London Borough of Tower Hamlets

GS Strategic Absolute Return Bond II Portfolio

Portfolio Review

GSAM Global Fixed Income and Liquidity Solutions

December 2018

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Goldman Sachs
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I. Executive Summary

Executive Summary

As of 31-Dec-2018

Asset Management

Account Summary

Account Name	London Borough of Tower Hamlets Pension Fund - GS STAR Bond II
Assets	GBP 51mn
Benchmark	3 Month GBP LIBOR
Target Tracking Error	500-600 bps
Target Excess Return	400-500 bps
Performance Inception Date	4-Apr-2016

Performance Summary

	Portfolio Net (%)	Target (Benchmark +4%)	Difference Gross (bps)
Last 1 Months	(0.55)	0.40	(95)
4Q 2018	(0.70)	1.20	(-190)
2018 YTD	(2.62)	4.73	(735)
Since Inception (Ann)	0.06	4.49	(443)

Portfolio Summary

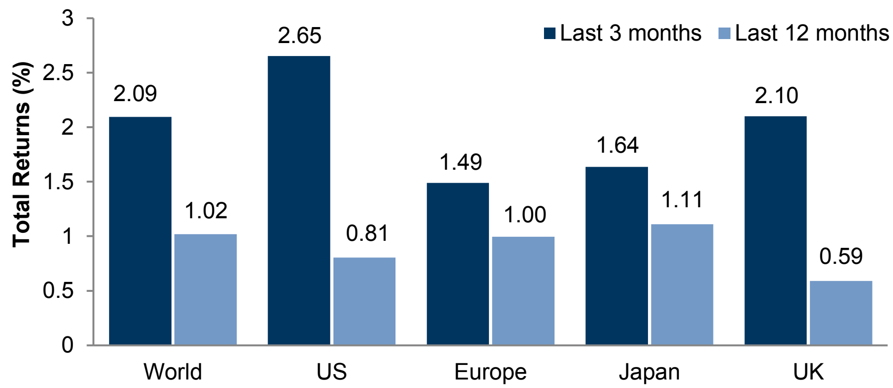
	Portfolio	Benchmark	Difference
Number of Countries	44	0	44
Yield to Maturity (%)	2.53	0.91	1.62
Yield to Worst (%)	2.51	0.91	1.60
Option Adjusted Duration (yrs)	0.37	0.25	0.12
OA Spread Duration (yrs)	2.35	0.25	2.10
Maturity (Bonds, yrs)	6.33	0.00	6.33
Average Life (Bonds, yrs)	3.90	0.00	3.90
Libor OAS (bps)	111	0	111

As of 31-Dec-2018. Performance inception date: 4-Apr-2016. **Past performance does not guarantee future results, which may vary.** Targets are subject to change and are current as of the date of this presentation. Targets are objectives and do not provide any assurance as to future results. Please see additional disclosures. The returns are gross and do not reflect the deduction of investment in advisory fees, which will reduce returns. Portfolio holdings and/or allocations shown above are as of the date indicated and may not be representative of future investments. The holdings and/or allocations shown may not represent all of the portfolio's investments. Future investments may or may not be profitable.

II. Market Review

Market Review

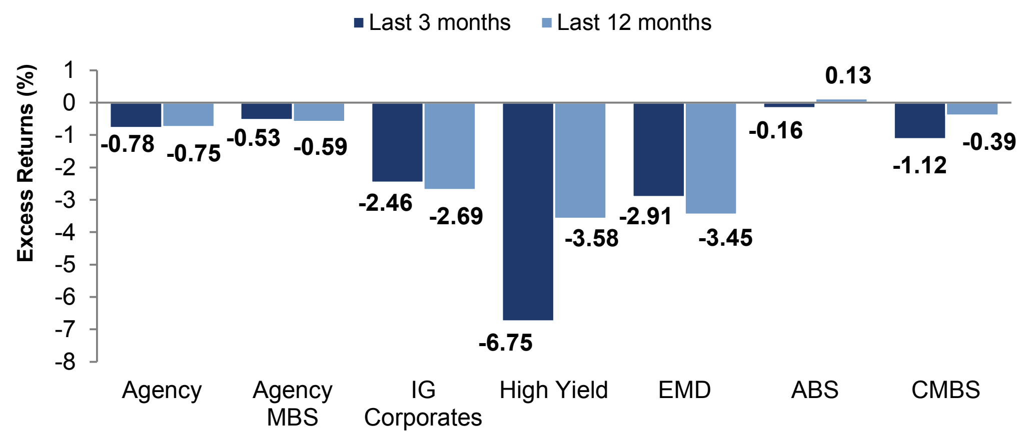
Global Government Markets – Local Currency



Source: Bloomberg

- Global government bonds posted positive returns during the fourth quarter of 2018. The Federal Open Market Committee (FOMC) delivered the fourth rate hike of 2018 at its meeting in December. The median dot plot projection shifted to two rate hikes in 2019 from three previously.
- Unlike their US counterpart, the Bank of Japan (BoJ) and Bank of England (BoE) kept policy rates unchanged at their December meeting. The BoE noted that UK wages are rising at a faster-than-anticipated pace but also reiterated that rate rises should be gradual and limited. We think limited deflationary risks will lead the ECB to raise rates in the second half of the year (barring a material growth shock). However, in our view, commencing the process of lifting policy rates out of negative territory does not equate to monetary tightening. We think sluggish inflation will require prolonged monetary accommodation.

Sector[3] Performance (in USD) – Excess Returns[2] Over Government Bonds



Source: Barclays, Bloomberg

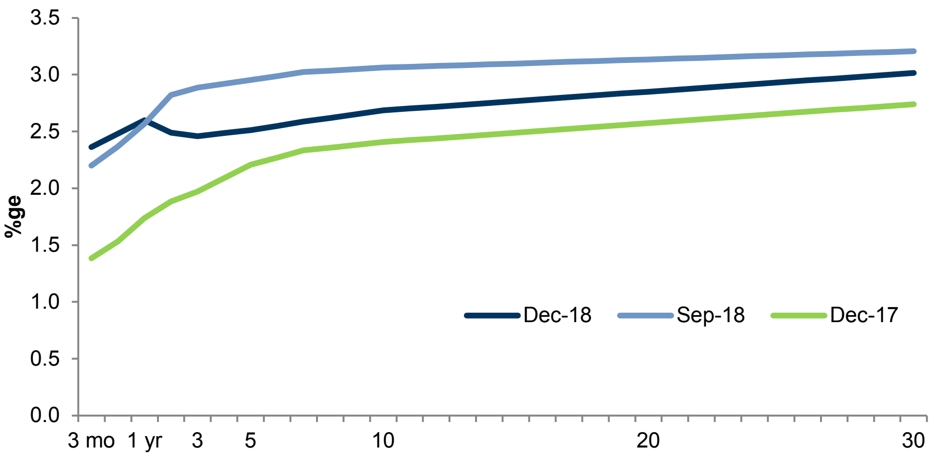
- In the fourth quarter, performance was negative across the spread sectors.
- High yield corporate credit was the worst performing sector and the proportion of US-dollar denominated high yield rated bonds trading below par has risen to the highest level since the financial crisis. Besides concerns about the broader macroeconomic cycle, the decline was driven by corporate profit margin pressures given the rising input and wage costs, company specific events, lower oil prices and prolonged trade concerns.
- Investment Grade corporate credit returns were also negative for similar reasons. IG debt was also under pressure due to earnings expectations, highlighted by Apple revising down Q4 18 revenue guidance.
- Emerging market debt returned to negative territory for the third time in 2018. This was mainly driven by countries, such as Venezuela and Nigeria, affected by the freefall of oil prices in Q3. Argentina was another key underperformer as it grappled with its ongoing macroeconomic adjustments.

[1] Total returns are calculated from the respective regions based off the JP Morgan Global Government Bond Index.[2] This is the excess return over swaps, and is based off GSAM's non-agency MBS factor return. All securities are denominated in US$.[3] Agency: Bloomberg Barclays Global Aggregate: Government Related Agencies; MBS: Bloomberg Barclays US MBS; IG Corporates: Bloomberg Barclays Global Aggregate Corporates; High Yield: Bloomberg Barclays US Corporate High Yield, EMD: Bloomberg Barclays EM (US$) Aggregate. **Past performance does not guarantee future results, which may vary.** As of December 31,2018. Source: GSAM

Market Review

Goldman Sachs Asset Management

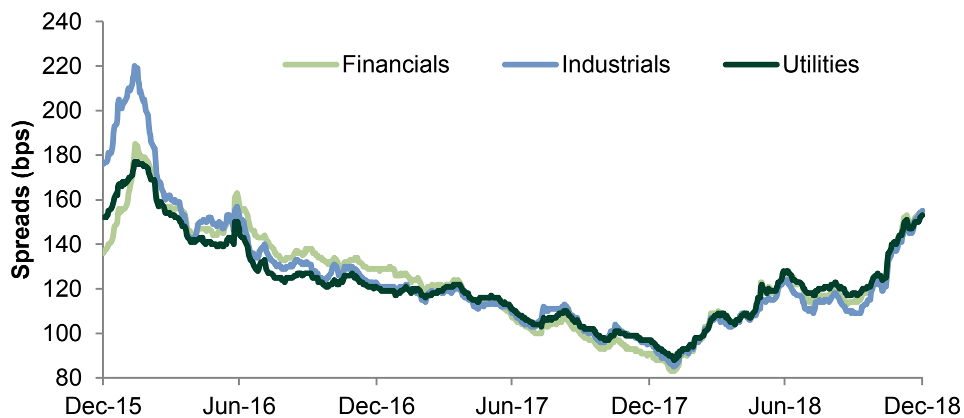
US Treasury Yields (%)



Source: Bloomberg

- The US yield curve steepened slightly over the last quarter of 2018, as the spread between the 2-year and 30-year nodes of the curve increased by 14bps to close at 53bps. 30-year yields decreased by 19bps, whilst 2-year yields decreased by 33bps. The front-end of the curve also inverted for the first time in a decade, with increasing pressure at the front-end paired with medium-term concerns about growth and inflation.
- The Federal Open Market Committee (FOMC) delivered the fourth rate hike of 2018 at its meeting in December. The median dot plot projection shifted to two rate hikes in 2019 from three previously.
- The US economy added 312,000 jobs in December 2018 and annual growth in average hourly earnings reached a cycle-high of 3.2%. The unemployment rate ticked up from 3.7% to 3.9% though this largely reflects an increase in labor force participation.

