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Global Macro Policy Quarterly

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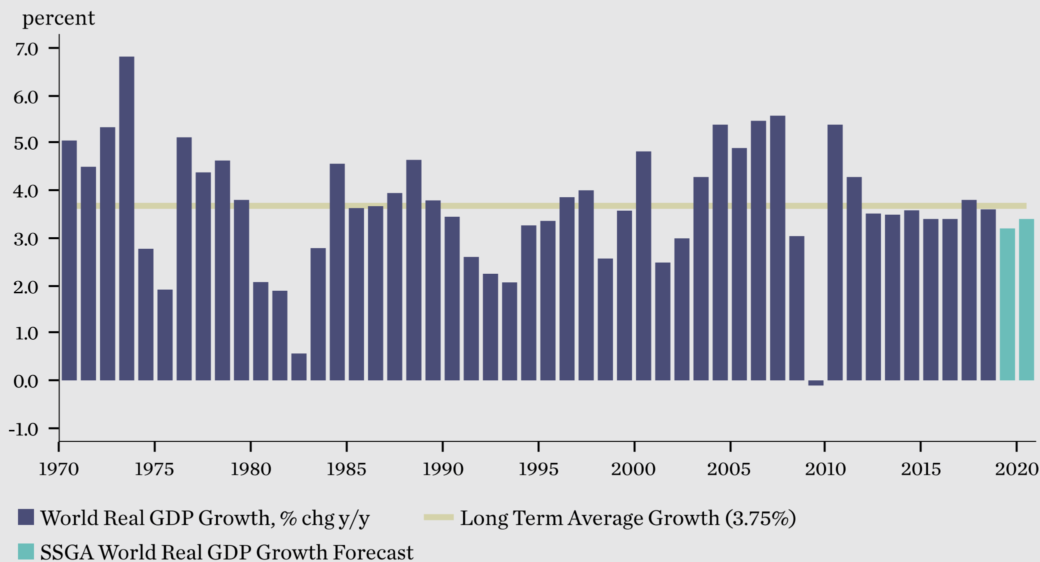
Figure 1: Deeper Slowdown, Higher Risks, Policy Support



Sources: IMF, SSGA Global Macro and Policy Research, Oxford Economics

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Abnormal World: Negative Yields, Oil Shocks, Trade Wars, Low Growth & Inflation

Welcome to the second issue of our Global Macro Policy Quarterly where we present different interconnected macro-research perspectives of the world drawing on our experience in Economics, Demographics, Finance, Geopolitics & Policy. In this issue, we present our views on (i) Macroeconomic analysis and commentary (ii) Brexit and other risks and (iii) Low long bond yields, ageing populations and asset-liability impact on long-term investors. We also present our Quarterly Economic Forecasts for major global economies. We believe that a holistic view of markets and economics is essential as politics and social media affect growth, inflation, asset prices and capital flows in a historically unprecedented fashion.

We are in a period of slower protracted growth where existing relationships, concepts and correlations are getting challenged, forcing central banks and monetary authorities to adopt unconventional measures. The limited effectiveness of several rounds of unconventional monetary policy measures is now becoming apparent, suggesting urgent need for fiscal policy and structural reforms. Youth unemployment and income inequality continue to fuel instability and populism in many countries.

Negative yields on many sovereign bonds and few highest quality corporates are taking bond-investors into uncharted new territory. Traditional corporate finance and investment models, research and texts deal with treasury bills as the safe asset and based on an upward sloping yield curve, longer-dated government bonds added on a maturity premium to yield a bit higher. Asset pricing models and asset allocation paradigms such as Markowitz, Sharp, Black, Merton, Modigliani-Miller etc. all have been grounded on that basic precept. Longer dated bonds and their yields were also related in macroeconomics to long-term productivity and growth prospects. However, the current environment raises serious challenges to portfolio theory and asset allocation concepts ingrained in the investor psychology and mind set. What price should one pay to buy a sovereign credit? Should we hold negative yielding assets in investor portfolios? If so, why does it make sense? Bond pricing and term structure models have to be recast to explain this phenomenon and rationalize investor behavior. This has implications for portfolio returns, volatility and pension funding ratios.

The established economic assumptions of perfect information, perfect capital markets, homogeneity, speed of information aggregation and processing as well as rational behavior are being challenged for failure to warn about the Global Financial Crises. The speedy response of financial markets to news is also now no longer restricted to FX markets with social media tweets causing volatility and price impacts across other markets and geographies too. JP Morgan's recent tweet-based volatility index tries to capture such impacts. Currently sentiment, psychology and momentum often dominate core fundamentals, driving investment returns.

The politics underlying Trade wars and disputes are taking their toll on growth and investments from Singapore, Japan, Russia and Korea to Colombia and Argentina. Rising populism, increased protectionism via FX, capital controls, tariffs, and quotas are all coming into play. The underlying sub-current is that the US hegemony in the economic and financial markets of last few decades is under threat from a rising China. While much of the discontent relative to trade dynamics in regard to China, Mexico, EU and other trade partners is understandable, US statements and policies on trade are having the unintended global consequences of greater uncertainty, greater volatility and lower investments combined with lower growth and profitability.

Oil price shocks due to the recent drone attacks on Saudi oilfields are part of longstanding political issues that Saudi Arabia has with Yemen, although initially Iran appears to be blamed for these attacks too. The oil price spikes and the sensitivity of many oil-dependent economies in Asia, Latin America and Africa is likely to drive global growth even lower than projections lowered due to Trade War effects.

Lower growth prospects continue due to the issues discussed above as well as low labor productivity growth and low inflation due to limited effects of monetary policy, changing role of inflation expectations as well as applicability of the Phillips curve.

Amlan Roy (Head, Global Macro Policy Research)

Key Macro Themes for the Global Economy

- Worsening trade tensions between US and China have deepened a global slowdown that had been already afoot since 2018. The world economy has swung from a synchronized global upturn that saw **global GDP growth** accelerate to a six-year high of 3.8% in 2017 to a synchronized global slowdown set to reduce growth to a post-crisis low of 3.2% this year. The slowdown is broadly distributed, with both advanced and emerging economies slowing, but the US relative outperformance is quite noteworthy. Indeed, the US grows 2.3% this year, best among the G7. Moreover, this, as well as our 1.9% projection for 2020, have not changed since March. Another important observation is that this slowdown has been disproportionately centered around manufacturing, whereas global service activity is holding up OK. This "resilience in divergence" is central to our view that the global economy avoids a much-feared recession. Consumer spending has been another bright spot. Admittedly, we can't take this for granted and the story is not entirely uniform. For instance, consumer sentiment has taken a hit in the UK, Australia, and other economies where households struggle with political risks, high debt, and housing corrections. Nevertheless, persistent labor market strength offers considerable support and represents an important cushion that should help carry the global economy through until, as we still anticipate, trade tensions subside. But the trade war has already taken a considerable toll. Global trade volumes are currently contracting at the fastest rate since the crisis and global industrial production growth is on par with lows seen during the depths of the euro crisis and the 2015-16 slowdown. But, on assumption that a trade "truce" is reached that prevents further tariff escalation, activity should start forming soon, giving way to a modest improvement in activity in 2020, when global growth quickens to 3.4%.
- **Global inflation** remains well contained. The much talked-about inflation "deficit" persists across developed markets despite continued labor market healing that has brought unemployment rates to multi-decade lows. Having highlighted the inflation "mystery" a couple of years ago, the Fed, alongside other central banks, has engaged in a more focused review of concepts such as NAIRU (non-accelerating-inflation rate of unemployment) and the neutral interest rate. From the Fed to the BoC to the RBA, the widely shared conclusion among policy makers is that economies can now support considerably lower levels of unemployment without generating undue inflationary pressures. NAIRU estimates have come down, neutral policy rates have come down as a result, and policy interest rates have come down in many economies as a direct result. At the same time, it does appear that we may finally be approaching a point of labor market tightness where wage inflation is turning higher. Cycle high wage inflation in the US and UK would seem to suggest as much. We are not concerned about an inflation "event", but it would be incorrect to assume that inflation is altogether dead. Rather, we view it as "manageable".
- Changing **central banks**' views around NAIRU and the neutral rate, combined with heightened risks to the outlook, have driven another round of monetary easing globally. The Fed has by now delivered the two rate cuts we had incorporated in our June forecast and may yet cut again. The RBA has also cut twice and is poised to do so again. The ECB has cut further and is restarting QE. Other central banks have delivered various doses of stimulus. Policy support in the context of intensifying risks makes sense. But given the already low level of interest rates globally, we would much prefer to see a more balanced policy response, with more emphasis on fiscal policy. India's recent policy announcements are noteworthy in this regard.
- **Energy prices** have played a key role in the evolution of headline inflation in recent years. After collapsing from about $110 per barrel in mid-2014 to $30 a barrel in January 2016, Brent oil prices subsequently began to recover—helped partly by OPEC+'s decision to cut production 1.2 mbd in November 2016. Brent broke through $60 in October 2017 and briefly rose above $80 in September 2018. The rally was subsequently short-circuited by the US decision to offer multiple wavers from Iran sanctions and by the global growth slowdown. Given the wild past gyrations in oil prices, the lack of a sustained price response following the attacks on Saudi oil facilities is quite impressive, even if production has resumed quickly. The good news is that we are unlikely to see any meaningful impact on either global growth or inflation from this incident.

