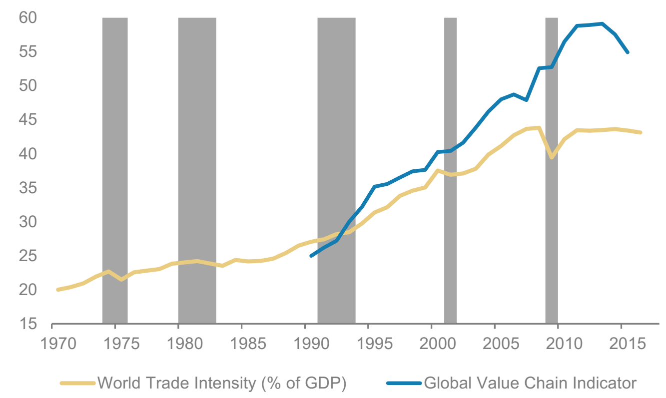
Source: OECD

What's more, a number of secular trends will likely keep wage inflation in check: These secular macroeconomic trends include:

- A high level of **global competition** via a deep economic integration through international trade and cross-border value chains;
- A faster pace of **technological change,** especially through automation, robotisation and digitalisation, facilitated through a pick-up in global capex;
- A shift in the composition of employment towards more **temporary and part-time work,** a shift towards lower-paid **service jobs** and a rise in **female labour market participation;**
- In addition, **broader metrics of underemployment** are still pointing to a considerable share of workers that would like to work longer hours than they are currently offered.

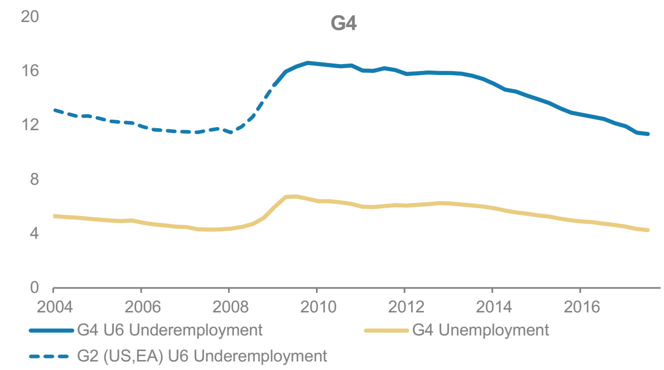
All in all, we therefore deem an all-out overheating for the DM labour market unlikely at the present juncture: Instead, we would expect wage inflation to inch back towards the pace of pay increases that would be broadly in line with inflation-neutral wage increases. The simple panel regression we run to quantify the impact of the structural factors on wage inflation in the G7 countries confirmed our expectations of these factors weighing on wage growth across countries (see the Appendix for details).

Exhibit 19: Global competition remains intense



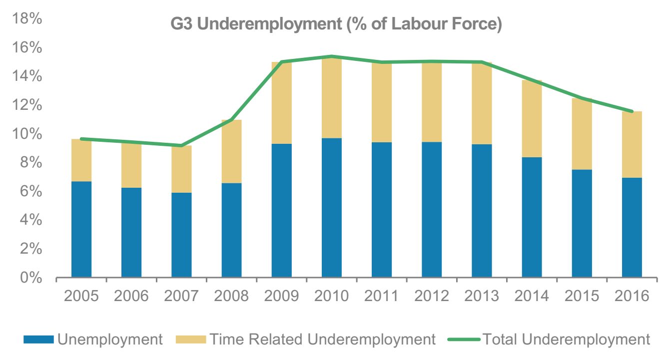
Source: OECD, Morgan Stanley Research; Note: Trade intensity is the sum of exports and imports in GDP. GVC reflects the ratio of intermediate goods imports to final domestic demand.

Exhibit 20: Considerable degree of underemployment across DM…



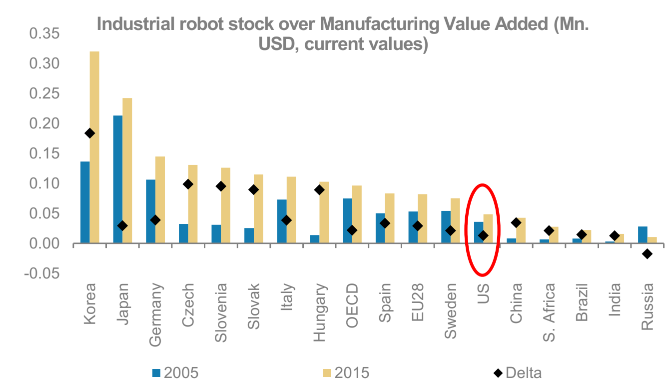
Source: National data sources

Exhibit 21: …due to workers keen to work longer hours



Source: ILO

Exhibit 22: Robots are ready to get to work



Source: OECD calculations based on International Federation of Robotics data, and the World Bank, World Development Indicators Database, September 2017, Morgan Stanley Research

Appendix: Identifying structural determinants of DM wage inflation

Setup

In an attempt to identify the impact of the structural factors that have been driving wage growth in DM over recent decades, we ran a **panel regression for the US, Japan, Germany, France, the UK, Italy and Canada, using sample data between 1986 and 2017.** This extended time span improves the robustness of our inference, as the data set provides nearly 400 observations. The coefficients in Exhibit 23 can be interpreted as the marginal effect of multiple explanatory variables on wage growth, controlling for country-specific idiosyncrasies. The existence of such idiosyncrasies has been confirmed by statistical tests commonly applied in the academic literature.

Methodology

Using panel data allows us to **analyse wage data across two dimensions – over time and across countries** – while controlling for unobserved heterogeneity ('country fixed effects') across countries. This way we attempt to explain wage inflation (the dependent variable) as a function of the state of the labour market, which tends to change materially over time in sync with the business cycle, and a series of structural factors that will materially differ between the countries and that are also likely to impact wage dynamics.

These structural factors represented by a set of explanatory variables include:

- Exposure to competition via international trade
- Extent of involuntary part-time employment
- Equipment provided for each worker (i.e., capital deepening)
- Role of the lower-paying services industry
- Share of female labour market participation

Results

As we expected, the **cyclical variables – i.e., the unemployment rate and the underemployment rate – have a negative marginal effect on wage inflation** and were statistically significant. In other words, a rise in the unemployment rate and an increase in the share of involuntary part-time employment weigh on wage growth, considering short time lags of one and two quarters, respectively.

Equally, **increased global competition, proxied by the share of exports and imports in GDP, has a negative impact on wage growth in our model,** with a lag of about a year.