Global Investment Grade Corporate Spreads



Source: Bloomberg

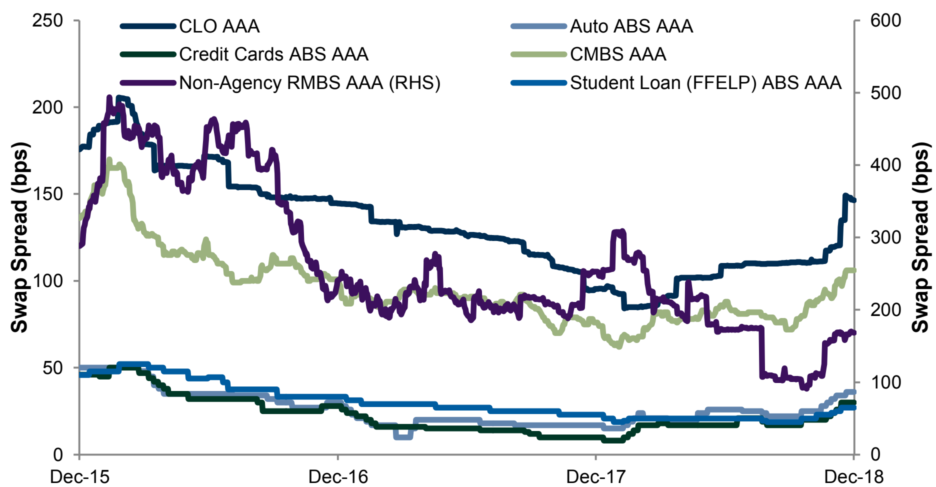
- Global investment grade corporate spreads widened significantly in the fourth quarter of the year, as spreads on the Bloomberg Barclays Global Aggregate Corporate index rose by 43bps to end at 155bps over sovereigns. This resulted from a combination of investor concerns relating to global trade hostilities, oil prices, decelerating global growth, withdrawal of central bank liquidity and potential "peak" corporate earnings growth. Global Industrials widened the most, by 45bps, whilst Utilities widened the least, by 35bps. Financials widened by 41bps. Regionally, the US underperformed, widening by 47bps to 153bps over Treasuries, whilst Euro corporates widened by 38bps to 152bps over sovereigns.
- New issuance fell quite significantly in both the US and Europe in Q4 2018, with totals amounting to $202bn and €78bn respectively. New issuance was dominated by Industrials in both regions, in contrast to the preceding quarter when Financials dominated.

GSAM As of December 31,2018. **Past performance does not guarantee future results, which may vary.**

Market Review

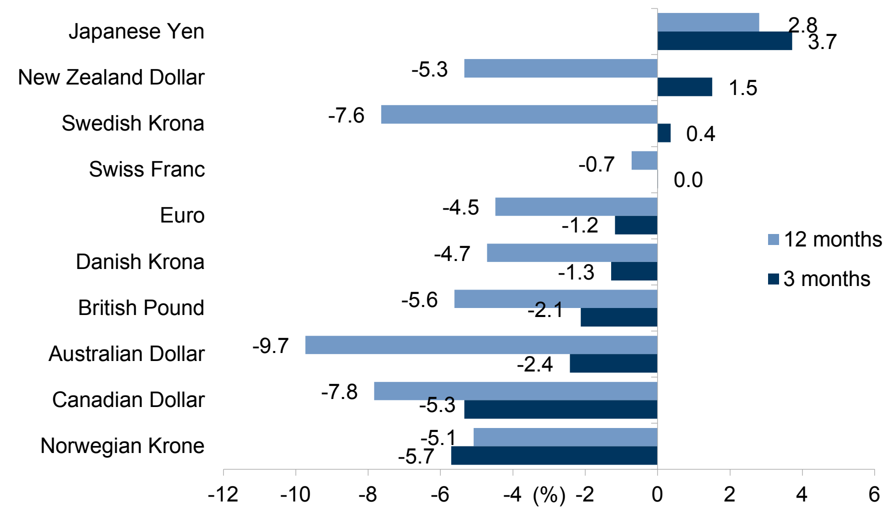
Goldman Sachs Asset Management

Securitised Credit



Source: JP Morgan, GSAM

Major Currency Movements vs. USD (%)



Source: Bloomberg

- Almost all securitized credit sub-sectors came under spread widening pressure in Q4 2018 in sympathy with corporate credit and ultimately a broader risk-off market tone. Non-agency MBS have outperformed corporate credit over the quarter and the entire year 2018 driven mainly by increased prepayment rates on seasoned collateral, as home prices continue to increase.
- ABS and CLOs ended 2018 with spreads in December at their widest for the year. The ABS market started the year strong on the backdrop of a record-high stock market and investor optimism whereas in December, the ABS and CLO markets closed with increased equity market volatility and heightened investor concerns.

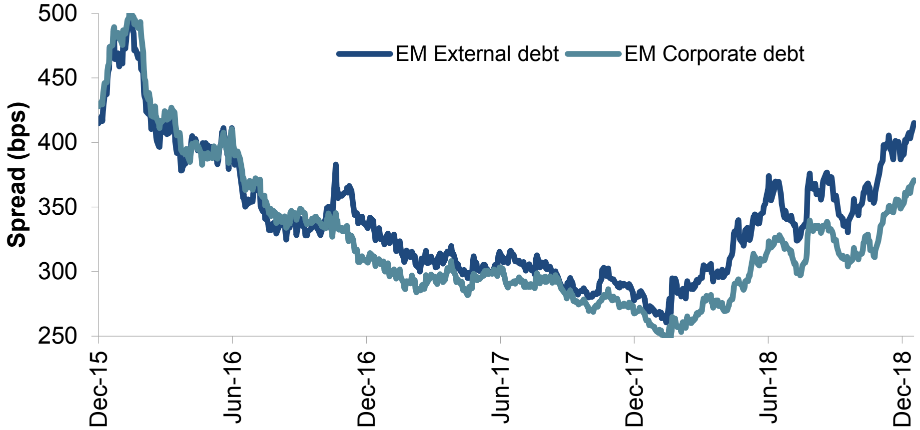
- The majority of G10 currencies vs the US dollar depreciated over the quarter, with the Japanese Yen, New Zealand Dollar and Swedish Krona being the outliers. The Yen was the best performing currency over the period. Overall weak performance in risk assets and a subsequent decline in US treasury yields saw flows into haven currencies such as the Yen.
- The Norwegian Krone was the weakest performing G10 currency over the quarter. The currency was predominantly driven by the largest decline in oil prices since 2008 as well as also being impacted by a broader weakness in market sentiment.

GSAM Source: JP Morgan, GSAM, Bloomberg. CLO AAA : CLO Post AAA Portfolio discount margin; Credit Card ABS AAA : Credit Cards Fixed AAA – 3 Year spread to swap; Non-Agency RMBS AAA : ABX. HE. 07-1. AAA Cashflow spread (base case); Auto ABS AAA : Auto (Prime) Fixed AAA – 3 Year Spread to Swap; CMBS AAA : New issue CMBS 10 year on the run AAA Spread to Swap; Student Loan (FFELP) ABS AAA : Student Loans (FFELP) AAA – 5 year spread to Libor. As of December 31,2018. **Past performance does not guarantee future results, which may vary.**

Market Review

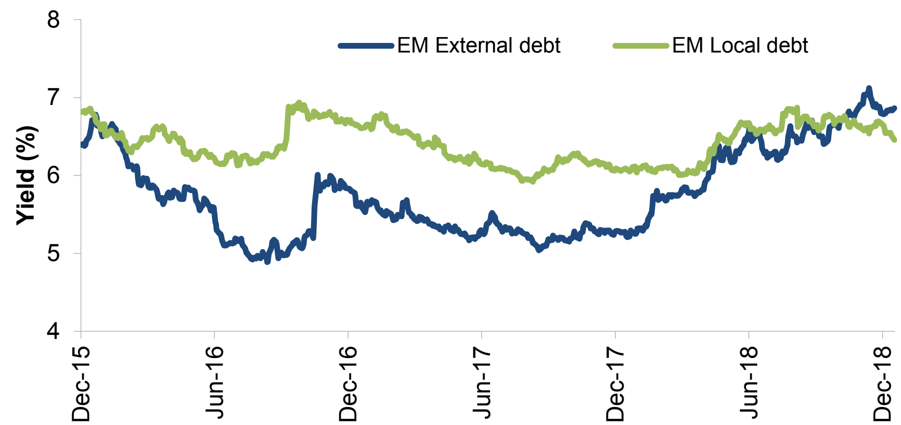
Goldman Sachs Asset Management

External Emerging Market Debt Spreads



Source: Bloomberg

Local and External Emerging Market Debt Yields



Source: Bloomberg

- Both EM external and EM Corporate spreads widened over the quarter by 80bps and 61bps, respectively. Spreads on EM external debt ended at 415bps, while EM corporate spreads were 371bps at the end of the quarter. EM external sovereign debt returned -1.26% during the quarter while EM corporate debt returned -0.04%.

- The sell-off in emerging markets continued into the fourth quarter, as global and Chinese growth showed signs of slowing down, US-China trade tensions persisted and global liquidity conditions continued to tighten. Middle East and African credits were the largest underperformers in the JPM EMBI Index as oil prices fell over the quarter. Argentina was another key underperformer as it grappled with its ongoing macroeconomic adjustments.

- The JPMorgan GBI-EM Global Diversified Index (unhedged, in US dollars) returned 2.11% in Q4, comprising of -0.82% currency depreciation and 2.93% from local rates. Bouncing back from their severe underperformance in prior months, Turkey and Argentina emerged as the biggest outperformers in the GBI-EM index over the quarter.

- In Turkey, the Finance Minister announced that they will not issue new debt during December in an attempt to lower rates. The central bank kept its policy rates on hold at the meeting in October and subsequently in December that led to a lira rally versus the dollar, which also strengthened on current account improvement driven by weaker oil prices. Meanwhile, Argentine local debt gained mostly in October as Argentina had the standby financing agreement from the IMF increased to $56.3bn from the original $50bn agreed, which bolstered the currency. However, the additional funding from IMF requires spending cuts and taxes to bring Argentina's primary fiscal deficit to balance in 2019.

EM External represented by the JPM EMBI Global Diversified. EM Local represented by the JPM GBI-EM Global Diversified. EM Corporate represented by JPM CEMBI Broad Diversified. Spreads quoted are over treasuries. **Past performance does not guarantee future results, which may vary.** As of December 31,2018.