Summary of World Output[1] and Inflation[2]

(Annual percent change)

	Weight	History					Forecast	
	(2018)	2014	2015	2016	2017	2018	2019	2020
World Growth	100.0	3.6	3.5	3.3	3.8	3.6	3.2	3.4
Advanced Economies	40.8	2.1	2.3	1.7	2.4	2.2	1.7	1.7
US	15.2	2.5	2.9	1.6	2.2	2.9	2.3	1.9
Euro area	11.4	1.6	2.3	1.9	2.5	1.8	1.1	1.3
Germany	3.2	2.2	1.5	2.2	2.5	1.5	0.6	1.3
France	2.2	1	1.0	1.1	2.3	1.5	1.4	1.5
Italy	1.8	0.2	0.8	1.2	1.7	0.8	0.1	0.5
Japan	4.2	0.3	1.3	0.6	1.9	0.8	0.9	0.3
UK	2.2	3.0	2.4	1.8	1.8	1.4	1.2	1.4
Canada	1.4	2.9	0.7	1.1	3.0	1.8	1.4	1.7
Australia	1.0	2.6	2.5	2.8	2.4	2.8	1.9	2.5
Developing Economies	59.2	4.7	4.3	4.4	4.8	4.5	4.2	4.6
Advanced Economy Inflation	40.8	1.4	0.3	0.8	1.7	2.0	1.5	1.7
US	15.2	1.6	0.1	1.3	2.1	2.4	1.8	2.1
Euro area	11.4	0.4	0.2	0.2	1.5	1.8	1.3	1.4
Germany	3.2	0.9	0.0	0.5	1.5	1.7	1.4	1.5
France	2.2	0.5	0.0	0.2	1.0	1.9	1.2	1.4
Italy	1.8	0.3	0.0	-0.1	1.2	1.1	0.8	1.1
Japan	4.2	2.8	0.8	-0.1	0.5	1.0	0.6	0.7
UK	2.2	1.5	0.1	0.6	2.7	2.5	1.9	1.9
Canada	1.4	1.9	1.1	1.4	1.6	2.2	1.9	2.0
Australia	1.0	2.5	1.5	1.3	1.9	1.9	1.6	2.1
Developing Economies	59.2	4.7	4.7	4.2	4.3	5.0	4.7	4.5
Value of World Output ($ trl)								
At Market Exchange Rates		78.8	74.6	75.7	80.1	84.7	87.3	92.3
At Purchasing Power Parities		110.8	115.7	120.7	127.5	135.2	142.1	150.2

[1] Real GDP; [2] Consumer Price Inflation

Weight represents the share of world GDP on a purchasing power parity basis. IMF: *World Economic Outlook* , October 2018

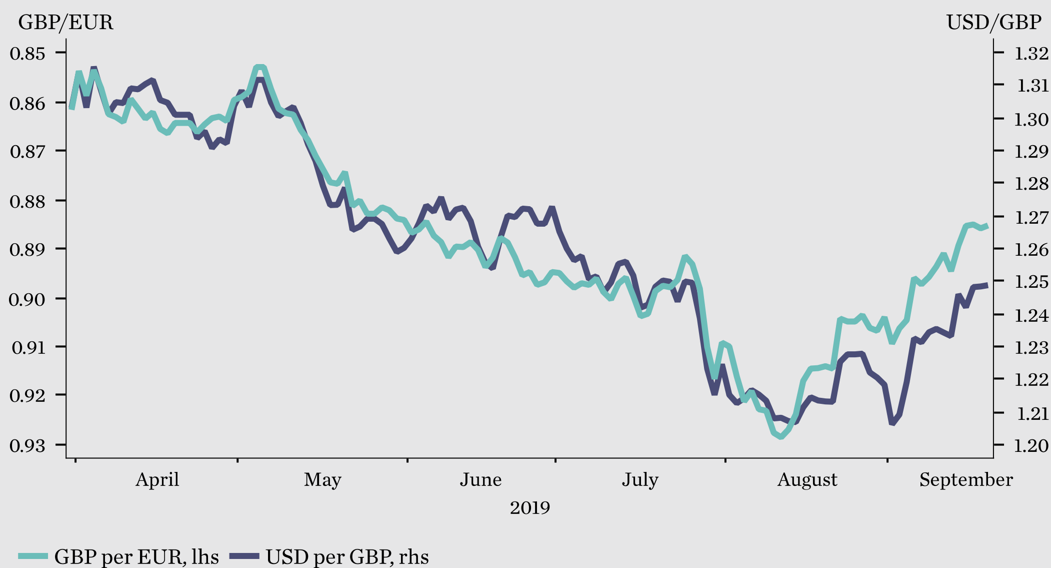
Source for historical data: Oxford Economics and IMF. Forecast: SSGA Global Macro and Policy Research

Political Risk In Focus: Hit Series 'Brexit' Enters Final Season

Recap for viewers who missed the past season: On 12 April, the day that the EU and the UK agreed another negotiation extension to 31 October, we issued our last Brexit forecast in fairly great detail: First, there would be a massive electoral setback for the main Conservative and Labour parties (fact: they came in 3rd and 4th respectively in May's European elections, their worst showing in any national election). Second, Prime Minister May would need to resign and allow for an intra-party election to choose an ardent Brexit supporter to replace her over the summer (fact: she resigned on 11 June and Boris Johnson of the Leave camp took office on 25 July). Third, and more forward-looking, we pointed out that "it is hard to fathom the UK being ready by late October and **another extension beckons, though with the more explicit commitment of a binding electoral test**."

While Sterling has reflected the news flow and weakened with the emergence of a ruling No-Deal government in London, currency markets underestimated political fundamentals, one of which was that there was a clear parliamentary majority opposed to a crash-out Brexit. Hence, as Figure 2 shows, the currency has recovered some of its losses upon parliament legislating against such an outcome in early September and obliging the government to seek another extension through 31 January 2020.