Providing workers with better equipment and more modern technology (proxied by capital-deepening in our models) **leads to higher wage growth.** We include time lags here as well because some benefits of higher productivity growth only accrue over time.

A shift towards the services sector, independent of whether it is proxied by the share in value added or the share in employment, **tends to lower wage inflation.** This likely reflects lower average wages in services compared to the manufacturing sector.

Equally, **a rising share of female labour participation weighs on wage inflation:** This will likely be a reflection of the well-documented gender pay gap. At the same time, we observe a high correlation between service sector employment and female employment. Hence. controlling for both female employment and the services' share in the same model would lead to statistical issues related to multi-collinearity.

Exhibit 23: Detailed panel regression results: G7 countries, 1986-2017

Panel Regression Estimates	Model 1	Model 2
Constant	25.862***	6.477***
Share of Female Labour Force (lagged four quarters)	-0.417***	-
Change in Share of Services in Total Employment (lagged 4 quarters)	-	-0.164
Globalisation (lagged 4 quarters)	-0.064***	-0.059***
Change in Share of Involuntary Part Time Workers (lagged 1 quarter)	-0.276***	-0.294***
Change in Share of Services in GDP/GVA (lagged 4 quarters)	-0.284***	-0.217**
Capital Deepening (lagged 8 quarters)	0.086*	0.17***
Change in Unemployment Rate (lagged 2 quarters)	-0.289***	-0.375***
Country Fixed Effects	Yes	Yes
Year Fixed Effects	No	No
Number of observations	390	390
Cross sections included	7	7
R-square	0.499	0.506

Source: Morgan Stanley Research
Wage inflation (dependent variable): Wage rate, %Y change. Globalisation: Proxied by imports and exports as a % of GDP.
Female labour force share: Female labour force as a % of total labour force. Share of services in total output. Gross value added services as a % total gross value added. Involuntary part-time employment: Involuntary part-time workers as a % of labour force.
Technology: Proxied by data on capital deepening (interpolated on a quarterly basis). Share of service sector workers. Employment in services as a % of total employees. Unemployment rate. Note : The change in unemployment rate, female labour share, share of services in GDP and employment are relative to four quarters ago. Estimates with ***,**, * are significant at 1% , 5% and 10%, respectively

Key forecast profile

Exhibit 24: GDP growth, CPI inflation, monetary policy rates

	Quarterly														
	2017				2018				2019				2017E	2018E	2019E
Real GDP	**1Q**	**2Q**	**3Q**	**4QE**	**1QE**	**2QE**	**3QE**	**4QE**	**1QE**	**2QE**	**3QE**	**4QE**			
Global (%Q, SAAR)	**3.8**	**4.3**	**4.0**	**3.8**	**3.7**	**3.9**	**3.9**	**3.9**	**3.7**	**3.8**	**3.8**	**3.5**	**3.7**	**3.9**	**3.8**
G10 (%Q, SAAR)	**1.8**	**2.9**	**2.8**	**2.3**	**1.7**	**2.0**	**1.9**	**1.9**	**2.0**	**2.1**	**1.8**	**1.3**	**2.2**	**2.2**	**1.9**
United States	1.2	3.1	3.2	2.6	1.7*	2.4	2.3	2.4	2.2	2.0	1.9	1.7	2.3	2.6	2.1
Euro Area	2.5	3.0	2.8	2.4	2.6*	1.9	1.8	1.8	2.1	2.1	1.9	1.9	2.5	2.1	1.9
Japan	1.9	2.4	2.4	1.6	-0.4	1.5	1.4	1.6	2.2	2.1	1.5	-2.1	1.6	1.3	1.5
UK	0.9	1.1	2.0	1.6	1.0	1.0	0.6	-0.2	-0.2	2.2	1.6	1.8	1.7	1.1	0.8
EM (YoY)	**4.4**	**4.6**	**4.9**	**4.9**	**5.0**	**5.0**	**5.0**	**5.1**	**5.1**	**5.0**	**5.0**	**5.1**	**4.7**	**5.0**	**5.0**
China (YoY)	6.9	6.9	6.8	6.8	6.6	6.4	6.5	6.5	6.4	6.4	6.3	6.2	6.9	6.5	6.3
India (YoY)	6.1	5.7	6.3	7.2	7.5	7.6	7.4	7.4	7.7	7.6	7.7	7.8	6.3	7.5	7.7
Brazil (YoY)	0.0	0.4	1.9	3.1	2.6	3.3	3.5	3.9	3.7	3.2	3.3	3.2	0.7	3.1	3.4
Russia (YoY)	0.5	2.5	1.8	1.3	2.5	2.0	2.6	2.3	1.8	1.8	1.8	1.9	1.5	2.3	1.8
Consumer Price Inflation (YoY)															
Global*	**2.7**	**2.4**	**2.4**	**2.6**	**2.8**	**3.0**	**3.0**	**2.9**	**2.8**	**2.8**	**2.8**	**2.8**	**2.5**	**2.9**	**2.8**
G10	**2.0**	**1.6**	**1.7**	**1.7**	**1.8**	**2.0**	**2.1**	**1.8**	**1.6**	**1.7**	**1.7**	**1.7**	**1.8**	**1.9**	**1.7**
United States	2.6	1.9	2.0	2.1	2.2	2.4	2.3	1.8	1.6	1.8	1.9	1.9	2.1	2.2	1.8
Euro Area	1.8	1.5	1.4	1.4	1.3	1.8	2.0	1.9	1.6	1.6	1.6	1.6	1.5	1.8	1.6
Japan	0.3	0.4	0.6	0.6	1.3	1.2	1.5	1.3	0.7	0.9	0.8	0.7	0.5	1.3	0.8
UK	2.1	2.7	2.8	3.0	2.8	2.7	2.6	2.3	2.1	2.1	2.1	2.3	2.7	2.6	2.2
EM*	**3.2**	**2.9**	**3.0**	**3.3**	**3.4**	**3.7**	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**3.6**	**3.1**	**3.6**	**3.6**
China	1.4	1.4	1.6	1.8	2.5	2.7	2.8	2.8	2.7	2.7	2.8	2.8	1.6	2.7	2.8
India	3.6	2.2	3.0	4.3	4.3	5.2	4.3	4.4	4.5	4.2	4.4	4.4	3.3	4.5	4.4
Brazil	4.9	3.6	2.6	2.8	2.9	3.5	3.7	3.8	4.4	4.3	4.3	4.3	3.5	3.8	4.2
Russia	4.6	4.2	3.4	2.6	2.4	2.5	3.1	3.6	4.1	4.1	4.1	4.1	3.7	3.0	4.1
Core Inflation (YoY)															
Global	**2.2**	**2.1**	**2.0**	**2.0**	**2.1**	**2.3**	**2.4**	**2.5**	**2.5**	**2.5**	**2.6**	**2.6**	**2.1**	**2.3**	**2.6**
G4	**1.2**	**1.3**	**1.2**	**1.2**	**1.4**	**1.5**	**1.6**	**1.6**	**1.6**	**1.7**	**1.8**	**1.8**	**1.2**	**1.5**	**1.7**
United States^	1.8	1.5	1.4	1.5	1.6	1.8	1.8	1.8	1.7	1.8	1.9	1.9	1.5	1.8	1.8
Euro Area	0.8	1.1	1.2	0.9	1.1	1.2	1.3	1.5	1.5	1.6	1.7	1.6	1.0	1.3	1.6
Japan	0.1	0.0	0.2	0.3	0.4	0.5	0.7	0.9	1.0	1.1	1.2	1.2	0.1	0.6	1.1
UK	1.8	2.5	2.6	2.6	2.6	2.4	2.4	2.5	2.5	2.5	2.6	2.6	2.4	2.5	2.6
BRIC	**3.2**	**2.9**	**2.9**	**2.9**	**2.9**	**3.2**	**3.2**	**3.3**	**3.4**	**3.4**	**3.4**	**3.3**	**3.0**	**3.2**	**3.4**
China	2.0	2.1	2.2	2.3	2.3	2.4	2.5	2.7	2.6	2.6	2.7	2.7	2.2	2.5	2.6
India	4.9	4.2	4.3	4.7	4.7	5.1	4.7	4.5	4.7	4.7	4.7	4.3	4.5	4.7	4.6
Brazil	4.5	3.8	3.1	3.2	3.5	3.9	4.1	4.3	4.3	4.3	4.3	4.3	3.6	3.9	4.3
Russia	5.2	3.9	3.0	2.1	1.9	2.6	3.2	3.8	4.0	3.9	4.1	4.1	3.6	2.8	4.0
Monetary Policy Rate (% p.a.)															
Global	**3.2**	**3.2**	**3.1**	**3.1**	**3.2**	**3.2**	**3.3**	**3.3**	**3.5**	**3.6**	**3.6**	**3.6**	**3.1**	**3.3**	**3.6**
G10	**0.3**	**0.4**	**0.4**	**0.6**	**0.7**	**0.8**	**0.9**	**0.9**	**1.1**	**1.2**	**1.2**	**1.3**	**0.6**	**0.9**	**1.3**
United States	0.875	1.125	1.125	1.375	1.625	1.875	2.125	2.125	2.375	2.625	2.625	2.625	1.375	2.125	2.625
Euro Area	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.40	-0.25	-0.25	-0.25	-0.25	-0.40	-0.40	-0.25
Japan	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
UK	0.25	0.25	0.25	0.50	0.50	0.75	0.75	0.75	0.75	1.00	1.00	1.25	0.50	0.75	1.25
EM	**5.4**	**5.3**	**5.1**	**5.0**	**5.0**	**5.0**	**5.0**	**5.1**	**5.2**	**5.2**	**5.2**	**5.3**	**5.0**	**5.1**	**5.3**
China	4.35	4.35	4.35	4.35	4.35	4.35	4.60	4.60	4.85	4.85	4.85	4.85	4.35	4.60	4.85
India	6.25	6.25	6.00	6.00	6.00	6.00	6.00	6.25	6.25	6.50	6.50	6.75	6.00	6.25	6.75
Brazil	12.25	10.25	8.25	7.00	6.75	6.75	6.75	7.25	8.25	8.50	8.50	8.50	7.00	7.25	8.50
Russia	9.75	9.00	8.50	7.75	7.25	6.75	6.50	6.50	6.50	6.50	6.50	6.50	7.75	6.50	6.50