III. Performance and Attribution

London Borough of Tower Hamlets Performance

GS Strategic Absolute Return Bond II Portfolio (I Flat Acc. GBP Hedged Share Class)

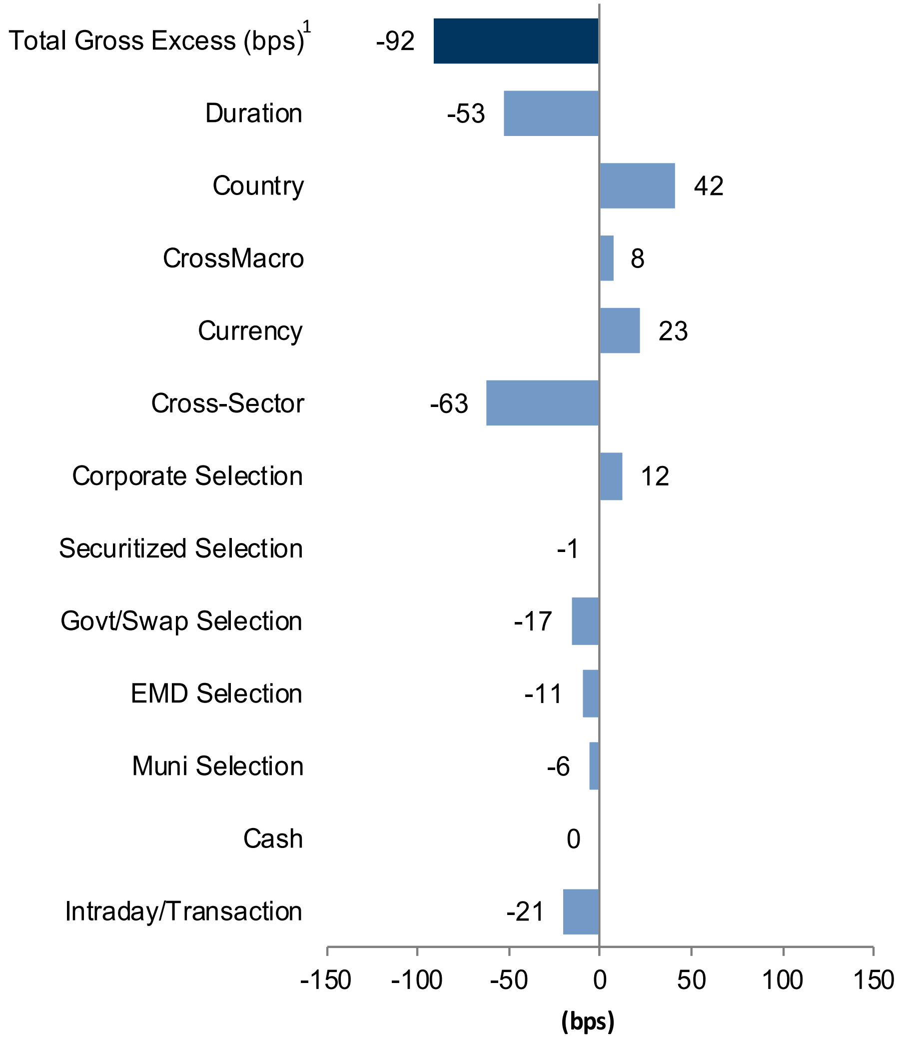
Goldman Sachs Asset Management

	(%)			(bps)
As of December 31, 2018	Portfolio (Net)	Benchmark[1]	Target (Benchmark +4%)	Difference vs Target (Net)
Trailing Periods				
Last 1 Year	-2.62	0.73	4.73	-735
Last 6 Months	-0.89	0.42	2.40	-329
Last 3 Months	-0.70	0.22	1.20	-190
Quarters				
1Q18	-0.10	0.14	1.12	-122
2Q18	-1.65	0.17	1.15	-281
3Q18	-0.19	0.20	1.18	-137
4Q18	-0.70	0.22	1.20	-190
Months				
Jul-18	0.94	0.06	0.39	55
Aug-18	-1.75	0.07	0.40	-214
Sep-18	0.63	0.07	0.39	24
Oct-18	-0.17	0.07	0.40	-56
Nov-18	0.01	0.07	0.40	-39
Dec-18	-0.55	0.08	0.40	-95
Since Inception[2]				
Annualised Return	0.06	0.52	4.49	-443

1 Benchmark: 3-Month LIBOR (GBP) Benchmark.
2 Client performance inception date: 04-Apr-2016.
Past performance does not guarantee future results, which may vary.

Performance Attribution

4Q 2018



Primary drivers of performance

- The portfolio underperformed over the period. This was predominantly due to our Cross-Sector and Duration strategies, whilst the Country and Currency strategies were positive contributors.
- Our Cross-Sector strategy was the largest detractor from performance. Long positions in investment grade and high yield corporates were drivers of this underperformance amidst a risk off environment as the quarter came to a close. Yet, we believe the pronounced spread widening observed in the final quarter of 2018 is excessive relative to the mild deterioration in the outlook for corporate and macro fundamentals. As such, we view recent market re-pricing as an opportunity to add exposure.
- Our Duration strategy was also a detractor during the period as macro growth concerns and trade tensions led to a broad risk-off sentiment toward the end of the period. The rally in U.S. interest rates detracted from our short U.S. rate position.
- Our Country strategy however, contributed to performance during the quarter. In particular, our long Europe vs. Sweden positions were beneficial as the Riksbank raised rates for the first time in seven years, increasing its policy rate to -0.25 percent and signaling a further hike to come over the course of 2019.
- The portfolio's Currency strategy also contributed to performance. Positions in Argentinian Peso were particularly accretive over the period as investors continued to move into the currency amidst short-term government bond issuance at high interest rates.

[1]Gross Excess vs the Benchmark

Note: Allocations may not sum to total due to rounding. Residual/Other: The difference between the fixed income proprietary risk and attribution model and the official GSAM performance system may be due to varying pricing, valuation, and data sources, as well as ad hoc custodian and accounting reconciliations. Benchmark: 3 Month GBP LIBOR. **Past performance does not guarantee future results, which may vary.** Portfolio Holdings may not be representative of current or future investments. Future portfolio holdings may not be profitable. The returns presented herein are gross and do not reflect the deduction of investment advisory fees, which will reduce returns.

IV. Portfolio Positioning

GS Strategic Absolute Return Bond II Portfolio

Current Positioning and Opportunities - Details (Macro)

Goldman Sachs Asset Management

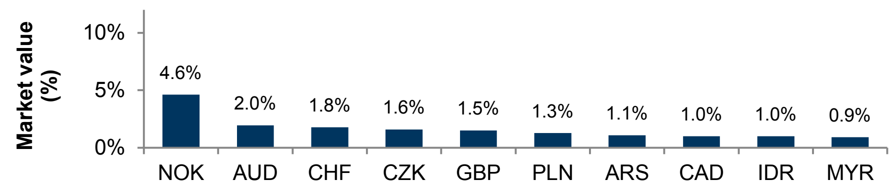
Interest Rate Duration

Total Portfolio Interest Rate Duration[1] :	**-1.22 years**
Active Duration:	-2.27 years
Country:	-0.18 years
Other[2] :	1.23 years

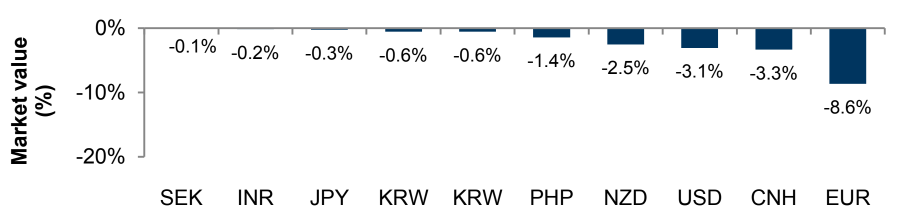
Active Duration Positioning

Active Duration:	**-2.27 years**
US: -2.32 years	UK: --
Europe: 0.30 years	Sweden: -0.06 years

Top Net Currency Exposure



Bottom Net Currency Exposure



Country Strategy Positioning

Country Strategy:	**-0.18 years**
US: -0.11 years	Canada: 0.54 years
UK: -1.58 years	Europe: 2.24 years
Sweden: -1.29 years	Other: 0.02 years

Key Cross Macro positions

Relative Financial Conditions:

Overly Restrictive	Too Accommodative	Expression
Europe	UK	Long EUR vs Short UK rates vs. EURGBP Real Yields

Correlated Asset Relative Value (Rates vs FX):

Europe vs. US	Long Europe rates vs. Short US rates vs. EURUSD
Canada vs. US	Long Canada rates vs. Short US rates vs. USDCAD

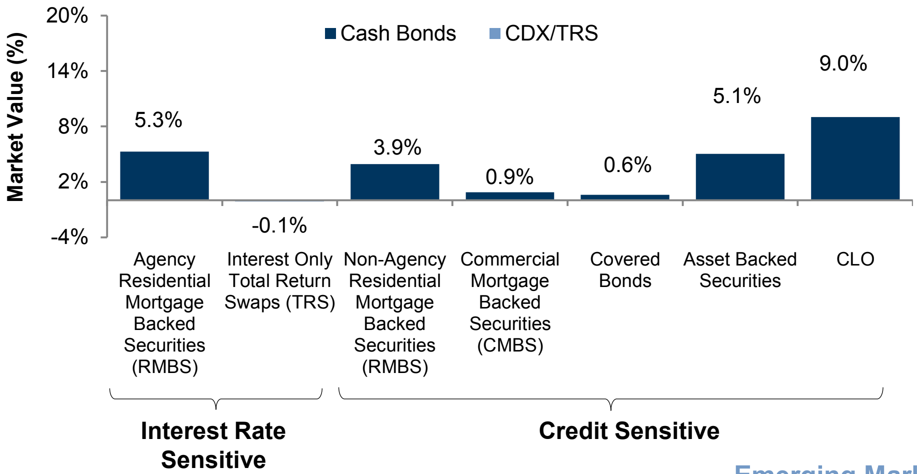
Source: GSAM. Data as of December 31, 2018 and subject to change. Any mention of an investment decision is intended only to illustrate our investment approach and/or strategy, and is not indicative of the performance of our strategy as a whole. It should not be assumed that any investment decisions shown will prove to be profitable, or that any investment decisions made in the future will be profitable or will equal the performance of the investments discussed herein. A complete list of past recommendations is available upon request. Please see additional disclosures. **Past performance does not guarantee future results, which may vary.** [1] Interest Rate Duration is a modified measure of Total Average Duration that has been estimated by GSAM. This modified measure seeks to take account of the different behaviours of different bond markets around the world by re-expressing all duration exposures to a common US market standard. The goal is to improve the estimate of the portfolio's sensitivity to changes in interest rates. This estimate is guided by historical market observations amongst markets which are themselves subject to change over time and may not necessarily be reflected by the actual outcome. This refers to the duration adjusted for volatility and not raw duration. [2] Others comprises of EMD, Cross Sector, Cross Macro and Gov./Swaps strategies. Portfolio holdings and/or allocations shown above are as of the date indicated and may not be representative of future investments. The holdings and/or allocations shown may not represent all of the portfolio's investments. Future investments may or may not be profitable.