Figure 2: GBP Spot price versus US Dollar and Euro

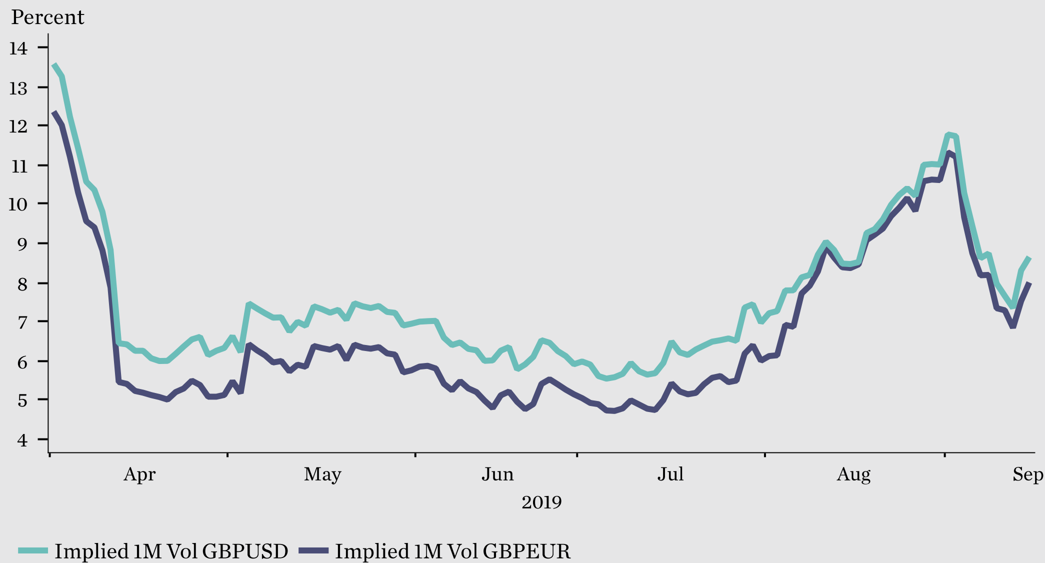


Sources: Bank of England

So why do we not see a stronger recovery in foreign exchange markets, particularly as Sterling remains profoundly undervalued by any conventional metrics, e.g. purchasing power parity or yield differential trajectories? In the short term, there are perceived residual risks associated with the actual implementation of the extension deadline, given Prime Minister Johnson's signalling that he is still seeking a EU exit, "do or die". Again, currency markets do hold up a good mirror to political sentiment. Figures 3 below shows how the implied volatility of Sterling came off highs right after the extension was sealed in April, remaining low until Johnson took over the premiership and peaking again during the parliamentary battle over stopping a no-deal crash. These short-term reasons have not fully gone away, though we give little likelihood to the chance of either a negotiated deal prior to 31 October or a British government able to defy parliamentary legislation.

Instead, the bulk of Sterling weakness may be a longer-term signal about political risks beyond Brexit. The current stalemate of an impotent Prime Minister and a blockading parliament is not sustainable and will require one or many political events to move ahead, including a democratic exercise to re-establish a political mandate for the country's Brexit approach. At a minimum, the current government's tenure will need to end and either pass via a temporary caretaker government or directly to national elections after the extension period has begun.

Figure 3. Implied One Month Volatility of GBP vs USD, EUR



Sources: SSGA Research, Bloomberg

Back to the People

Any election at this time would be highly unpredictable with a variety of market negative outcomes. Voter fragmentation and variability (i.e. switching party allegiances) are near all-time highs, and multi-party competition in Britain's first-past-the-post system can deliver highly skewed outcomes. Current polls show that there are five plausible election outcomes, all just requiring a shift in public opinion of 5% or less.

Table 1 shows the possible scenarios in descending order of likelihood and complementary market implications. A cursory look highlights the paucity of market-friendly outcomes and the likelihood of continued political troubles in the UK. This continues to be a negative backdrop for Europe too as long as the Brexit impasse is not resolved. That said, Brexit is nearing its end with 2020 most likely seeing the completion or the reversal of UK's departure from the EU and the disappearance of Brexit as a market-relevant topic. However, the British body politic will not be healed any time soon regardless of outcome, so markets may need to ponder whether the UK has permanently forfeited one of its major sources of competitiveness: a stable political system and predictable policy environment.

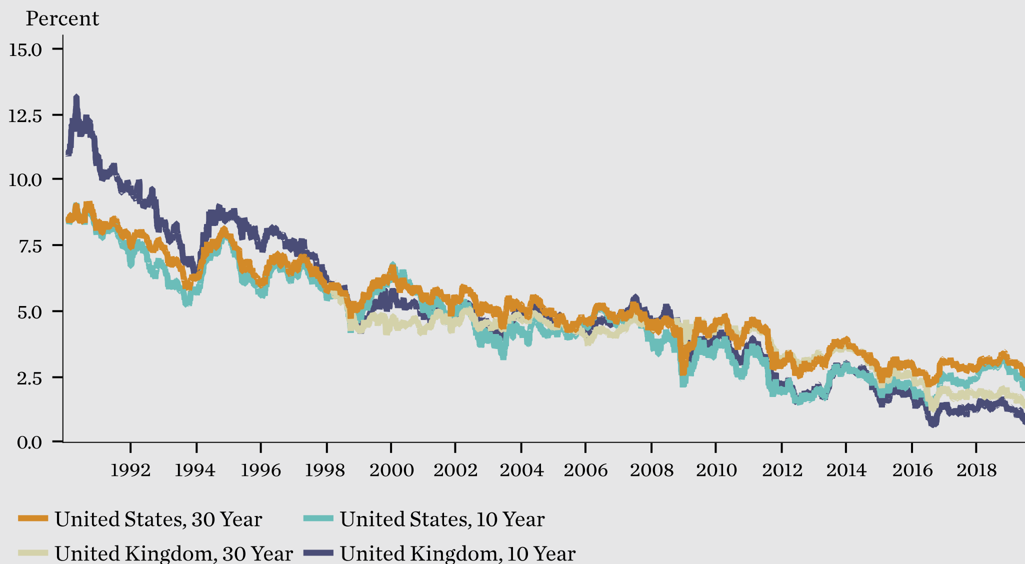
Table 1: UK Election Outcomes, ranked by likelihood and market implications

	Election Outcome & Policy Implications	Market Implication
1	Hung parliament without an operational majority: this would simply prolong uncertainty without delivering any positive impulses	Negative
2	Narrow Conservative Party victory under Boris Johnson (single digit majority of seats): a No Deal exit would become very likely	Negative
3	Johnson landslide (double digit majority): this could create political space for alternative solutions to the Brexit impasse in Northern Ireland and boost chances of a Deal, but would not rule out No Deal crash	Mixed, with downside bias
4	Labour-led (Corbyn or alternative) coalition government reliant on centrist Liberal Democrats: would trigger a second referendum and bring an end to the Brexit saga, but with limited downside policy risk otherwise	Mixed, with upside bias
5	Corbyn-led premiership in partnership with the Scottish Nationalists: this too would trigger a second Brexit referendum, but would also re-open uncertainty around Scottish independence and introduce harmful interventionist policies	Highly Negative

Demographics, Interest Rates & Pensions

Post the Global Financial Crisis (GFC), short-term nominal interest rates in advanced countries have been close to zero, suggesting that accommodative monetary policies as a response to recessionary pressures have been the main reason for the low interest rates. However, as shown in Figure 4 below, long-term interest rates have also been trending down for the last two decades in advanced countries. Unlike short-term interest rates, long-term interest rates are not fully under the control of monetary policy. We have argued along with others for nearly two decades the role of long-term bond demand as an important factor explaining long-term yields.

Figure 4: Long-Term Bond Yields



Sources: Macrobond, SSGA Global Macro Policy Research

Over the recent years, many academic researchers and practitioners have pointed towards demographics as a major determinant of interest rates. Fed research (2016) has suggested that demographics alone account for 1.25 percentage-point decline in both real GDP growth and equilibrium real interest rates since 19801. BIS research (2016) shows that subpar global growth and higher global savings have hold down long-term rates2. Holston, Laubach and Williams (2017)3 shows that in advanced countries, the main input of policy rate i.e. natural rate of interest or the real short-term interest rate that would prevail absent transitory business cycle shocks, is driven by shifts in demographics, a slowdown in trend productivity growth and global factors. We also show in our previous research4 that aging population with its effects through lower population growth and lower productivity growth have an adverse effect on real GDP growth in many developed and developing countries, which in turn pushes down both nominal and real interest rates.