Note: Global and regional aggregates for GDP growth are GDP-weighted averages, using PPPs. Japan CPI excludes VAT; Japan policy rate is the interest rate on excess reserves; CPI numbers are period averages. Global* and EM* Consumer Price Inflation Aggregates exclude Venezuela and Argentina. **Tracking estimate. ^The US core inflation number is core PCE.
Source: IMF, Morgan Stanley Research forecasts

Key debates in global economics

Our core views on the global economy

The global recovery is likely to gain momentum and breadth in 2018, supported by still accommodative monetary policy and more fiscal stimulus. With major economies at different stages of the business cycle, the risk of the global economy running too hot is limited though.

Growth – solid stride in DM, faster pace in EM: The global recovery is set to continue in 2018 and it is likely to broaden further as EM gains momentum. Maturing business cycles could cause DM growth to slow in 2019, but it should still stay above potential. US and China are late-cycle already, while the euro area and Japan are mid-cycle and EM commodity exporters only early-cycle.

Inflation – moving higher, but not beyond targets: While DM headline inflation is likely moving sideways over the forecast horizon, DM core inflation is likely to pick up in 2018. However, with the exception of the UK, DM inflation is unlikely to move above central bank targets. Meanwhile, EM inflation is set to rise, led by Asia.

Policy – less monetary expansion, more fiscal stimulus: Monetary policy is set to remain expansionary in 2018. Balance sheet reduction and additional rate hikes cause the Federal Reserve to inch beyond neutral, but only in 2019. Fiscal policy is likely to become more expansionary in several key DM economies, particularly the US.

Risks – faster inflation, tighter finances, trade protectionism: The key risk relates to estimating the remaining economic slack correctly and anticipating wage pressures as labour markets reach full employment. Overly rich asset valuations could cause tighter financial conditions. Lastly, a disruption in global trade could undermine the recent rebound in capex and productivity.

Country highlights

US: We forecast GDP growth of 2.6%Y in 2018 and 2.1%Y in 2019, as a fiscal boost supports the macro backdrop in 2018, though its positive impulse should fade somewhat in 2019. Core inflation should rise gradually to just below target as transitory factors that had led to a decline in 2017 fade (prior USD appreciation, price resets of telecom contracts). The Fed will likely hike rates three times in 2018, followed by a lengthy pause before hiking twice more in 2019.