GS Strategic Absolute Return Bond II Portfolio

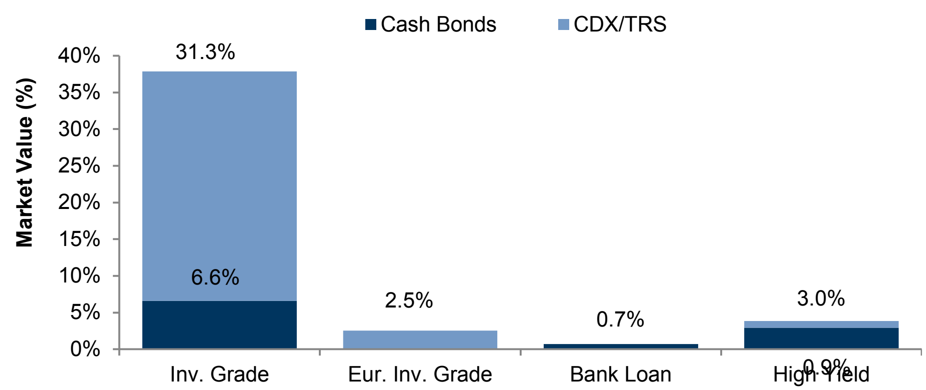
Current Positioning and Opportunities - Details (Sector)

Goldman Sachs Asset Management

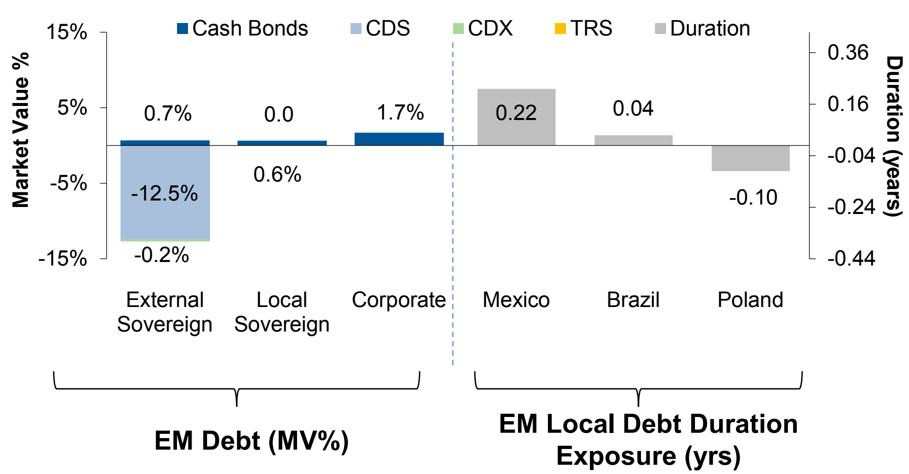
Securitized (24.6% by MV)



Corporate Credit (44.9% by MV)



Emerging Markets Debt (-9.8%)



Source: GSAM. Data as of December 31, 2018 and subject to change. Any mention of an investment decision is intended only to illustrate our investment approach and/or strategy, and is not indicative of the performance of our strategy as a whole. It should not be assumed that any investment decisions shown will prove to be profitable, or that any investment decisions made in the future will be profitable or will equal the performance of the investments discussed herein. A complete list of past recommendations is available upon request. Please see additional disclosures.. **Past performance does not guarantee future results, which may vary.** Portfolio holdings and/or allocations shown above are as of the date indicated and may not be representative of future investments. The holdings and/or allocations shown may not represent all of the portfolio's investments. Future investments may or may not be profitable.

Risks

GS Strategic Absolute Return Bond II Portfolio

Goldman Sachs Asset Management

- **Market risk** - the value of assets in the Portfolio is typically dictated by a number of factors, including the confidence levels of the market in which they are traded.
- **Operational risk** - material losses to the Portfolio may arise as a result of human error, system and/or process failures, inadequate procedures or controls.
- **Liquidity risk** - the Portfolio may not always find another party willing to purchase an asset that the Portfolio wants to sell which could impact the Portfolio's ability to meet redemption requests on demand.
- **Exchange rate risk** - changes in exchange rates may reduce or increase the returns an investor might expect to receive independent of the performance of such assets. If applicable, investment techniques used to attempt to reduce the risk of currency movements (hedging), may not be effective. Hedging also involves additional risks associated with derivatives.
- **Custodian risk** - insolvency, breaches of duty of care or misconduct of a custodian or sub-custodian responsible for the safekeeping of the Portfolio's assets can result in loss to the Portfolio.
- **Contingent Convertible ("Coco") Bond Risk:** Investment in this particular type of bond may result in material losses to the Portfolio based on certain trigger events. The existence of these trigger events creates a different type of risk from traditional bonds and may more likely result in a partial or total loss of value or alternatively they may be converted into shares of the issuing company which may also have suffered a loss in value. Such trigger events may include a reduction in the issuers' capital ratio, determination by a regulator or the injection of capital by a national authority. Investors should be aware that in the event of a financial crisis that action by regulators or the companies themselves may cause concentrations of these trigger events across the Portfolio.
- **Interest rate risk** - when interest rates rise, bond prices fall, reflecting the ability of investors to obtain a more attractive rate of interest on their money elsewhere. Bond prices are therefore subject to movements in interest rates which may move for a number of reasons, political as well as economic.
- **Credit risk** - The failure of a counterparty or an issuer of a financial asset held within the Portfolio to meet its payment obligations will have a negative impact on the Portfolio.
- **Derivatives risk** - certain derivatives may result in losses greater than the amount originally invested.
- **Counterparty risk** - a party that the Portfolio transacts with may fail to meet its obligations which could cause losses.
- **Emerging markets risk** - emerging markets are likely to bear higher risk due to lower liquidity and possible lack of adequate financial, legal, social, political and economic structures, protection and stability as well as uncertain tax positions.
- **High yield risk** - high-yield instruments, meaning investments which pay a high amount of income generally involve greater credit risk and sensitivity to economic developments, giving rise to greater price movement than lower yielding instruments.
- **Leverage risk -** the Portfolio may operate with a significant amount of leverage. Leverage occurs when the economic exposure created by the use of derivatives is greater than the amount invested. A leveraged Portfolio may result in large fluctuations in the value of the Portfolio and therefore entails a high degree of risk including the risk that losses may be substantial.

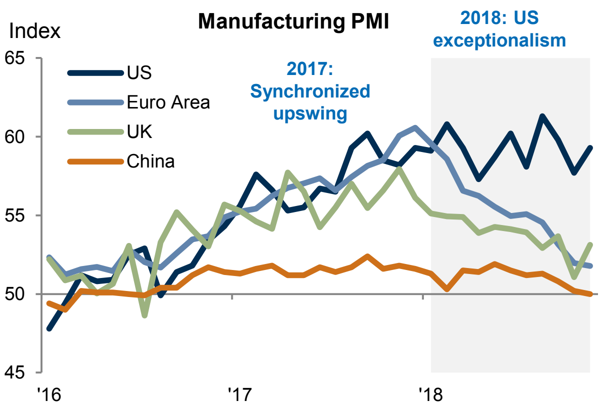
For full description of risks please refer to the Prospectus.

V. Macro Outlook

2018 Review – Snapshot Charts

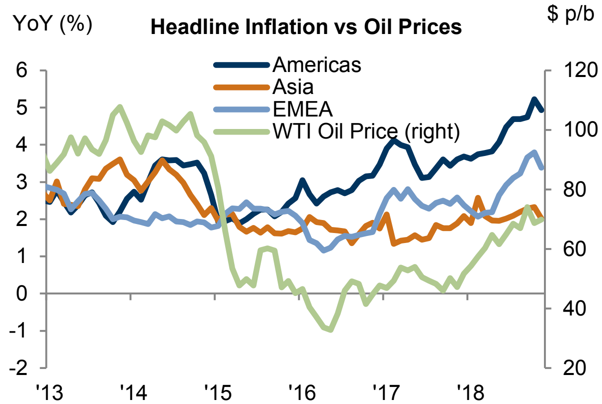
Goldman Sachs Asset Management

Growth: Moderation outside the US



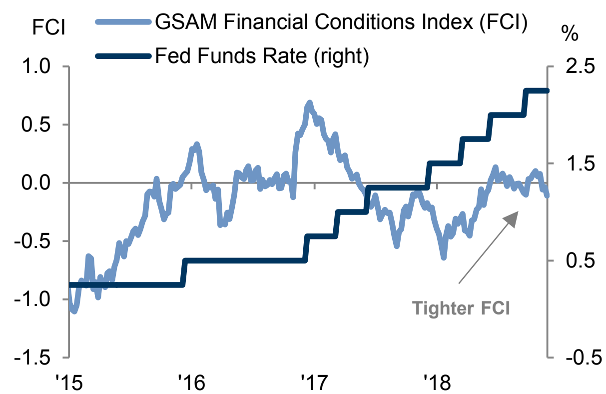
Source: Macrobond, Markit, ISM, NBS. As of November 2018.

Inflation: Lifted by energy prices



Source: Macrobond. GSAM regional calculations. As of November 2018.

Central Banks: Tighter US FCI

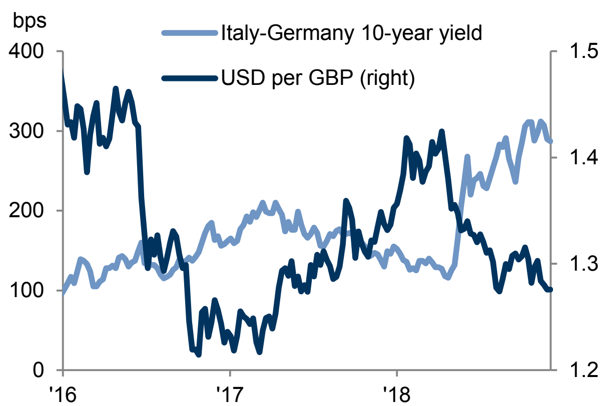


Source: Macrobond, GSAM. As of December 7, 2018.

Trade tensions: US-China Dispute

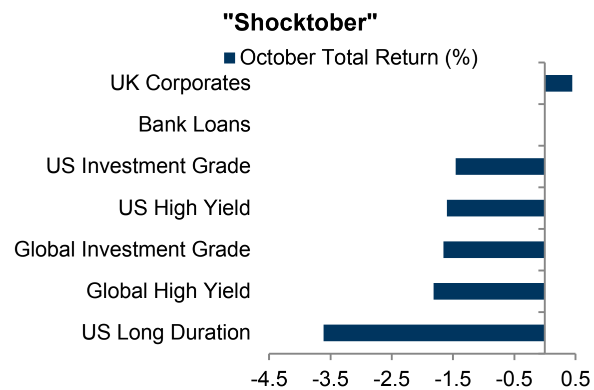
Source: Macrobond. Annual data.

Politics: EM, Italian & UK uncertainty



Source: Macrobond. As of December 7, 2018.

Markets: Volatility and Drawdowns

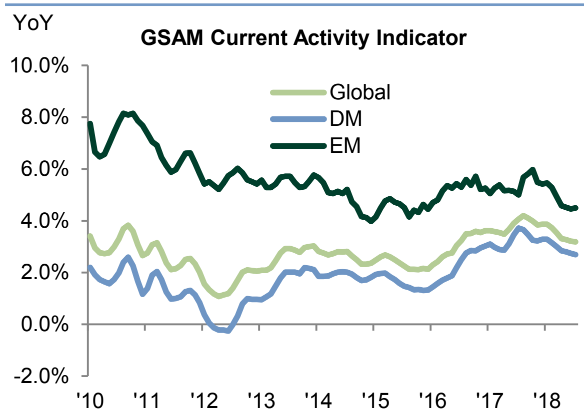


Source: Macrobond, Bloomberg Barclays.