Given that growth and inflation have also been low by historical standards in many countries, the environment of protracted low interest rates poses serious challenges to insurance companies and pension funds, especially to defined benefit (DB) pension schemes. On one hand, as fixed-income securities such as government bonds contribute a large

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[1] Gagnon E., B.K. Johannsen and D. Lopez-Salido, 2016, “Understanding the New Normal: The Role of Demographics”, FRB

[2] Hördahl P., J. Sobrun and P.Turner, 2016, “Low long-term interest rates as a global phenomenon”, BIS Working Papers No 574

[3] Holston K., T. Laubach and J.C. Williams (2016) “Measuring the Natural Rate of Interest: International Trends and Determinants”

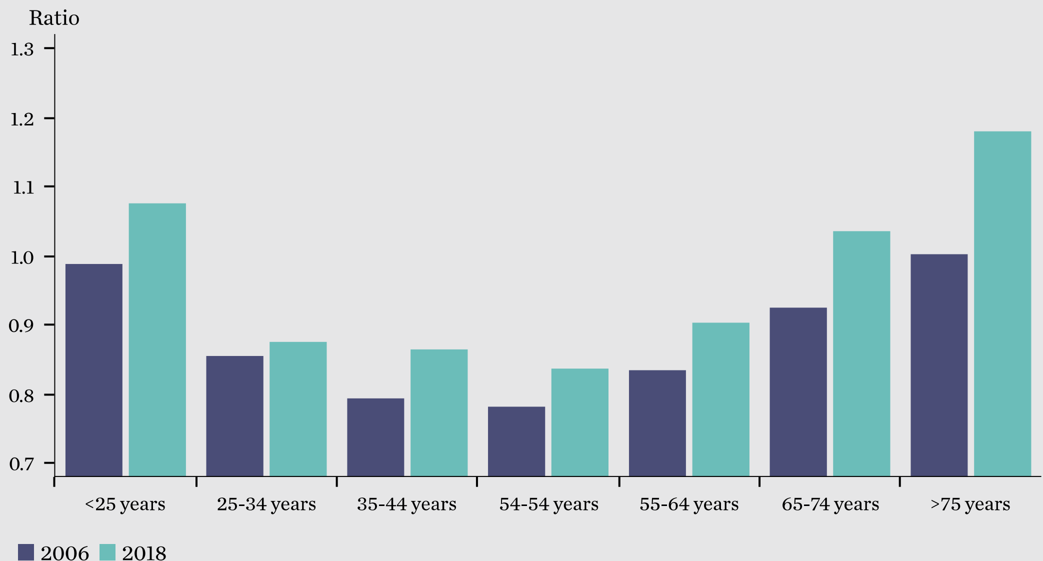
[4] SSGA Global Macro Policy Research, 2018, “Asia at A Crossroads: Demographics, Economics & Investment”

proportion of the investment portfolio in pension funds and insurance companies, low interest rates affect the future value of savings through lower bond yields. On the other hand, the ensuing environment of low interest rates, the exposure to longevity risk is exacerbated due to the increased weights of future payments.

Uncertain longevity is one of the main reason for most advanced countries facing a shortfall of aggregate retirement savings. Aging populations are associated with high public expenditures and fiscal unsustainability pressures in older European countries and Japan. In particular, higher life expectancy at birth and higher conditional life expectancy lead to rapid increase in old age dependency ratios i.e. the number retirees relatively to the working -age population. Old age dependency ratios are high and growing fast in Japan (projected at 47.8 persons aged 65+ per 100 of working age in 2020 , 3.2 times its value in 1985), and older European countries such as Italy (38.1 in 2020), Germany (34.2 in 2020) and France (33.7 in 2020). Younger advanced countries such as US have lower old age dependency ratio of 25.7 in 2020 but they too have been on an upward trend for the last 35 years (18.3 in 1985).

In addition, aging-related costs such as health care costs and long-term care costs are much higher than pension costs in Europe, Japan and US and this will likely increase tax pressures on younger generations, in turn weighing on their future retirement savings and creating the potential for inter-generational conflicts. In general, household savings as proportion of disposable income have declined over the last 20 years in many advanced countries while household spending has increased. As an example, over the last 12 years, in US, the level of household expenditure to post-tax income has increased, with most significant changes in age groups 65-74 years and 75+ years (Figure 5). Over the same period, the share of healthcare expenditures has noticeably increased for all age groups. The oldest age group consumes more 16% of total expenditures on healthcare, more than 4 times of the youngest age groups.

Figure 5: US Household Spending vs. Disposable Income, By Age Group



Sources: BLS, SSGA Macro Policy Research

Longer time horizons of uncertainty in terms of growth, income, and asset returns mean that pension funds and insurance companies need to actively adopt risk management strategies.

Outlook for the Major Advanced Economies

US: Still Outperforming

For some time now, investors have been grappling with two types of questions about the US economy. One has to do with the length of the expansion, in other words: can this cycle, already the longest on record, keep going? The other has been more of a relative-type question: while the US has greatly outperformed its developed market peers in 2018, would it be able to do so again in 2019? The answer so far has been yes, on both counts. Moreover, we look for US outperformance to persist. Much ink has been spilt over this since the spring, but, absent additional tariff escalation or some other major shock, we see the chance of a US recession over the next 12-18 months at no higher than 20-25%. And while it is true that the US economy has and will continue to modestly slow, its relative performance vis-à-vis key trading partners (eurozone, Japan, China) will be little changed. The early stages of a genuine convergence with the rest of the world should become visible (US slows, rest of the world improves modestly) over the course of 2020, but the US remains the best performing economy among the G7.

What is our rationale? The story is not necessarily US specific. Rather, it is more that the positives appear strongest in the US just as the negatives appear less intense here. As we noted in our "Key Themes in the Global Economy" summary earlier in this publication, there is "resilience in divergence". What do we mean? Well, we've identified two key divergences in the global economy. One is the divergence between manufacturing (tethering on contraction) and services (generally doing quite well). But these two sectors are not created equal: manufacturing accounts for 10% of the US economy, while services make up 90%!

The other key divergence is that between business investment, which has fizzled after a good run in 2018, and consumer spending, which has rebounded nicely in recent months. Again, investment is important, but private consumption accounts for roughly 70% of the US economy. To recall a favorite tag line of ours, as long as the consumer and services hold, the US economy holds! When we look at employment (very high) and wages (elevated), the household debt service burden (very low historically) and the personal savings rate (close to cycle highs), we draw one conclusion: the US consumer is in great financial shape. Chair Powell said this much in his press conference this week. It is true that the labor market is generally a lagging indicator, but with over 7,000,000 open positions in the US and not that many unemployed people, there is considerable strength in the pipeline to carry us through for some time. Even with what we expect to be slower job growth in 2020, it still seems likely that the unemployment rate continues to hover below 4.0% next year. The Fed's summary of economic projection shows a similar expectation, as the unemployment rate is seen steady at 3.7%.

Another positive is that we now have a two-year budget deal that has eliminated the risk of automatic spending cuts into the next fiscal year. On the contrary, spending caps have been raised and we anticipate a small fiscal stimulus in 2020. The debt ceiling has also been raised through July of 2021, eliminating a recurring source of risk/volatility.

What about the weaker links? Yes, business investment has slowed, but it is far from collapsing, and not all that weakness has to do (directly) with trade uncertainty. For instance, lower oil prices have depressed rig activity and structures investment. Residential investment has been the weakest link by far, but it may very well be here that the Fed's recent easing could make the biggest difference. It is quite possible that, having consistently declined since the start of 2018, residential fixed investment may yet revive before long. The impressive rebound in housing starts and permits in August keep this hope alive.

Inflation is not dead. Core consumer price inflation sits at a cycle high and while the headline measure has been buffeted by a combination of methodology changes and lower oil prices , we do expect it to converge higher towards the core in coming months. Core PCE inflation, which is the Fed's preferred target, has been softer, but this gap between the two measures has historically persisted. The Fed, as well as ourselves, do see even this measure of inflation rising gently towards 2.0%.

What about the Fed? After two rate cuts that have left the FOMC committee deeply divided over what the next step should be, absent new information or events that drive a change of views regarding the outlook, we think the best move is to stay put for a while and reassess. Data does not suggest another cut is urgently needed and, for what they are worth, the latest median dots do not reflect it. Still, the reality is that the Fed had opened multiple paths toward 50-75 basis points worth of

"mid-cycle" easing, with a triad or arguments: 1. weak inflation expectations, 2. heightened risks amid intensifying trade tensions, and 3. lower estimates for the natural rate of interest (also known as r*, which reduced by 30 basis points to 2.5% in June). The first argument seems less convincing given recent data but trade uncertainties and the realities of a lower r* remain. So, another insurance cut is quite possible…but we would caution against expecting any further cuts beyond that.

Canada: Consumption Needs To Offset Slowing Investment

After a stellar 2017, growth moderated to 1.8% in 2018 and the weak momentum was carried forward to 2019. Despite a fairly strong labor market, household consumption slowed once the positive effects of earlier government fiscal transfers waned. Tougher mortgage lending regulations took a toll on housing, undermining confidence. Residential investment has been a major drag on growth, contracting 5.3% from highs reached in late 2017. House prices have been either flat or falling in most major metropolitan markets, capping investment and consumer confidence alike.