Euro area: The economic recovery has broadened during recent quarters. We expect the euro area to grow by 2.1%Y in 2018 and 1.9%Y in 2019, with support from acceleration in capex and consumption. Our euro area forecast envisages three key shifts: the output gap turns positive, core inflation rises above its long-term average and the ECB ends QE in 4Q18, with the first 15bp depo rate hike to -0.25% in March 2019, with risks that it may happen somewhat later.

Japan: We expect real GDP to rise by 1.3%Y in 2018 and 1.5%Y in 2019, lifted by stronger exports and private capex. We think inflation has bottomed with an improving output gap on the back of a tighter labour market and higher capacity utilisation rates. We expect the BoJ's first adjustment of the long-term rate target in Jan-March 2019 when core-core CPI (ex. fresh food and energy) will likely approach 1%Y.

China: We expect GDP growth to moderate to 6.5%Y in 2018 from 6.9%Y in 2017 amid intensified deleveraging efforts. In particular, closer scrutiny of local government financing could weigh on infrastructure investment, while curbs on consumer credit could affect consumer discretionary spending. That said, we think the risk of over-tightening is low, as policy-makers have undertaken a counter-cyclical approach on the back of strong exports and a robust job market.

Brazil: We expect growth to accelerate from 0.7%Y in 2017 to 3.1%Y in 2018 and 3.4%Y in 2019, driven by consumption and a pick-up in investment growth, despite the drag from political uncertainty. But the sustainability of the recovery is more policy-dependent. Inflation and rates should continue to be low amid a large output gap.

India: High-frequency indicators are showing that economic growth momentum has been sustained at the start of the year. The recovery in end demand should lead to higher utilisation rates which, coupled with improving corporate return expectations, balance sheet fundamentals and a strengthening financial system, should support private capital spending in 2018. Moderate risks to macro stability are emerging due to the wider-than-targeted fiscal deficits, and we expect the RBI to start hiking in 4Q18, with risks tilted to an earlier-than-expected hike.

Russia: We pencil in 2.3%Y GDP growth in 2018, supported by higher oil prices and increases in public sector wages. With average CPI at 3%Y in 2018, we see the CBR cutting interest rates to 6.5% by 3Q18. We are sceptical about government delivery of reforms after the presidential elections and expect growth to moderate to 1.8%Y in 2019.

For our global forecasts, see Global Economics Playbook: Global Capex Cycle: Gaining Strength and Breadth, February 7, 2018.

What's new in the global economy

Despite the recent spike in market volatility and dampening in equity markets, our Morgan Stanley DM Financial Conditions Index (MSDMFCI) currently stands at 0.7 standard deviations (SD's) above its long-term average (LTA), reflecting accommodative financial conditions, driven by stable credit conditions.

Our Morgan Stanley Global Trade Leading Indicator (MSGTLI) for February stayed unchanged at 0.29 as a strong ISM print offset the weaker Ifo Business Expectations. We expect global trade to expand by around 4.9%Y in 1Q18. Going forward, rising trade tensions could become a concern though.

Our MS Global Coincident Indicator (MSGICI) points to growth of 3.5%Y for 1Q18, below our bottom-up country forecasts. Though our MSGIDMCI is slightly above the bottom-up estimate, it still points to slower DM growth of 2.2%Y. Declines witnessed in US and EU retail sales along with a steep fall in Japanese IP contributed to a decline in the DM estimate. Our MSGIEMCI is in line with our bottom-up growth estimate of 5%Y for the EM region.

Key research highlights

Ahya, Chetan

Global Economics and Strategy: Protectionism Risks: What's Next?

Trade frictions are likely to persist, but the strong starting point of global demand, particularly capex, would be an offset. Global growth should remain strong unless we move into a protectionist push scenario with the US imposing broad-based tariffs and trade partners responding commensurately. read more

Zentner, Ellen

US Economics & Rates Strategy: FOMC Preview: A Hike and Hawkish Bias

We expect the Fed to hike its target range by 25bp at its March meeting with a hawkish bias in its projections. While too early to call for four hikes this year, the FOMC moves decisively in that direction. read more

Nell, Jacob

UK Economics and Strategy: Homemade Inflation

Inflation should fall, as FX pass-through fades. But rising domestic pressures lead us to hike our core inflation forecast. We expect steeper breakevens and flatter rates. read more

Bartsch, Elga

European Economics: The Power of QE and Prospects of Policy Normalisation

Despite considerable obstacles, the ECB's QE policy was effective. Not only did it push shadow short rates deep into negative territory, it also stabilised financial conditions at an accommodative level. Policy normalisation needs to allow for renewed stimulus, given the late stage of the cycle. read more

Global risk calendar

Date	Time (Ldn)	Ccy	Event	Ref. Period	MS forecast	Market	Previous
22-Mar	**09:00**	**GER**	**IFO Business Climate**	**Mar**	**114.8**	**114.6**	**115.4**
22-Mar	**09:00**	**EUR**	**PMI Composite**	**Mar P**	**56.6**	**56.8**	**57.1**
22-Mar	09:30	GBP	Retail Sales (MoM)	Feb	0.5%	0.4%	0.1%
22-Mar	N/A	TWD	CBC Rates Decision		1.375%	1.375%	1.375%
22-Mar	N/A	IDR	BI Rates Decision		4.25%	4.25%	4.25%
22-Mar	**12:00**	**GBP**	**BoE Rates Decision**		**0.50%**	**0.5%**	**0.5%**
22-Mar	14:00	USD	Leading Index	Feb	0.7%	0.5%	1%
22-Mar	**23:30**	**JPY**	**CPI (YoY)**	**Feb**	**1.5%**	**1.5%**	**1.4%**
22-23 M	**N/A**	**EUR**	**EU Council Meeting**				
23-Mar	**12:30**	**USD**	**Durable Goods Orders**	**Feb P**	**3.5%**	**1.6%**	**-3.6%**
23-Mar	14:00	USD	New Home Sales	Feb	585k	623k	593k
23-Mar	14:00	USD	New Home Sales (MoM)	Feb	-1.4%	5.1%	-7.8%
26-Mar	07:45	EUR	French GDP (QoQ)	4Q F			0.6%
27-Mar	09:00	EUR	M3 (YoY)	Feb			4.6%
27-Mar	13:00	HUF	NBH Rates Decision		0.90%	0.9%	0.9%
27-Mar	15:00	USD	Consumer Confidence Index	Mar	133.3	130.5	130.8
03/27-04/	N/A	EUR	German Retail Sales (MoM)	Feb			-1%
28-Mar	08:05	THB	BoT Rates Decision		1.50%		1.5%
28-Mar	N/A	ZAR	SARB Rates Decision		6.50%	6.5%	6.75%
28-Mar	13:30	USD	GDP (QoQ)	4Q T		2.5%	2.5%
29-Mar	09:30	GBP	GDP (QoQ)	4Q F			0.4%
29-Mar	12:00	CZK	CNB Rates Decision		0.75%	0.75%	0.75%
29-Mar	13:00	EUR	German CPI (YoY)	Mar P			1.4%
29-Mar	**13:30**	**USD**	**PCE Core (YoY)**	**Feb**	**1.6%**		**1.5%**
29-Mar	13:30	USD	Personal Income	Feb	0.4%	0.4%	0.4%
29-Mar	13:30	USD	Personal Spending	Feb	0.1%	0.2%	0.2%
29-Mar	15:00	USD	Univ. of Michigan Confidence	Mar F		102	102
30-Mar	00:30	JPY	Unemployment rate	Feb			2.4%
30-Mar	00:50	JPY	Industrial Production (MoM)	Feb P			-6.8%