2019 Outlook – Snapshot Charts

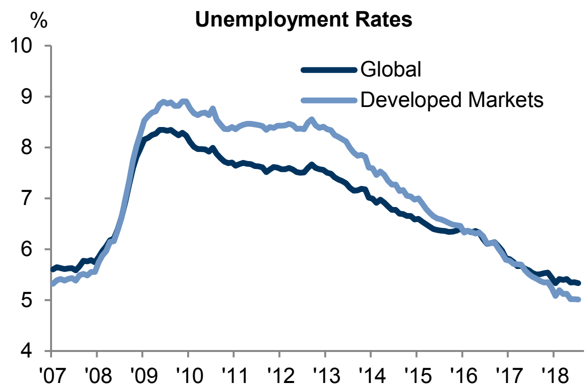
Goldman Sachs
Asset Management

Growth: Convergence to trend



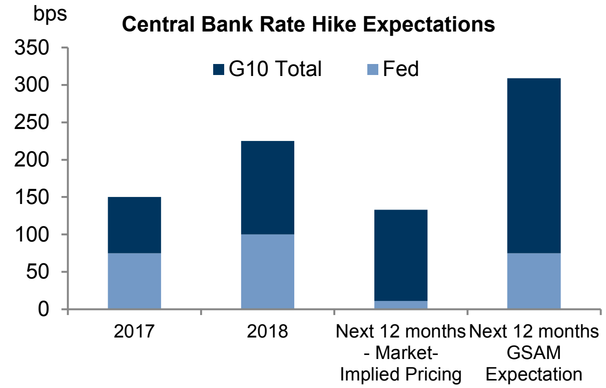
Source: Macrobond, GSAM. As of December 2018.

Inflation: Rising amid tight labor markets



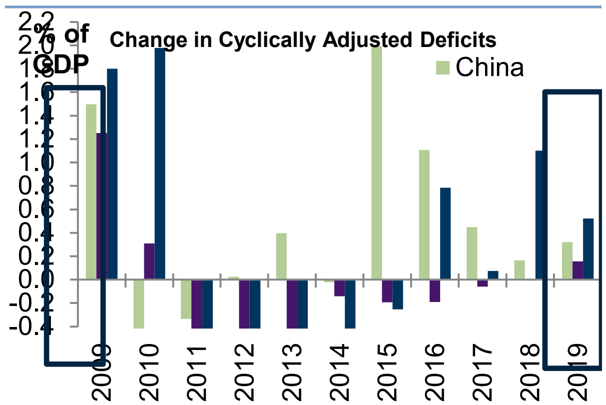
Source: Macrobond, GSAM calculations. As of November 2018.

Central Banks: More Normalisation



Source: GSAM, Bloomberg. As of December 7, 2017. 2018 assumes 25bps Fed hike in December.

Fiscal: Coordinated stimulus

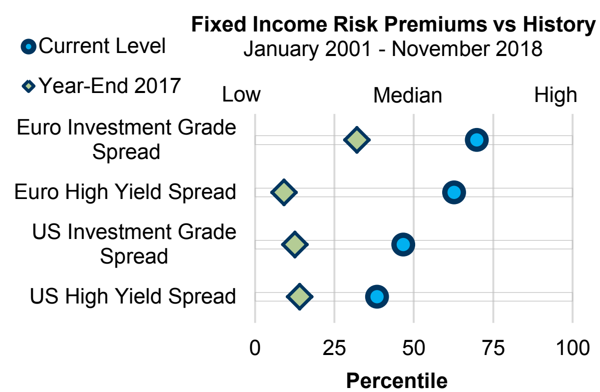


Source: Macrobond. IMF estimates as of October 2018.

Trade Tensions: Weighing on activity

Source: Macrobond. PMI as of December 2018, Trade volume as of October 2018.

Markets: Attractive credit valuations



Source: GSAM, Bloomberg. As of November 2018.

Summary

Goldman Sachs Asset Management

Macro Backdrop

Growth

Pace: Slowing toward trend

Level: Still-expansionary

Inflation

Core: Moderating on lower oil prices

Headline: Rising amid tight labor markets

Policy

Monetary: Normalization to broaden out

Fed: Balanced 2019 Outlook

Fiscal: Supportive in key economies

Key Risks

Macro: Upside inflation surprise

Macro: Late-cycle signs

Politics: Populism and Protectionism

Fixed Income

Macro Markets

Sovereign rates: Moving higher

Dollar: Unclear direction in current hiking cycle

Financial Conditions: Responding to Fed rate hikes

Sectors

Corporate credit: Attractive valuations for still-healthy fundamentals

Securitized credit: Underpinned by healthy private sector balance sheets and US housing market

EMD: Medium to long-term potential with room for stabilization or improvement in early-cycle economies

Investment Views

Rates

US front-end: Underweight

Core Europe: Overweight vs other G10s

Currencies

USD: Neutral

EM: Modestly overweight

Cyclical Europe: Overweight

Spread Sectors

US credit: Overweight

Securitized credit: Overweight

Agency MBS: Underweight

External EMD: Modestly overweight

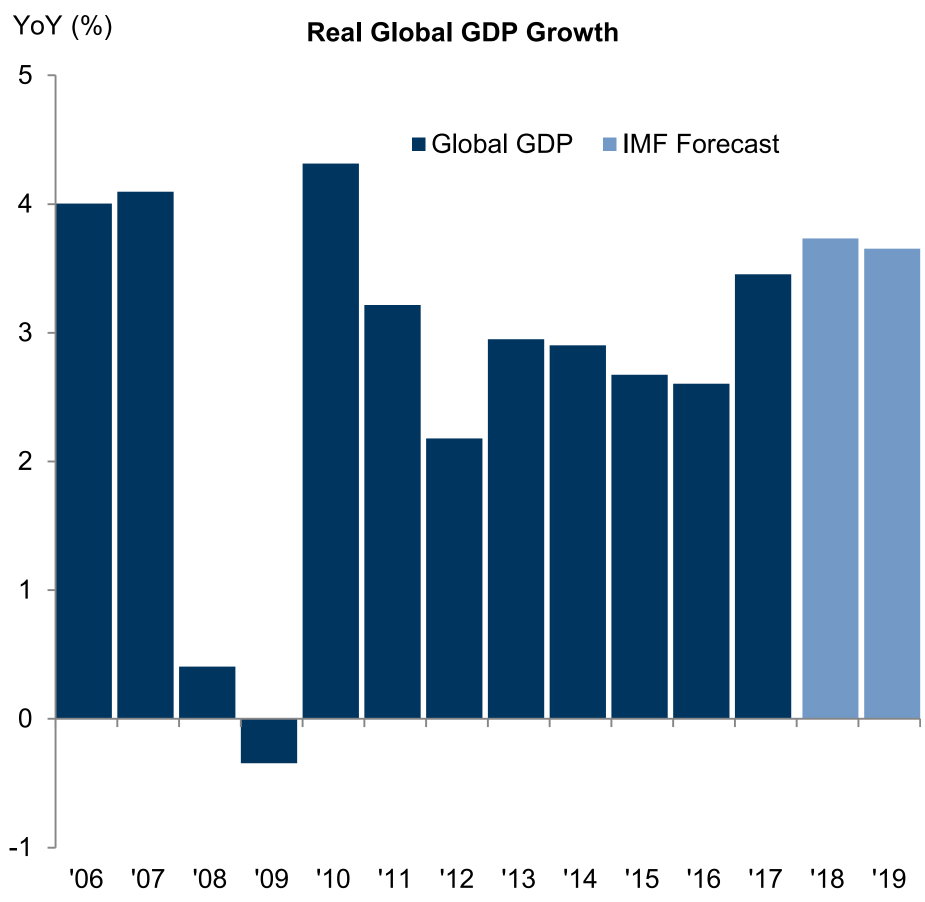
Local EMD: Idiosyncratic exposures

EM Corporate: Idiosyncratic exposures

Source: GSAM. As of December 17, 2018.

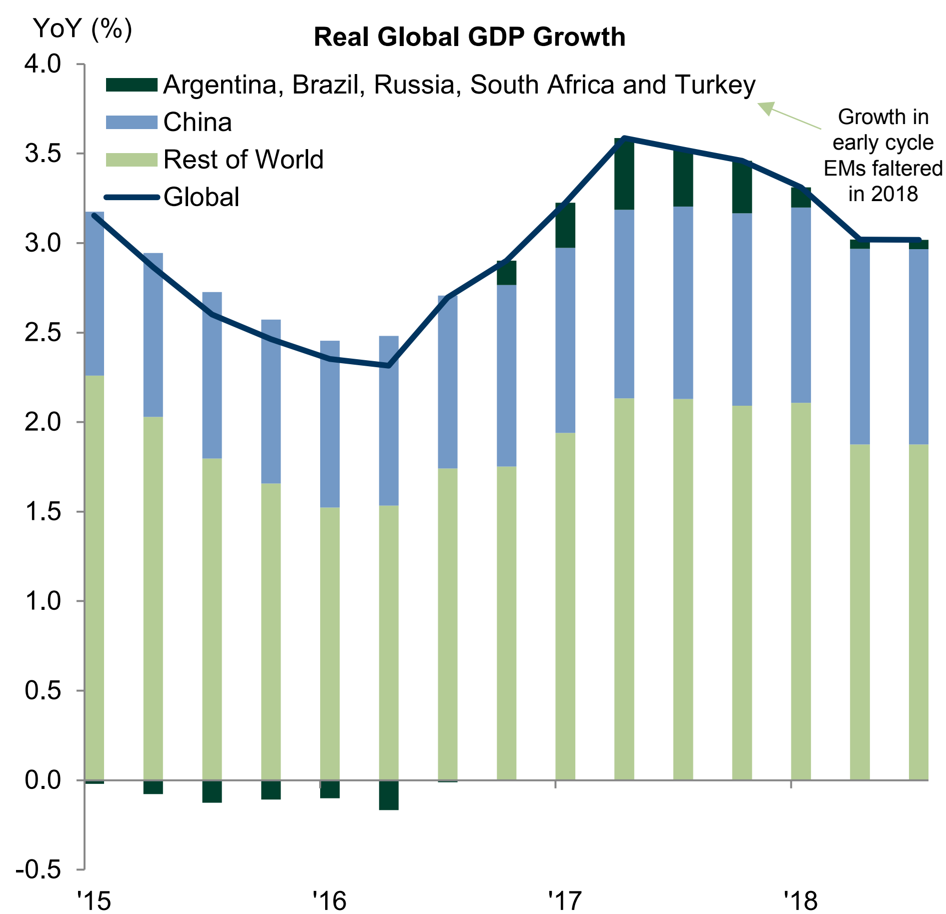
Growth: Pace is slowing, level is still growing