The economy barely grew in the first quarter, rising 0.1% q/q. But the second quarter saw a robust rebound, growing 0.9%, led by a 5.9% increase in export of energy products despite dismal business investment and soft consumer spending. The strength in exports might be transitory, but a housing recovery might provide the much needed impetus to consumer spending. Though house prices have remained virtually unchanged after reaching a high in November 2017, both permits and starts show a gentle uptrend. As a matter of fact, sales for existing homes rose above the historical average in July for the first time since January 2018. Arguably, the unemployment rate can go lower, but employment gains have been pretty spectacular in some of the recent months. Wage inflation has picked up, having averaged close to 4.0% y/y over the last three months, much higher than the historical average. Growth in retail sales volumes finally turned positive in the second quarter, edging up 0.1%. Exports are also likely to hold up, given improved chances of USMCA ratification before year-end. The drag however, is likely to come from investments. The CFIB Business Barometer shows relatively subdued sentiment for manufacturers, suggesting there is little chance of a near-term investment rebound. In light of all this, we maintain our growth forecasts at 1.4% in 2019 and 1.7% in 2020.

Inflation is unlikely to pick up materially, but it is already essentially at target. Headline consumer price inflation decelerated slightly to 1.9% y/y in August, but mainly due to the moderation in oil prices. Excluding energy, inflation actually rose to 2.4% y/y, while all three measures of core inflation have stayed at around the 2.0% mark. Taking into account the new carbon pollution charge, we see inflation at 1.9% and 2.0% in 2019 and 2020 respectively. The unemployment rate has actually increased by three tenths since May, standing at 5.7% as of August, accompanied by an increase in the participation rate. This implies that some slack probably remains in the labor market. This should keep wage inflation in check and, along with stabilization in energy prices, will keep inflation contained at current levels.

Up until very late last year, the Bank of Canada had been expected to raise rates in early 2019. Expectations have reversed since then, with the debate now being whether the BoC will follow the Fed into pre-emptive cuts. We believe the current strength of the recovery does not warrant easing bias by the Bank, but the openness of the Canadian economy makes it vulnerable to global economic shocks that are not built into the baseline projections. The market is currently pricing in a 25% probability of a cut by the end of 2019, with 83% probability of a 25 basis points cut by July next year. For now, we continue to see the BoC on an extended pause through 2020. We will however, closely monitor global developments for signs of strain, for either affirmation or rebuttal of our views.

UK: Treading Water

The ongoing Brexit drama has been casting a long shadow over the UK economy for three years now. While performance proved resilient in the early phase, with GDP up 1.8% each in 2016 and 2017, deeper cracks began appearing last year. Momentum waned in the early part of 2018, although it reaccelerated in the second and third quarters on a combination of the World Cup, Royal Wedding, and unusually warm weather. Nevertheless, sluggish real wages and fragile home prices (particularly in London) have hindered consumption, while Brexit chaos weighed on business sentiment, causing fixed investment to come to standstill. Hence, the economy advanced just 1.4% in 2018, the twin lowest since 2012.

Unfortunately, 2019 brought neither clarity as yet on the next path forward for Brexit, nor relief for business or consumer confidence. Still, so far we are still in a scenario in which the economy fails to manifest the better growth that its otherwise

decent fundamental suggest, rather than a situation in which those fundamentals have been materially undermined. We find it telling that, even amid Brexit, the labor market continues to tighten and wage inflation just touched a post-GFC high...Even fixed investment is merely stuck in low gear rather than collapsing outright. We look for private consumption to grow by 1.8-1.9% this year, similar to its 2018 performance, and for fixed investment to come in roughly flat (after 0.2% increase last year). Given this, it should not be too surprising that our overall GDP growth projection does not show a major slowdown either. Indeed, while we have brought this year's forecast down by a tenth, we still see the economy expanding 1.2% this year.

2020 is a far more binary story, depending on how Brexit plays out. The huge divergence of views among professional forecasters tells the story well, with the September 2019 Consensus Forecasts publication showing an extraordinary 2.0 percentage points gap between the low and the high estimates. Assuming a cliff-edge is avoided, growth should marginally improve in 2020, not dissimilar to our expectations for the eurozone.

Inflation accelerated quite sharply in 2017 on a combination of rising oil prices and the depreciation of sterling following the referendum result. Indeed, headline consumer price inflation jumped 2.0 percentage points to 2.7%, by far the highest in the G7. Since then, though, headline inflation has steadily retreated and stood at just 1.7% y/y in August. Core inflation has followed a similar path, spiking to 2.7% y/y in the latter part of 2017 but now down to 1.5%. Still, the Bank of England (BoE) views this as likely temporary, noting in its September policy statement that "unit wage cost growth has also risen, to a level above that consistent with meeting the inflation target in the medium term."

Given Brexit uncertainties, the BoE can't do much for the time being. Indeed, having cut the Bank Rate to 25 basis points in the immediate aftermath of the referendum and then raised twice (in November 2017 and August 2018), the BoE has since stayed pat. It stands ready either to cut in the event of a hard Brexit, but also to hike (though only "gradually and to a limited extent") should the more benign scenario of a favorable resolution play out. The promise—and the premise—remains the same: "in all circumstances, the Committee will set monetary policy appropriately to achieve the 2% inflation target. The MPC judges at this meeting that the existing stance of monetary policy is appropriate." In our view, the same stance will likely prove appropriate throughout 2020 as well.

Eurozone: Policy Diversification Is Desperately Needed, Will It Come?

Italy's political troubles have been much discussed. But it is the macro policy paralysis within the eurozone that troubles us just as much, if not more. The region is currently undergoing a cyclical slowdown. Such a deceleration should not be, in and of itself, either surprising or particularly problematic. Everyone agrees that eurozone's 2017 growth rate of 2.5% was unsustainable. The trouble really lies in the structural impediments to growth, which, unlike in a typical nation-state, are intimately linked to the region's incomplete monetary union and lack of an institutional framework designed to facilitate a flexible deployment of fiscal policy when required.

Do not get us wrong: there is an urgent need for national-level reforms in many eurozone countries. Italy's complaint that the common currency has shackled its industry has some validity, but is not the whole story. After all, Spain has the same single currency constraints, yet the Spanish economy has greatly outperformed Italy's. There must be something more then to the Italian underperformance story. What is it? The answer lies in national-level structural reforms (such as labor market reforms) that Italy has persistently avoided but which Spain has pushed through. A quick glance at the working-age female labor force participation (FLFP) in these two countries is quite revealing. Back in 1992, FLFP in Spain and Italy was almost identical at around 44%. Today, Spain stands at close to 70%, whereas Italy is far behind at just 56%. This is a severe limitation, but also an opportunity that, with the right policies, could be harvested to lift Italy's potential growth.

But even in a best-case scenario of considerable growth-enhancing reforms, changes are needed to the union's institutional framework in order to facilitate a mode flexible and effective deployment of fiscal policy to augment the so-far single-handed monetary policy intervention. Alternative solutions, such as fiscal spending aimed to attenuate the short-term pain of structural reforms, strikes us as a more impactful policy mix. It remains to be seen whether Mme. Lagarde—although at the helm of the ECB and so probably unlikely to wade very publicly into the fiscal policy debate—could wield influence

behind closed doors to energize the political establishment to move in this direction. Evidence that such a policy shift is underway would make us feel more sanguine about the region's medium term prospects.

For now, the region is stuck in low gear, with GDP growth unlikely to exceed 1.1% this year and 1.3% in 2020. Not only have both the weak and the strong been hurting in this downturn, but the traditional roles have even reversed somewhat. Germany is poised to grow just 0.6% this year, having narrowly escaped a technical recession in late 2018. And the road ahead remains exceedingly bumpy: Germany's manufacturing PMI has been stuck in contraction territory for over half a year, with little signs of improvement so far. In fact, it has fared worse than Italy's, whose economy did undergo a mild technical recession in 2018...By contrast, France is shaping up to be the growth leader among the "Big-3" this year, and unusual situation that to some extent mirrors the dichotomy seen around the world between a weak manufacturing sector and a much more resilient service sector. France is still expected to manage 1.4% growth this year, whereas Italy will be essentially flat.

Progress on inflation has been slow. The core measure is unlikely to move materially above 1.0% for some time yet given the backdrop of softer growth. Meanwhile, the headline dips to 1.3% in 2019, largely on account of oil prices and only moves up a couple of tenths next year.