Source: Bloomberg, MS FX Strategy Research. N/A Denotes timing approximate or not confirmed / All times and dates are Ldn time and correct as of the date of publication / For a full list of economic events, see the calendar on the Morgan Stanley Matrix Platform.

Global economic dashboard

US

1. US Economics: Key Data Watch Calendar

2. US Economics & Rates Strategy: FOMC Preview: A Hike and Hawkish Bias

3. US Economics: CPI Inflation: Steady Underlying Momentum

Europe

1. European Economics Weekly: Softer Sentiment, Hawkish Hold

2. ECB Watch: Bye Bye QE Bias

3. UK Economics and Strategy: Homemade Inflation

Japan

1. Japan Economic Calendar: Impressions from Visits to Asian Investors

2. Japan Economics: Real Rates, Releveraging and Capex

3. BoJ Watch: March MPM Review

Asia Pacific

1. Asia/Pacific Weekly Preview: Four Central Banks to Meet, One to Hike Rates

2. Global Macro Forum - Trades for Trade

3. China Economics: Quick Comments on China's Government Restructuring Plan

CEEMEA

1. CEEMEA Compass: A Window of Opportunity (for Some, Not All)

2. Turkey: Moody's Decision Unlikely to Be a Game-Changer

3. CEEMEA Compass: Testing EM, Gauging Strength

Latin America

1. Week Ahead in Latin America: Latin America: The Implications of Protectionism

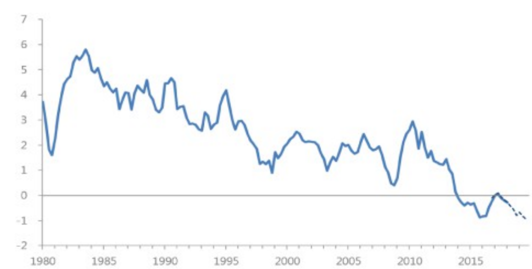
2. Argentina: Blue Paper Revisit II: Watching Risks to the Virtuous Cycle

3. Peru Economics and Strategy: Adding Duration to the Easing Cycle

Exhibit 25: US: We see core PCE inflation rising to 1.8% in 2018, 1.9% in 2019 on a 4Q/4Q basis

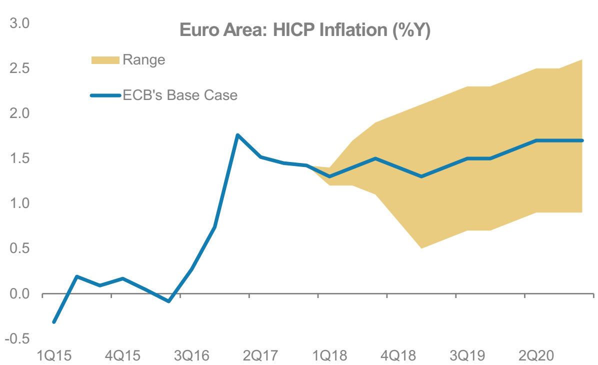
Source: BLS, Morgan Stanley Research forecasts

Exhibit 26: Japan: Expecting real rates to fall further: Long-term real interest rate (10-yr JGB yield - core-core CPI) (%)



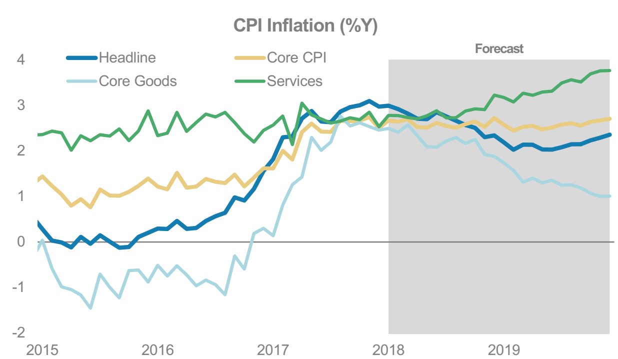
Source: Bloomberg, Ministry of Internal Affairs and Communications, Morgan Stanley Research

Exhibit 27: Euro area: Less but still large variance around base case for headline inflation



Source: Mar-18 ECB staff macroeconomic projections, Morgan Stanley Research

Exhibit 28: UK: Domestic pressures keep core and headline CPI above target, driving MPC hawkishness