Global growth: Still strong for the post-crisis period



Source: Macrobond, GSAM for Global GDP, IMF for 2018 and 2019 forecasts. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

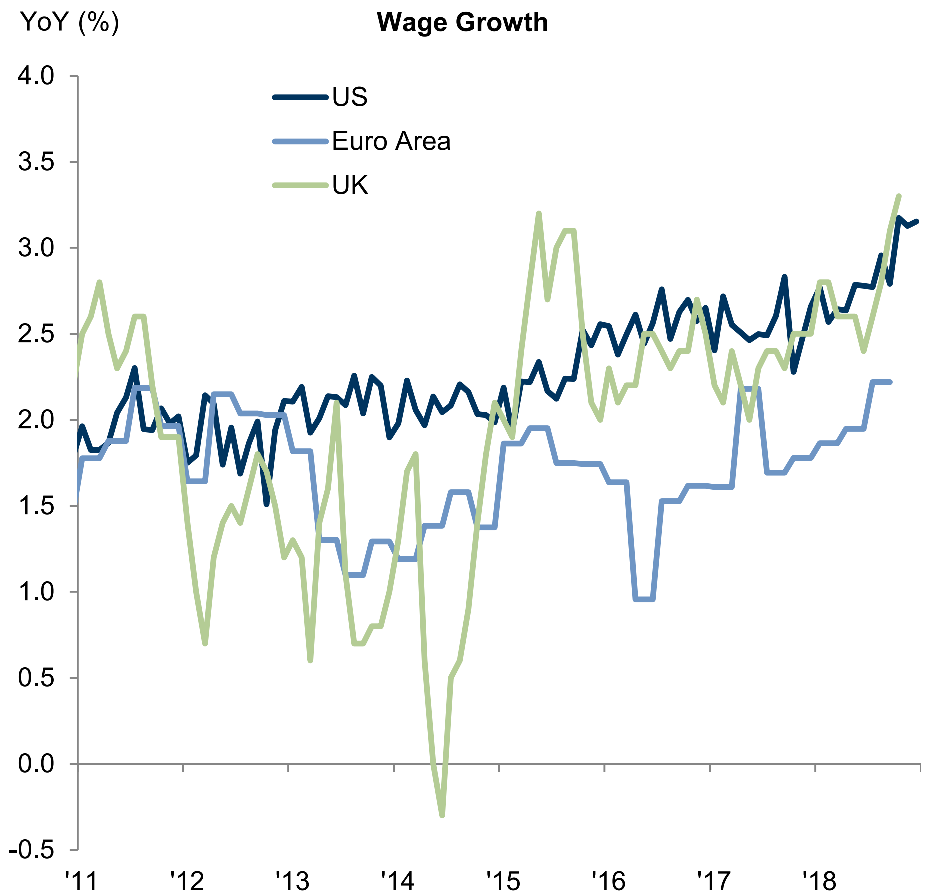
Country contributions: Rebound potential in early-cycle EMs



Source: Macrobond, GSAM calculations. As of Q3 2018.

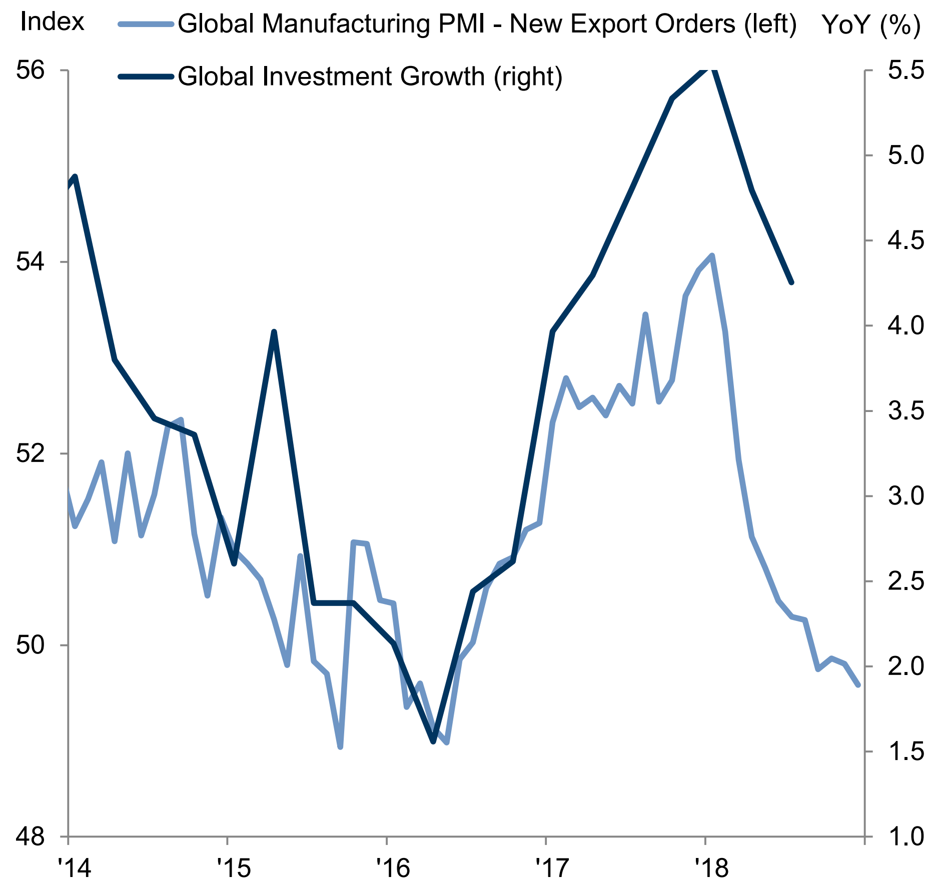
Growth: Improving consumption vs slowing investment and trade

Consumption: **Supported by wage growth and lower oil prices**



Source: Macrobond. UK average weekly earnings as of October 2018, US private sector average hourly earnings as of December 2018 and Euro area nominal labour cost index (quarterly data) as of Q3 2018.

Investment and Trade: **Undermined by trade uncertainty**

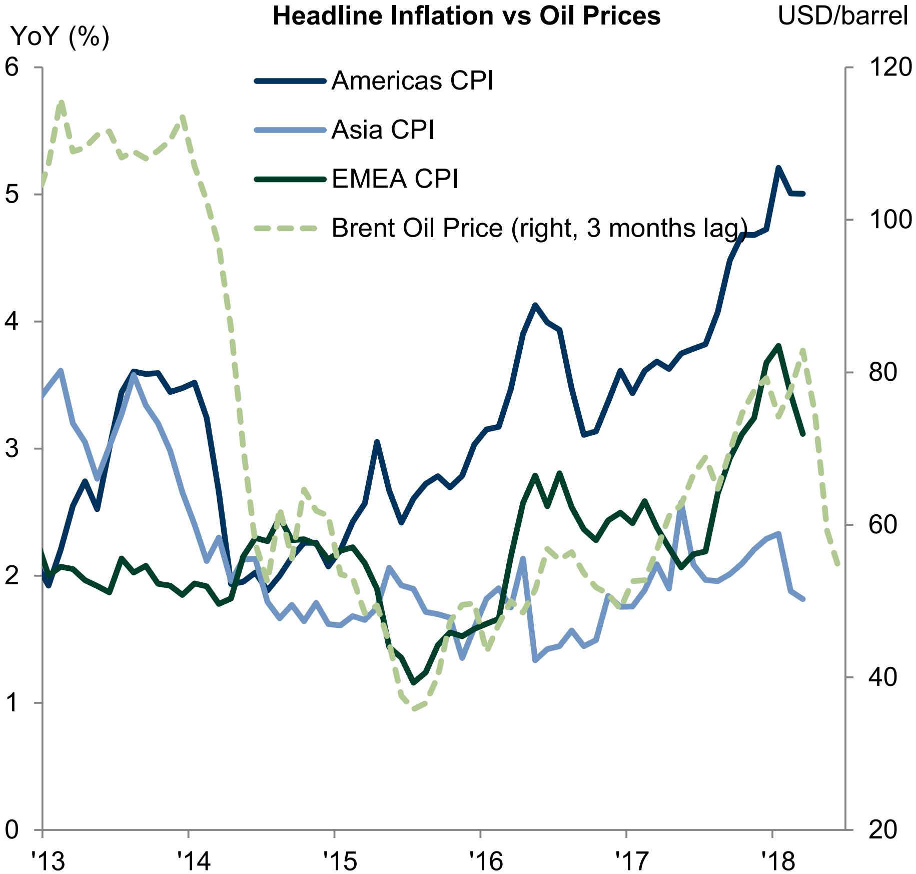


Source: Macrobond. Investment growth reflects GSAM calculations as of Q3 2018. PMI as of December 2018.

Inflation: Rotating from headline to core measures

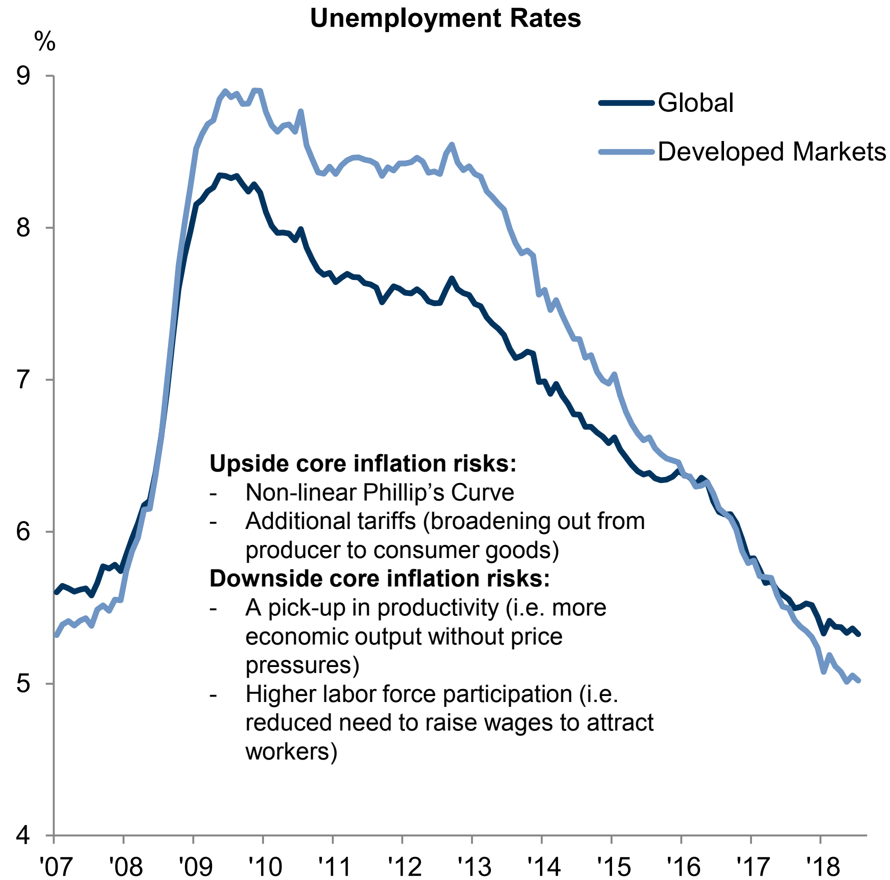
Goldman Sachs
Asset Management

Headline inflation: **Firmer on oil and 2018 EM FX weakness**



Source: Macrobond. Monthly data. Regional headline inflation as of November 2018. Brent oil prices as of December 2018.