Against this backdrop, the ECB eased progressively, with the deposit rate falling to zero in 2012, -20 basis points in 2014,-30 basis points in 2015, and to -40 basis points in March 2016. It also introduced a genuine QE program in January 2015 and subsequently made a slew of adjustments and enhancements to it. As growth accelerated and the threat of a broad-based deflation receded, the Bank changed direction in 2017, starting to "taper" QE that April and ending the program in December 2018 (reinvestments continued).

But ECB's hopes of exiting unconventional initiating genuine policy normalization have been thwarted once again. On the contrary, after repeatedly altering its forward guidance in response to the region's sharp slowdown and announcing another longer-term refinancing operations program (TLTRO-III), the Bank cut the deposit facility rate to -50 bp in September and, despite considerable opposition, announced it would restart QE in November. We are skeptical that this new round of stimulus would accomplish much. After all, we do not think eurozone's real problem is the high cost of capital, yet all that further monetary easing can hope to accomplish is to reduce borrowing costs. Still, until a better policy mix can be deployed, something is better than nothing....

Japan: More Policy Support Will Be Needed

Japan is one of the rare economies where economic activity has held up a little better than expected this year, driving a minor upgrade to our 2019 forecast. However, the economy is very vulnerable both to external risks and to the negative impact of the upcoming VAT hike. While the 2020 Olympics should support growth, the entirety of the macro dynamics are such that we have simultaneously lowered the 2020 growth forecast by two tenths to 0.3%. Longer term, structural reforms such as a more open migration policy, along with efforts to accelerate productivity are required to offset the aging workforce and revive potential growth. In this respect, we are encouraged by the clear pick-up in female labor force participation, but more will be needed to offset Japan's considerable demographic drag.

Growth has exceeded expectations in the first half of the year, which is why we have revised our GDP expectations for 2019 upward by 0.2 percentage points to 0.9%. Public investment supported growth in the first quarter, while consumption was a drag. In the second quarter, they reversed roles. Having said that, consumer spending has not been at par with expectations prior to the tax hike in October. The positive is that it probably implies that the drawdown in spending will also not be as acute as expected, especially because of the offsetting measures by the government. Unfortunately, it does not look like we can expect the typical pre-tax boost from private consumption.

Meanwhile, exports remain a drag as the trade situation unfolds while uncertainty continues to buffet investment spending. Manufacturing seems poised for persistent weakness as the PMI has languished below 50 for much of this year. Public investment has been a solid contributor to growth till date, but at public debt to GDP at close to 240% of GDP and a budget deficit of 3.8% (2018), there are clear limitations on this front. Post VAT tax hike, consumption will struggle. Admittedly, the Tokyo 2020Olympics should help, but we doubt the veracity of the contribution to topline growth. Slowing

growth in key export markets such as China and spillover effects from global trade spats remain a principal concern to companies, the risk now of Japan-South Korea relations deteriorating further merely adds to the already-strong headwinds.

Inflation has been anemic but the Bank of Japan insists that they are making progress on achieving the 2% target. A spike in oil prices following the disruption in Saudi Arabia's oil supply might mean a short-term boost to inflation, but the fundamentals are far from encouraging. Wage inflation has averaged a negative 0.6% over the course of the year, mainly impacted by the usually volatile bonus component. The silver lining has been a steady improvement in regular earnings, which strips off the bonus component. The irregularities due to methodological changes of computing labor cash earnings will mostly wear off in January and we might actually see an improvement in wage inflation. The intense rivalry amongst mobile network providers will also not help headline inflation. Although the Bank of Japan's measure of the output gap still points towards inflation of above 1%, we expect inflation to come in only at 0.6% in 2019 and improve only one tenth to 0.7% in 2020.

The Bank of Japan has watched several central banks make pre-emptive rate cuts, but has so far remained on the sidelines. That may change soon. Given limited fiscal space, the BoJ will again be expected to do the heavy lifting come 2020. Earlier in the April meeting, the BoJ made minor tweaks to the policy setting - relaxing eligibility criteria for provision of credit and expanding the eligibility criteria for collateral. We tend to believe that a broader slowdown in 2020 will force the BoJ to act. BoJ Governor Kuroda in a recent interview with Nikkei said that moving rates further into the negative territory is definitely an option[5], and we have factored in a 20 basis points cut into our forecasts, taking the policy rate to -0.30% in 2020. There are few other measures the bank might consider, 1) cut the Yield Curve Control (YCC) target with a flexibility margin, 2) expanding purchases for ETFs and JGBs, equivalent to another QE. To offset the impact on banks' profitability, the BoJ might take a page from ECB's playbook of a two-tier system for reserve remuneration.

Australia: Housing Sector Is Key

After a strong 3.8% (annualized) growth in the first two quarters of 2018, momentum fizzed out sharply in the second half, when GDP grew just 0.9% (annualized). Thus, while the full-year growth of 2.8% was an improvement over the 2.4% 2017 performance, this was two tenths below what the Reserve Bank of Australia had been anticipating. The RBA has revised down its growth forecasts to 2.5% for 2019 and around 2.75% in 2020, but we suspect further downgrades are in order.

Private consumption has long been a drag on overall GDP due to a myriad of factors—high debt, low household income and declining house prices. That said, consumption growth has averaged 0.4% over the past two quarters, pretty stable though below the long term average. The downside has been a drawdown in discretionary spending. So far retail sales have done little to quell the fear, amidst increasing competition from big e-commerce chains. However, there are reasons to be optimistic about the future. The tax refunds implemented by the Coalition government are expected to flow from August onwards, boosting disposable income. The successive interest rate cuts by the Reserve Bank of Australia should also modestly alleviate households' debt burden, while the amendment by the Australian Prudential Regulatory Authority (APRA) to ease borrowing criteria will help improve housing sentiment.

In our view, housing will be key to improving consumer sentiment. The quarterly ABS House Price index moderated somewhat in the June quarter, but prices still fell a record 7.4% from the previous year. Housing approvals have also fallen sharply over the past year and construction is likely to follow suit, at least until the end of 2019. But an easing bias by the RBA points to a recovery in 2020. The investment outlook is also negative. While the number of public infrastructure projects in the pipeline will boost mining investment, non-mining investment will suffer as a result of elevated global uncertainties. Further stimulus from the government remains a possibility, given the strong fiscal position. Exports are also expected to contribute positively, with a lower AUD offering significant support. Our outlook for growth is broadly unchanged, with GDP growing around 1.9% this year and accelerates to 2.5% in 2020.

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[5] https://in.reuters.com/article/bank-of-japan-kuroda/bojs-kuroda-says-deepening-negative-rates-is-among-options-nikkei-idINKCN1VR0JW

Underlying inflation has run at a soft 1.7-2.0% over the past couple of years as a result of an increasingly competitive retail environment, smaller administered price increases and, of course, slow wage growth. Indeed, while wage inflation (as measured by private-sector wages excluding bonuses) has clearly bottomed, it still only tracked at 2.3% y/y in the second quarter (whereas it ran at about 4.0% per year during the mid to late 2000s). Wage growth is unlikely to shoot up sometime soon, due to the excess capacity in the system. The underemployment rate rose for the third consecutive month to 8.6% in May, while the unemployment rate still has further room to fall from the current 5.3%. The RBA has acknowledged that the full-employment rate is probably somewhere around 4.5%, hence wage growth will recover only slowly as the gap closes. Our baseline expectation is therefore for inflation to be just 1.6% in 2019 before rising to a still modest 2.0% in 2020.

The ongoing labor market tightening, slow progress on inflation, declining consumer confidence, an intensifying housing correction, and heightened uncertainty about external demand induced the RBA to initiate a cumulative 50 basis points cut in June-July. The RBA has emphasized that any action hereon will be dependent on the nature of the incoming data. We are of the opinion that the RBA will be more motivated by domestic rather than global factors while considering the next move. The 0.1 percentage point increase in the August unemployment rate indicates that there still is too much spare capacity in jobs market, detrimental to wage growth and thus inflation. Housing-related inflation has also deteriorated sharply. We feel that the RBA has little choice but to ease further over the coming months as the domestic slowdown feeds into the labor market and global policy settings create upward pressure on the AUD. We expect the Bank to cut policy rate by 25 basis points in the October meeting, and another 25 basis points in 2020, bringing the cash rate down to 0.5%.