Source: ONS, Morgan Stanley Research forecasts

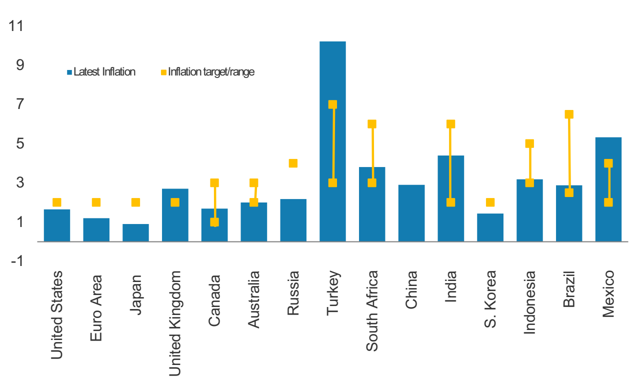
Inflation & central bank monitor

Exhibit 29: Inflation monitor and next policy moves by country

	Inflation target	Latest Month	12M MS Forecast	Next Rate Decision	Current Rate	Market Expects (bp)	MS Expects (bp)	Risks to our call
United States	2.0% PCE Price Index	1.7%	1.5%	02 May	1.625	2.1	0	-
Euro Area	< 2% HICP (u)	1.2%Y	1.7%Y	26 Apr	-0.40	0.9	0	-
Japan	2% CPI (u)	0.9%	1.2%	27 Apr	-0.10	0.1	0	-
United Kingdom	2%	2.7%	2.2%	22 Mar	0.50	0.7	0	Upside risk, but we assume MPC waits for May forecasts
Canada	1-3%	1.7%	2.0%	18 Apr	1.25	6.0	25	-
Norway	2.5% CPI	2.2%	2.0%	03 May	0.50	1.5	0	-
Sweden	2.0% CPI	1.6%	2.4%	26 Apr	-0.50	-0.5	0	-
Australia	2-3% over the cycle	1.9%	2.1%	03 Apr	1.50	0.1	0	-
New Zealand	1-3% over the cycle	1.6%	2.7%	10 May	1.75	0.2	0	-
Russia	4% CPI	2.2%	4.1%	23 Mar	7.50	-	-25	Risk of a deeper 50 bp cut
Poland	2.5% (+/- 1%) CPI	1.4%	2.6%	11 Apr	1.50	-0.5	0	-
Czech Republic	2.0% (+/-1%) CPI	1.8%	2.3%	29 Mar	0.75	-	0	-
Hungary	3.0% CPI +/- 1%	1.9%	3.1%	27 Mar	0.90	0.2	0	-
Romania	2.5 (+/-1%) CPI	3.8%	2.7%	04 Apr	2.25	-	0	Risks tilted towards faster hikes
Turkey	5% (±2%)	10.3%	9.1%	25 Apr	8.00	-	0	-
Israel	1-3%	0.2%	0.9%	16 Apr	0.10	0.1	0	-
South Africa	3 - 6%	4.2%	4.7%	28 Mar	6.75	-14.9	-25	SARB stays on hold given VAT risks to CPI
Nigeria	6-9%	15.9%	12.6%	tbd	14.00	-	0	-
China	N/A	1.5%	2.8%	N/A	4.35	-	25	Evenly Balanced
India	2-6%	5.0%	4.6%	05 Apr	6.00	-	0	Risk of an earlier than expected rate hike
Hong Kong	N/A	3.1%	2.7%	02 May	2.00	-	0	Faster pace of rate hikes
S. Korea	2% CPI	1.4%	1.7%	12 Apr	1.50	2.1	0	Evenly Balanced
Taiwan	N/A	2.2%	1.2%	22 Mar	1.375	0.1	0	Evenly Balanced
Indonesia	3.5% +/- 1.0%	3.2%	3.8%	22 Mar	4.25	-	0	Evenly balanced
Malaysia	N/A	1.4%	2.7%	10 May	3.25	0.2	0	Evenly balanced
Thailand	2.5% +/- 1.5% CPI	0.4%	1.6%	28 Mar	1.50	0.7	0	Evenly balanced
Philippines	3% +/-1% CPI	3.9%	3.3%	22 Mar	3.00	-	25	Downside risk
Brazil	4.5% +/-2.0% IPCA	2.9%	4.4%	21 Mar	6.75	-21.9	0	-
Mexico	3% +/-1% CPI	5.5%	3.9%	12 Apr	7.50	9.0	0	-
Argentina	15% in 2018	25.4%	17.1%	27 Mar	27.3	-	0	-
Chile	3% +/-1% CPI	2.3%	2.9%	03 May	2.50	7.7	0	-
Peru	2% +/-1% CPI	1.2%	2.4%	12 Apr	2.75	-	0	-
Colombia	3% +/-1% CPI	3.4%	3.9%	27 Apr	4.50	-19.4	0	-

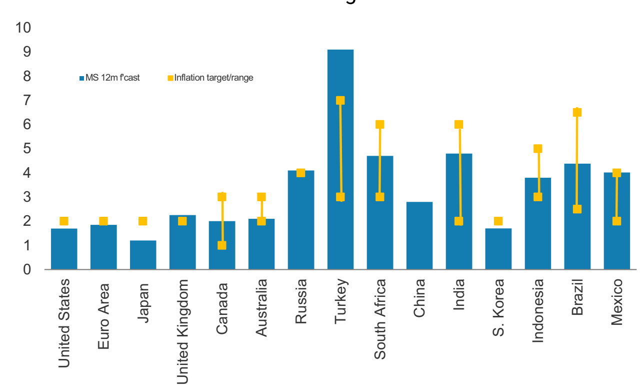
(u) = unofficial
Notes: Inflation numbers in red indicate values above target, green below; MS expectations in red (green) indicate our rate forecasts are above (below) market expectations. Japan policy rate is the interest rate on excess reserves.
Source: National central banks, Morgan Stanley Research forecast