Core inflation: **Steady rise amid tight labor markets**



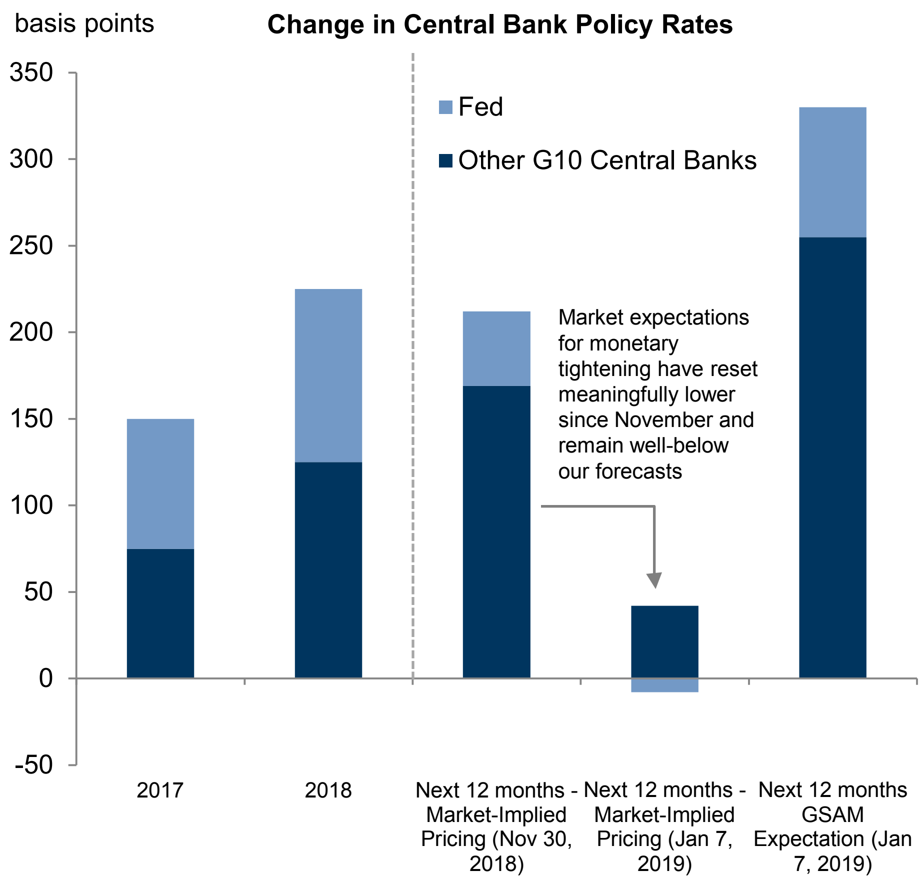
Upside core inflation risks:
- Non-linear Phillip's Curve
- Additional tariffs (broadening out from producer to consumer goods)

Downside core inflation risks:
- A pick-up in productivity (i.e. more economic output without price pressures)
- Higher labor force participation (i.e. reduced need to raise wages to attract workers)

Source: Macrobond, GSAM calculations. As of November 2018.

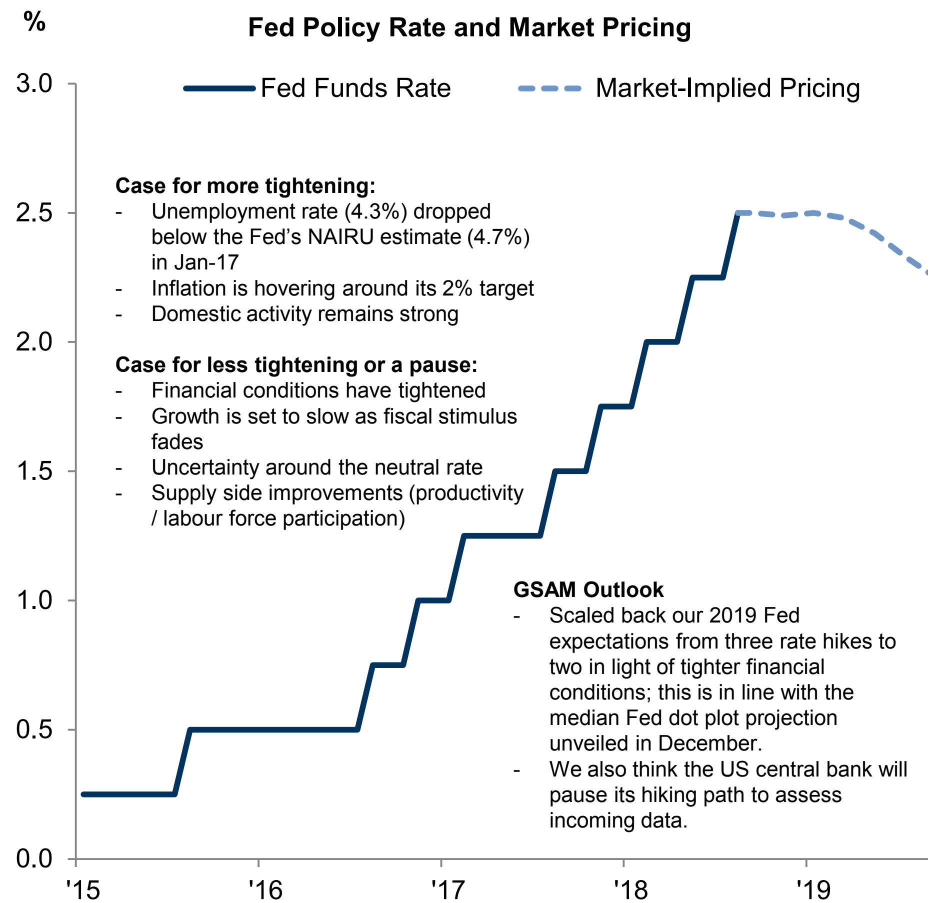
Monetary Policy: Broadening out beyond the Fed

G10: More normalization ahead



Source: GSAM, Bloomberg. As of December 7, 2017. 2018 assumes 25bps Fed hike in December.

Fed: Balanced 2019 Outlook

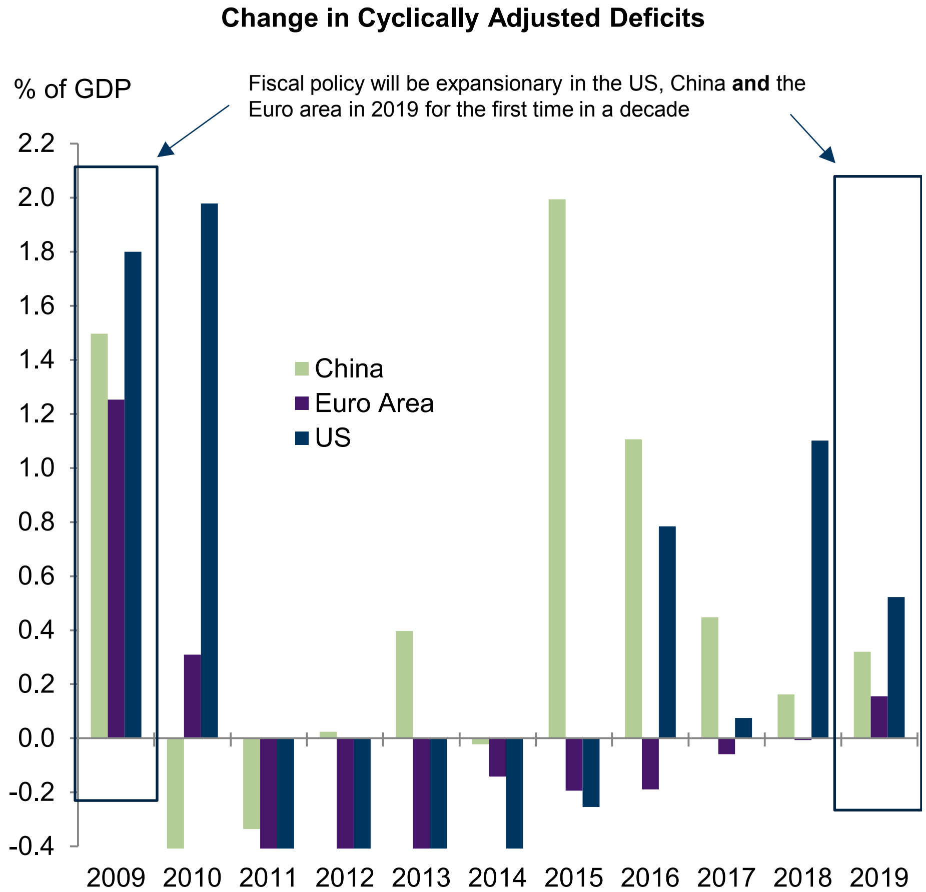


Source: Macrobond, GSAM, Bloomberg. Market-implied pricing as of January 9, 2019. GSAM Outlook as of January 2019.