Financial Markets Summary

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Stock Markets					10 Year Bond Yields			Currencies		
Country	Exchange	Last	% Ch Week	% Ch YTD	Last	BP Ch Week	BP Ch YTD	Last	% Ch Week	% Ch YTD
US	S&P 500®	2996.71	-0.4%	19.5%	1.72	-17	-96	98.501	0.2%	2.4%
Canada	TSE 300	16898.68	1.3%	18.0%	1.39	-13	-58	1.328	-0.1%	-2.6%
UK	FTSE®	7344.92	-0.3%	9.2%	0.63	-13	-65	1.2472	-0.2%	-2.2%
Germany	DAX	12468.01	0.0%	18.1%	-0.52	-7	-76			
France	CAC-40	5690.78	0.6%	20.3%	-0.22	-5	-93	1.1021	-0.5%	-3.9%
Italy	FTSE® MIB	22123.25	-0.3%	20.7%	0.92	4	-182			
Japan	Nikkei 225	22079.09	0.4%	10.3%	-0.21	-5	-21	107.56	-0.5%	-1.9%
Australia	ASX 200	6730.754	0.9%	19.2%	1.02	-14	-130	0.6765	-1.7%	-4.0%

Commodity Markets

Commodity	Unit	Source	Last Price	%Ch Week	%Ch YTD	%Ch Yr Ago
Oil (Brent)	US $/Barrel	Bloomberg	64.69	6.7%	21.7%	-17.5%
Gold	US $/troy oz	Bloomberg	1516.24	1.9%	18.2%	25.6%

Source: Bloomberg®

Week in Review: Data Releases and Major Events (September 16–September 20)

Country	Release (Date, format)	Consensus	Actual	Last	Comments
Monday, September 16					
US	Empire Manufacturing (Sep)	4	**2**	4.8	Soft.
CA	Existing Home Sales (Aug, m/m)	1.3%	**1.4%**	3.5%	Benchmark prices rise sharpest in 2 years.
Tuesday, September 17					
US	Industrial Production (Aug, m/m)	0.2%	**0.6%**	-0.1%(↑r)	Manufacturing was up!
US	NAHB Housing Market Index (Sep)	66	**68**	67(↑r)	Encouraging.
CA	Manufacturing Sales (Jul, m/m)	-0.2%	**-1.3%**	-1.4%(↓r)	Disappointing.
GE	ZEW Investor Expectations (Sep)	-37.8	**-22.5**	-44.1	Pleasant surprise, but long way to recovery.
AU	RBA Meeting Minutes				Easing bias reaffirmed.
AU	House Price Index (Q2, q/q)	-1.0%	**-0.7%**	-3.0%	First signs of bottoming?
Wednesday, September 18					
US	FOMC Monetary Policy Decision	2.00%	**2.0%**	2.25%	Multiple dissents, both hawkish and dovish.
US	Building Permits (Aug, thous)	1307	**1419**	1317(↓r)	Big jump!
US	Housing Starts (Aug, thous)	1250	**1364**	1215(↑r)	Lower rates driving housing revival?
CA	CPI (Aug, y/y)	2.0%	**1.9%**	2.0%	Steady.
UK	CPI (Aug, y/y)	1.9%	**1.7%**	2.1%	Core also moderated to 1.5% y/y.
UK	PPI Output (Aug, y/y)	1.7%	**1.6%**	1.9%(↑r)	Under control.
EC	CPI (Aug, final, y/y)	1.0%(p)	**1.0%**	1.0%	Nothing exciting happening with inflation.
IT	Industrial Orders (Jul, m/m)	na	**-2.9%**	-1.0%(↓r)	Ouch!
JN	Trade Balance Adjusted (Aug, ¥ bil.)	-156.2	**-130.8**	-104.0(↑r)	Steeper drop in exports.
Thursday, September 19					
US	Initial Jobless claims (Sep 14, thous)	215	**208**	206(↑r)	Very low.
US	Leading Index (Aug, m/m)	-0.1%	**0.0%**	0.4%(↓r)	At least not turning lower.
US	Existing Home Sales (Aug, m/m)	-0.9%	**1.3%**	2.5%	Lower rates help.
US	Philadelphia Fed Business Outlook (Sep)	11.0	**12.0**	16.8	We'll take it...
CA	Teranet/National Bank HPI (Aug, y/y)	na	**0.6%**	0.4%	Green shoots.
UK	BOE Monetary Policy Decision	0.75%	**0.75%**	0.75%	On hold due to binary outlook.
UK	Retail Sales (Aug, m/m)	-0.1%	**-0.2%**	0.4%(↑r)	Weaker than expected but positive revision.
JN	BOJ Monetary Policy Decision	-0.10%	**-0.10%**	-0.10%	Still on the sidelines.
JN	All Industry Activity Index (Jul, m/m)	0.2%	**0.2%**	-0.7%(↑r)	Services likely to remain robust.
AU	Unemployment Rate (Aug)	5.2%	**5.3%**	5.2%	Reinforces easing bias for RBA.
Friday, September 20					
CA	Retail Sales (Jul, m/m)	0.6%	**0.4%**	0.0%	First increase in three months.
GE	PPI (Aug, y/y)	0.6%	**0.3%**	1.1%	Three-year low.
FR	Wages (Q2, final, q/q)	0.5%(p)	**0.5%**	0.8%	Steady.
JN	CPI (Aug, y/y)	0.3%	**0.3%**	0.5%	Anemic.

Source: for data, Bloomberg®; for commentary, SSGA Economics

Week in Preview: Data Releases and Major Events (September 23 – September 27)

Country	Release (Date, format)	Consensus	Last	Comments
Monday, September 23				
EC	Manufacturing PMI (Sep, prelim)	47.3	47.0	
EC	Services PMI (Sep, prelim)	53.2	53.5	
GE	Manufacturing PMI (Sep, prelim)	44.0	43.5	Is it bottoming?
GE	Services PMI (Sep, prelim)	54.3	54.8	
FR	Manufacturing PMI (Sep, prelim)	51.2	51.1	
JN	Manufacturing PMI (Sep, prelim)	na	49.3	Manufacturing pains unlikely to go away soon.
JN	Services PMI (Sep, prelim)	na	53.3	In contrast, services have been robust.
Tuesday, September 24				
US	FHFA House Price Index (Jul, m/m)	0.3%	0.2%	
US	S&P CoreLogic 20-City Index (Jul, m/m)	0.1%	0.0%	
US	Consumer Confidence (Sep)	134.0	135.1	Will it hold?
GE	IFO Business Climate (Sep)	94.5	94.3	
FR	Business Confidence (Sep)	105	105	Will it hold?
JN	Leading Index (Jul, final)	93.6(p)	93.6	
Wednesday, September 25				
US	New Home Sales (Aug, thous)	653	635	
GE	GfK Consumer Confidence (Oct)	9.6	9.7	
FR	Consumer Confidence (Sep)	103	102	Will it hold?
JN	PPI Services (Aug, y/y)	0.5%	0.5%	Has been pretty weak off late.
Thursday, September 26				
US	Initial Jobless claims (Sep 21, thous)	na	208	
US	GDP (Q2, third, saar q/q)	2.0%(p)	3.1%	
US	Pending Home Sales (Aug, m/m)	1.0%	-2.5%	
US	Kansas City Fed Manf. Activity (Sep)	na	-6	
Friday, September 27				
US	Personal Income (Aug, m/m)	0.4%	0.1%	Good hours data should support this.
US	Personal Spending (Aug, m/m)	0.3%	0.6%	Some moderation likely after strong run.
US	Durable Goods Orders (Aug, prelim, m/m)	-1.2%	2.0%	Will be interesting to see if what happens here.
US	U of M Cons. Sentiment (Sep, final)	92.0(p)	89.8	
UK	GfK Consumer Confidence (Sep)	-14	-14	Unsurprisingly soft.
FR	CPI (Aug, y/y)	1.1%	1.0%	
FR	PPI (Aug, y/y)	na	0.0%	
FR	Consumer Spending (Aug, m/m)	0.3%	0.4%	
IT	Consumer Confidence (Sep)	112.3	111.9	
IT	PPI (Aug, y/y)	na	-0.8%	