Exhibit 30: Current inflation vs. target



Source: National data, Morgan Stanley Research

Exhibit 31: Inflation forecast vs. target



Source: National data, Morgan Stanley Research estimates

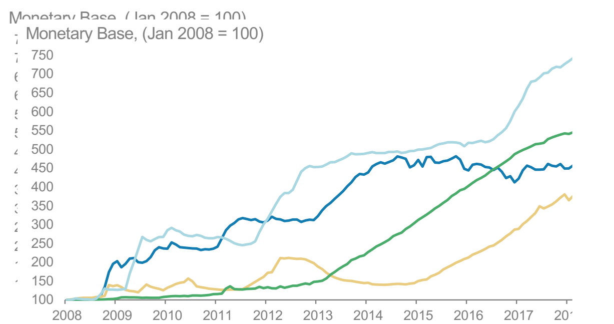
Monetary policy rate forecasts

Exhibit 32: Monetary policy rate forecasts, 2018-19E

	Current	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19
US	1.625	1.625	1.875	2.125	2.125	2.375	2.625	2.625	2.625
Euro Area	-0.40	-0.40	-0.40	-0.40	-0.40	-0.25	-0.25	-0.25	-0.25
Japan	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10	-0.10
United Kingdom	0.50	0.50	0.75	0.75	0.75	0.75	1.00	1.00	1.25
Canada	1.25	1.25	1.50	1.50	1.50	1.75	1.75	2.00	2.00
Norway	0.50	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25
Sweden	-0.50	-0.50	-0.50	-0.50	-0.50	-0.25	-0.25	0.00	0.00
Australia	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.75	2.00
New Zealand	1.75	1.75	1.75	2.00	2.25	2.50	2.75	3.00	3.25
Russia	7.50	7.25	6.75	6.50	6.50	6.50	6.50	6.50	6.50
Poland	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.75	2.00
Czech Republic	0.75	0.75	1.00	1.25	1.25	1.50	1.75	2.00	2.00
Hungary	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Romania	2.25	2.25	2.50	2.75	3.00	3.00	3.25	3.50	3.50
Turkey	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Israel	0.10	0.10	0.10	0.25	0.25	0.25	0.25	0.50	0.50
South Africa	6.75	6.50	6.50	6.50	6.50	6.50	6.75	6.75	6.75
Nigeria	14.00	14.00	13.00	13.00	13.00	13.50	14.00	14.00	14.00
Saudi Arabia	2.25	2.13	2.38	2.63	2.75	3.00	3.25	3.25	3.25
China	4.35	4.35	4.35	4.60	4.60	4.85	4.85	4.85	4.85
India	6.00	6.00	6.00	6.00	6.25	6.25	6.50	6.50	6.75
Hong Kong	2.00	2.00	2.25	2.50	2.50	2.75	3.00	3.00	3.00
S. Korea	1.50	1.50	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Taiwan	1.375	1.375	1.500	1.625	1.750	1.750	1.750	1.750	1.750
Indonesia	4.25	4.25	4.25	4.50	4.75	4.75	4.75	4.75	4.75
Malaysia	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Thailand	1.50	1.50	1.50	1.50	1.50	1.50	1.75	2.00	2.00
Philippines	3.00	3.25	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Brazil	6.75	6.75	6.75	6.75	7.25	8.25	8.50	8.50	8.50
Mexico	7.50	7.50	7.75	7.75	7.75	6.50	6.25	6.00	6.00
Chile	2.50	2.50	2.50	2.50	2.50	3.00	3.50	3.50	3.50
Peru	2.75	2.75	2.50	2.50	2.50	2.75	3.00	3.25	3.50
Colombia	4.50	4.50	4.50	4.25	4.25	4.25	4.75	5.00	5.00
Argentina	27.25	25.75	24.50	23.50	22.75	21.50	20.25	19.00	19.00

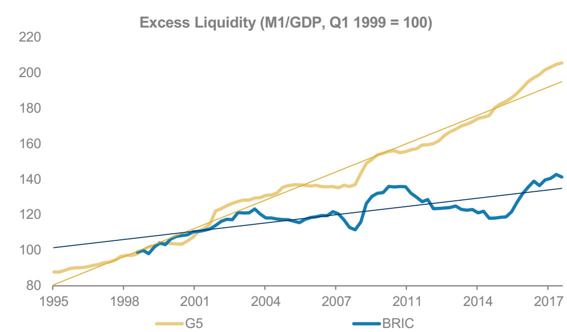
Source: Morgan Stanley Research forecasts

Exhibit 33: G4 monetary base



Source: FRB, BEA, ECB, Eurostat, BoJ, BoE, ONS, Morgan Stanley Research; 'Retail M4' used for UK.

Exhibit 34: G5 and BRIC excess liquidity



Source: National Sources, Morgan Stanley Research

Global GDP and inflation forecasts

Exhibit 35: Morgan Stanley real GDP and inflation forecasts, 2017-19E

	Real GDP (%Y)					CPI Inflation (%Y)				
	2017E	2018E		2019E		2017	2018E		2019E	
	MS	MS	Cons	MS	Cons	MS	MS	Cons	MS	Cons
Global*	**3.7**	**3.9**	**3.9**	**3.8**	**3.8**	**2.5**	**2.9**	**2.9**	**2.8**	**2.8**
G10	**2.2**	**2.2**	**2.4**	**1.9**	**2.0**	**1.8**	**1.9**	**2.0**	**1.7**	**1.9**
US	2.3	2.6	2.8	2.1	2.4	2.1	2.2	2.4	1.8	2.2
Euro Area	2.5	2.1	2.4	1.9	2.0	1.5	1.8	1.5	1.6	1.6
Japan	1.6	1.3	1.3	1.5	1.0	0.5	1.3	1.0	0.8	1.1
UK	1.7	1.1	1.5	0.8	1.5	2.7	2.6	2.5	2.2	2.1
Canada	2.6	1.8	2.1	1.8	1.8	1.5	1.5	2.1	2.2	2.0
Norway	1.8	2.3	2.2	2.1	2.2	1.9	1.9	1.8	2.0	2.0
Sweden	3.1	2.8	2.6	2.0	2.2	1.8	1.3	1.9	2.6	2.1
Australia	2.3	2.0	2.8	2.5	2.8	1.9	2.1	2.2	2.7	2.3
New Zealand	3.0	2.9	2.9	2.9	2.8	1.9	2.2	1.9	2.3	2.0
EM*	**4.7**	**5.0**	**4.9**	**5.0**	**4.9**	**3.1**	**3.6**	**3.5**	**3.6**	**3.4**
CEEMEA	**2.3**	**2.7**	**2.6**	**2.7**	**2.6**	**5.8**	**5.4**	**5.5**	**5.3**	**5.5**
Russia	1.5	2.3	1.8	1.8	1.8	3.7	3.0	3.5	4.1	4.0
Poland	4.2	4.4	4.0	3.8	3.3	1.9	2.2	2.2	2.5	2.5
Czech Rep	4.5	3.8	3.5	3.0	2.9	2.5	2.5	2.2	2.1	2.1
Hungary	3.7	3.5	3.5	3.2	3.0	2.4	2.9	2.6	3.0	3.0
Ukraine	2.2	2.9	3.0	3.4	3.3	14.5	11.7	8.7	7.9	6.2
Kazakhstan	4.0	4.3	3.2	4.0	3.3	7.4	6.3	6.5	6.1	6.1
Turkey	5.6	3.2	4.1	3.7	4.0	11.1	10.0	10.0	8.4	8.9
Israel	3.3	3.1	3.3	3.4	3.0	0.2	0.6	0.7	1.6	1.3
South Africa	0.8	2.3	1.6	2.5	1.7	5.3	4.5	5.1	5.1	5.2
Nigeria	0.7	2.5	2.6	2.9	3.1	16.6	13.5	13.0	13.0	10.8
Saudi Arabia	-0.7	1.5	1.7	1.9	2.0	-0.3	2.9	3.0	2.5	2.9
AXJ	**6.2**	**6.2**	**6.2**	**6.1**	**6.0**	**2.2**	**3.1**	**3.0**	**3.1**	**3.0**
China	6.9	6.5	6.5	6.3	6.2	1.6	2.7	2.3	2.8	2.3
India	6.3	7.5	7.3	7.7	7.4	3.3	4.5	5.0	4.4	4.6
Hong Kong	3.6	3.0	3.0	2.5	2.6	1.7	2.7	2.4	3.1	2.3
Korea	3.1	3.0	3.0	2.7	2.8	1.9	1.7	1.9	1.7	2.0
Taiwan	2.9	2.9	2.6	2.6	2.3	0.2	0.8	1.3	1.2	1.3
Singapore	3.6	3.4	3.0	3.1	2.6	0.6	1.4	1.0	1.8	1.5
Indonesia	5.1	5.4	5.3	5.5	5.5	3.8	3.5	3.7	3.8	3.8
Malaysia	5.9	5.6	5.4	5.3	5.1	3.8	3.0	2.9	2.5	2.5
Thailand	3.9	3.8	4.0	3.5	3.7	0.7	1.9	1.4	1.3	1.4
Philippines	6.7	6.6	6.7	6.6	6.7	3.2	3.7	4.0	3.1	3.6
LatAm*	**0.8**	**2.1**	**2.2**	**2.6**	**2.5**	**4.3**	**3.9**	**3.6**	**3.7**	**3.7**
Brazil	0.7	3.1	2.6	3.4	2.7	3.5	3.8	3.6	4.2	4.2
Mexico	2.0	1.8	2.2	2.3	2.3	6.0	4.9	4.2	3.6	3.6
Chile	1.6	2.9	2.7	2.7	3.0	2.2	2.5	2.5	2.9	2.9
Peru	2.5	3.9	3.8	3.9	3.8	2.8	1.2	2.0	2.5	2.5
Colombia	1.8	2.3	2.5	2.8	3.0	4.3	3.5	3.3	3.6	3.2
Argentina	2.8	2.9	3.3	3.5	3.2	25.6	22.4	20.5	15.9	14.0
Venezuela	-15.6	-9.6	-7.0	-6.9	-2.3	1049.0	4073.5	4073.5	10428.3	1789.0

Source: IMF, Morgan Stanley Research forecasts. * Global, EM and LatAm CPI aggregates exclude Venezuela and Argentina.

Government budget balance and debt forecasts

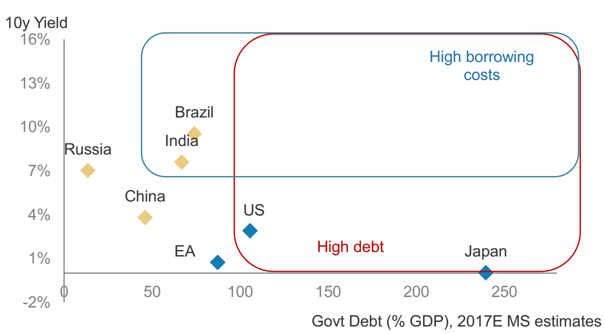
Exhibit 36: Budget balance, primary balance, gross and net government debt, 2016-19E

	General Gov't Budget Balance (% of GDP)				Primary General Gov't Budget Balance (% of GDP)			
	2016	2017E	2018E	2019E	2016	2017E	2018E	2019E
DM								
US	-3.1	-3.2	-4.4	-5.0	-1.8	-1.9	-2.9	-3.3
Euro Area	-1.5	-1.2	-1.4	-1.6	0.7	0.9	0.6	0.4
Japan	-4.2	-4.1	-3.5	-3.5	-4.0	-4.0	-3.6	-3.5
UK	-2.9	-2.4	-2.0	-1.7	-0.5	0.3	0.6	0.6
Canada	-1.9	-2.2	-1.8	-1.6	-1.2	-1.5	-1.3	-0.9
Sweden	0.9	1.1	0.9	0.9	1.3	1.3	1.1	1.1
Australia	-2.4	-2.1	-2.0	-2.1	-1.6	-1.5	-1.3	-1.4
BRICs								
Russia	-3.4	-2.0	-1.1	-0.7	-3.1	N/A	N/A	N/A
China	-3.8	-3.7	-3.3	-3.3	-2.9	N/A	N/A	N/A
India	-7.1	-6.7	-6.5	-6.1	2.1	2.2	1.8	1.5
Brazil	-9.0	-7.8	-7.9	-6.9	-2.5	-1.7	-2.2	-1.5

	Gross General Gov't Debt (% of GDP)				Net General Gov't Debt (% of GDP)			
	2016	2017E	2018E	2019E	2016	2017E	2018E	2019E
DM								
US	106.1	105.6	106.5	106.7	77.0	76.7	78.0	78.8
Euro Area	88.9	87.3	85.9	85.2	70.2	N/A	N/A	N/A
Japan	238.7	239.5	239.3	236.3	119.5	120.3	120.1	117.1
UK	88.2	86.5	86.3	86.3	53.2	51.0	50.9	50.8
Canada	92.4	89.6	87.7	85.8	27.4	24.6	22.7	20.9
Sweden	42.2	39.1	36.4	34.1	-29.5	N/A	N/A	N/A
Australia	25.4	28.7	29.9	31.5	17.9	18.6	20.1	21.4
BRICs								
Russia	12.9	13.5	14.9	15.0	N/A	N/A	N/A	N/A
China	48.0	46.0	45.0	45.0	N/A	N/A	N/A	N/A
India	68.0	66.8	65.3	63.4	N/A	N/A	N/A	N/A
Brazil	69.5	74.0	75.0	78.8	47.5	51.6	57.8	63.9

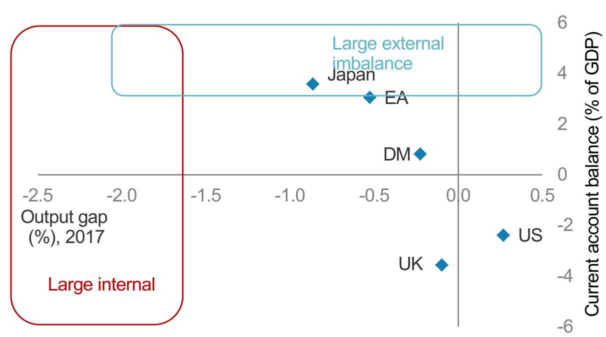
Source: IMF, Morgan Stanley Research forecasts.

Exhibit 37: G3 and BRIC government debt and 10Y yield



Source: IMF forecasts, Morgan Stanley Research

Exhibit 38: G3 fiscal space – output gap and C/A balance



Source: IMF forecasts, Morgan Stanley Research

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