Source: for data, Bloomberg®; for commentary, SSGA Economics

Economic Indicators

Central Bank Policy Targets

		Year/Year % Change in Target				
		Apr	May	Jun	Jul	Aug
US	Target: PCE price index 2.0% y/y	1.5	1.4	1.3	1.4	
Canada	Target: CPI 2.0% y/y, 1.0%-3.0% control range	2.0	2.4	2.0	2.0	1.9
UK	Target: CPI 2.0% y/y	2.1	2.0	2.0	2.1	1.7
Eurozone	Target: CPI below but close to 2.0% y/y	1.7	1.2	1.3	1.0	1.0
Japan	Target: CPI 2.0% y/y	0.9	0.7	0.7	0.5	0.3
Australia	Target Range: CPI 2.0%-3.0% y/y	1.6	1.6	1.6		

Source: Macrobond

Key Interest Rates

	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	####	Jun-19	Jul-19	Aug-19
US (top of target range)	2.25	2.25	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.25
Canada (Overnight Rate)	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
UK (Bank Rate)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Eurozone (Refi)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Japan (OCR)	-0.07	-0.06	-0.06	-0.06	-0.05	-0.06	-0.07	-0.06	-0.08	-0.07	-0.06
Australia (OCR)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.28	1.02	1.00

Source: Macrobond

General Government Structural Balance as a % of Potential GDP

									Forecast	
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
US	-7.9	-6.1	-4.0	-3.4	-3.2	-3.9	-4.0	-4.7	-5.2	-5.0
Canada	-3.1	-1.9	-0.9	0.3	0.9	0.8	0.1	-0.2	-0.4	-0.7
UK	-5.9	-5.9	-3.9	-4.6	-3.9	-2.8	-1.9	-1.4	-1.2	-1.0
Eurozone	-3.9	-2.2	-1.3	-1.0	-0.9	-0.8	-0.7	-0.7	-0.9	-1.1
Germany	-1.4	-0.1	0.2	0.9	0.8	1.0	0.9	1.3	0.7	0.6
France	-5.2	-4.5	-3.5	-3.3	-3.0	-2.8	-2.6	-2.5	-2.5	-2.5
Italy	-4.1	-1.5	-0.6	-1.1	-0.7	-1.4	-1.6	-1.7	-2.1	-3.1
Japan	-8.0	-7.6	-7.5	-5.5	-4.3	-4.1	-3.4	-3.1	-2.8	-2.1
Australia	-4.2	-3.3	-2.6	-2.5	-2.4	-2.2	-1.2	-1.0	-1.2	-0.4

Source: International Monetary Fund, World Economic Outlook

Headline Consumer and Producer Price Inflation

	CPI Year/Year % Change					PPI Year/Year % Change				
	Apr	May	Jun	Jul	Aug	Apr	May	Jun	Jul	Aug
US	2.0	1.8	1.6	1.8	1.7	2.4	1.8	1.7	1.7	1.8
Canada	2.0	2.4	2.0	2.0	1.9	1.7	0.4	-1.7	-1.7	
UK	2.1	2.0	2.0	2.1	1.7	2.1	1.9	1.6	1.9	1.6
Eurozone	1.7	1.2	1.3	1.0	1.0	2.6	1.6	0.7	0.2	
Germany	2.0	1.4	1.6	1.7	1.4	2.5	1.9	1.2	1.1	0.3
France	1.3	0.9	1.2	1.1	1.0	1.9	0.9	0.0	0.0	
Italy	1.1	0.8	0.7	0.4	0.4	2.1	1.5	0.9	-0.5	
Japan	0.9	0.7	0.7	0.5	0.3	1.3	0.7	-0.2	-0.6	-0.9
Australia	1.6	1.6	1.6			2.0	2.0	2.0		

Source: Macrobond

Economic Indicators

Real GDP Growth (Q/Q Seasonally Adjusted)

	Quarter/Quarter % Change					Year/Year % Change				
	Q2-18	Q3-18	Q4-18	Q1-19	Q2-19	Q2-18	Q3-18	Q4-18	Q1-19	Q2-19
US	0.9	0.7	0.3	0.8	0.5	3.2	3.1	2.5	2.7	2.3
Canada	0.6	0.5	0.1	0.1	0.9	1.8	2.0	1.6	1.4	1.6
UK	0.4	0.7	0.2	0.5	-0.2	1.4	1.6	1.4	1.8	1.2
Eurozone	0.4	0.2	0.3	0.4	0.2	2.3	1.7	1.2	1.3	1.2
Germany	0.4	-0.1	0.2	0.4	-0.1	2.1	1.1	0.6	0.9	0.4
France	0.2	0.3	0.4	0.3	0.3	1.9	1.5	1.2	1.3	1.4
Italy	0.0	-0.1	-0.1	0.1	0.0	1.0	0.5	0.0	-0.1	-0.1
Japan	0.5	-0.5	0.4	0.5	0.3	1.4	0.2	0.3	1.0	0.8
Australia	0.7	0.3	0.1	0.5	0.5	3.1	2.6	2.2	1.7	1.4

Source: Macrobond

Industrial Production Index (M/M Seasonally Adjusted)

	Month/Month % Change					Year/Year % Change				
	Apr	May	Jun	Jul	Aug	Apr	May	Jun	Jul	Aug
US	-0.6	0.2	0.1	-0.1	0.6	0.7	1.8	1.1	0.5	0.4
Canada	1.1	0.4	-0.5			2.1	2.2	1.1		
UK	-3.1	1.2	-0.1	0.1		-1.4	0.5	-0.6	-0.9	
Germany	-2.0	0.1	-1.1	-0.6		-2.8	-4.5	-4.8	-4.2	
France	0.5	2.0	-2.3	0.3		1.0	3.9	-0.1	-0.2	
Italy	-0.8	1.0	-0.3	-0.7		-1.4	-0.7	-1.3	-0.5	
Japan	0.6	2.0	-3.3	1.3		-1.6	0.1	-2.2	-1.1	

Source: Macrobond

Unemployment Rate (Seasonally Adjusted)

	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	####	Jun-19	Jul-19	Aug-19
US	3.8	3.7	3.9	4.0	3.8	3.8	3.6	3.6	3.7	3.7	3.7
Canada	5.7	5.6	5.6	5.8	5.8	5.8	5.7	5.4	5.5	5.7	5.7
UK	4.0	4.0	3.9	3.9	3.8	3.8	3.8	3.9	3.8		
Eurozone	8.0	7.9	7.9	7.8	7.8	7.7	7.6	7.6	7.5	7.5	
Germany	5.1	5.0	5.0	5.0	5.0	4.9	4.9	5.0	5.0	5.0	5.0
France	9.0	8.9	8.9	8.8	8.6	8.6	8.5	8.5	8.5	8.5	
Italy	10.7	10.5	10.4	10.4	10.5	10.1	10.1	9.9	9.8	9.9	
Japan	2.4	2.5	2.4	2.5	2.3	2.5	2.4	2.4	2.3	2.2	
Australia	5.0	5.1	5.0	5.1	4.9	5.1	5.2	5.2	5.2	5.2	5.3

Source: Macrobond

Current Account Balance as a % of GDP (Seasonally Adjusted)

	Q4-16	Q1-17	Q2-17	Q3-17	Q4-17	Q1-18	Q2-18	Q3-18	Q4-18	Q1-19	Q2-19
US	-2.2	-2.2	-2.5	-2.0	-2.3	-2.3	-2.1	-2.4	-2.8	-2.6	-2.4
Canada	-1.9	-2.5	-2.6	-3.1	-3.0	-3.0	-2.8	-1.8	-3.0	-3.0	-1.1
UK	-4.0	-3.0	-4.1	-3.1	-3.0	-3.4	-3.3	-4.3	-4.4	-5.6	
Eurozone	2.8	3.0	2.5	3.9	3.5	3.3	3.0	2.6	2.8	3.1	2.4
Germany	8.0	8.3	6.9	8.6	8.6	8.4	7.6	6.5	7.4	7.8	7.5
France	-0.7	-1.3	-0.7	-0.7	-0.3	-0.3	-1.5	-0.4	-0.4	-0.6	-0.6
Japan	4.1	4.3	3.7	4.6	4.2	3.6	4.0	3.4	3.1	3.4	3.5
Australia	-1.5	-1.5	-2.5	-2.8	-3.5	-2.2	-2.7	-2.2	-1.4	-0.2	1.2

Source: Macrobond

Important Risk Discussion

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