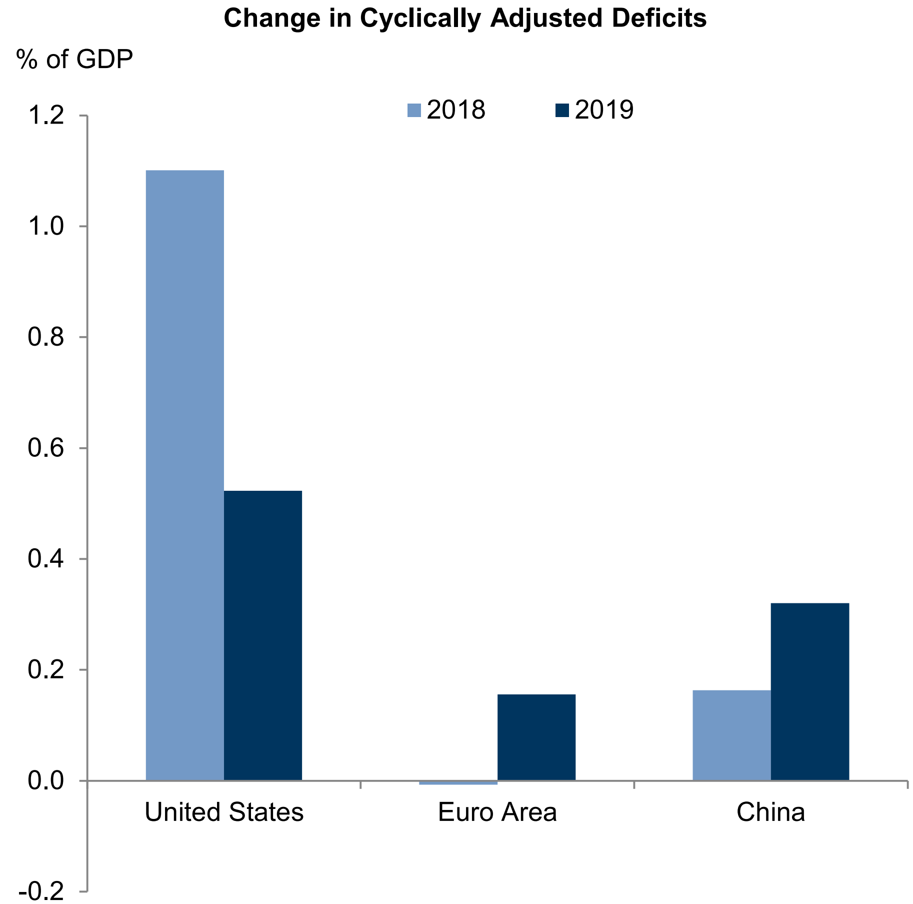
Fiscal Policy: Turning Supportive in Key Economies

Goldman Sachs
Asset Management

Global fiscal policy: Turning supportive



Country-level: US declining, China and Europe rising



Source: Macrobond, IMF Fiscal Monitor as of October 10, 2018. Cyclically adjusted deficit reflects government spending in excess of revenues adjusted for the impacts of real GDP changes. The economic and market forecasts presented herein are for informational purposes as of the date of this presentation. There can be no assurance that the forecasts will be achieved. Please see additional disclosures at the end of this presentation.

Risks: Late-cycle challenges and 'The known unknowns'

Goldman Sachs Asset Management

Late-cycle challenges: Not yet worrisome

Macro: Higher Inflation, Slower Growth

- **GSAM view**: Growth is still expansionary and the rise in core inflation is gradual not rapid
- **Risks**: External growth shock (e.g. trade wars) or non-linearity of the Philip's Curve as DM economies move beyond full employment.

Macro: Central Bank Policy Misstep

- **GSAM view**: QE withdrawal has been well-telegraphed and rate hikes are gradual (given uncertainty around neutral rates, NAIRU and output gaps).
- **Risks**: Sharp shift in central bank reaction functions which results in rates rising too quick or too high.

Micro: Contracting Corporate Profit Margins

- **GSAM view**: Wages and input costs are rising (party due to tariffs) but many corporates are protecting profit margins through pricing power.
- **Risks**: Tariffs broadening out from producer to consumer goods which in turn weighs on consumption and investment activity.

Micro: Private Sector Imbalances

- **GSAM view**: US households have de-levered in this cycle and a build-up of debt in the corporate sector presents idiosyncratic not systemic risks.
- **Risks**: Weak balance sheets may not have encountered a rate hiking cycle (e.g. millennials or new corporate issuers) , though we think this is a challenge for beyond 2019.

The known unknowns: Trade tensions are a key risk

Trade Tensions

- **GSAM view**: Direct macro impacts for both the US and Chinese economies from tariffs enacted thus far appear manageable and are being somewhat offset by policy support in the latter.
- **Risks**: Indirect impacts (via lower sentiment) could have broader global growth implications.

Populist Politics

- **GSAM view**: Populist policies such as anti-immigration measures, trade protectionism and lax fiscal policies are rising in popularity but are not yet mainstream.
- **Risks**: Prolonged Brexit and Italian budget negotiations which hinder UK and Euro area activity.

Market Structures

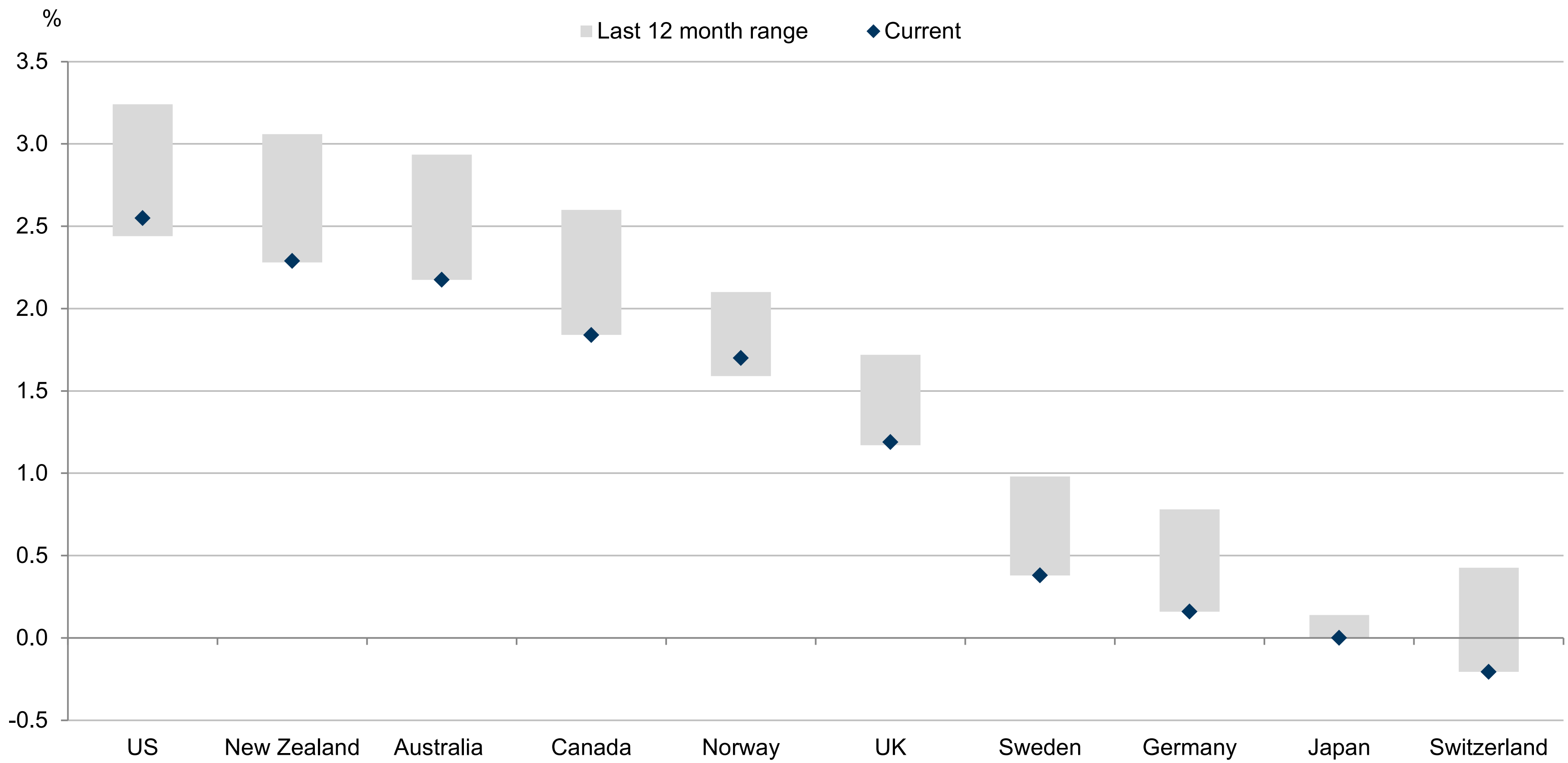
- **GSAM view**: Regulatory changes, QE and the advent of systemic trading strategies have changed the liquidity landscape across assets, but market direction is still broadly guided by fundamentals.
- **Risks**: Magnitude of market moves being amplified by systemic trading strategies (e.g. February sell-off) and resulting in premature investor de-risking.

Source: GSAM. As of December 2018.

Sovereign Yields: Moving higher

Goldman Sachs Asset Management

Sovereign 10-Year Yields: **Recently declined on growth concerns but direction of travel is higher**

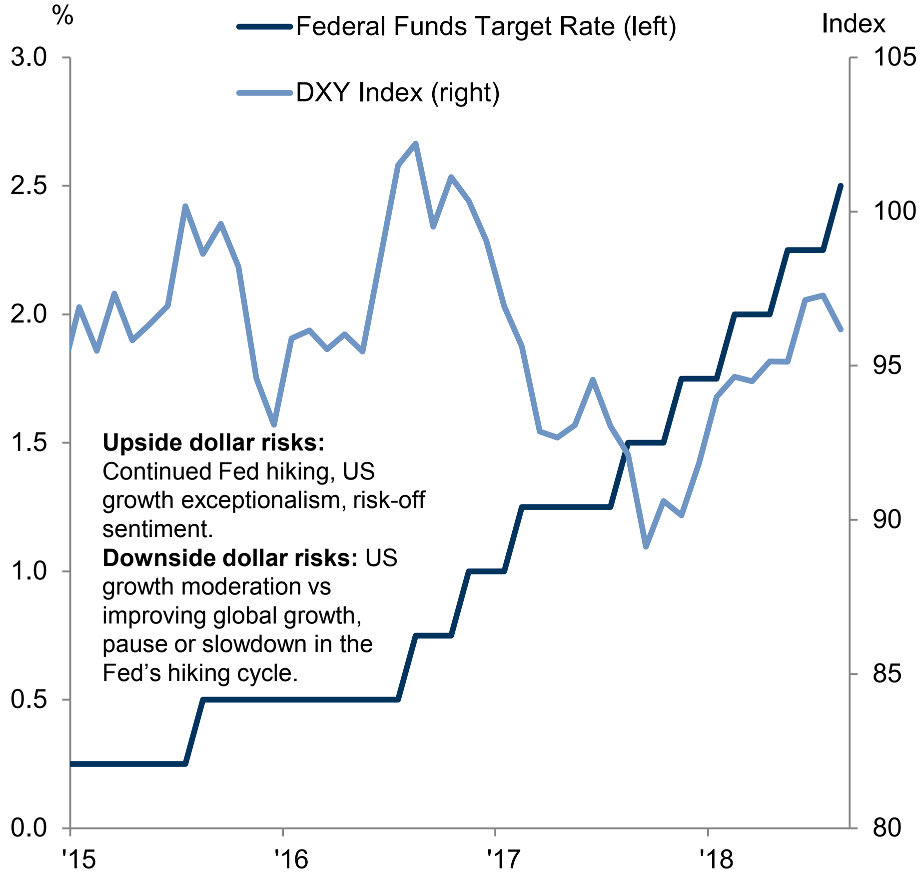


Source: Macrobond, GSAM. As of January 3, 2019.

Currencies: Directionless Dollar vs Undervalued EM

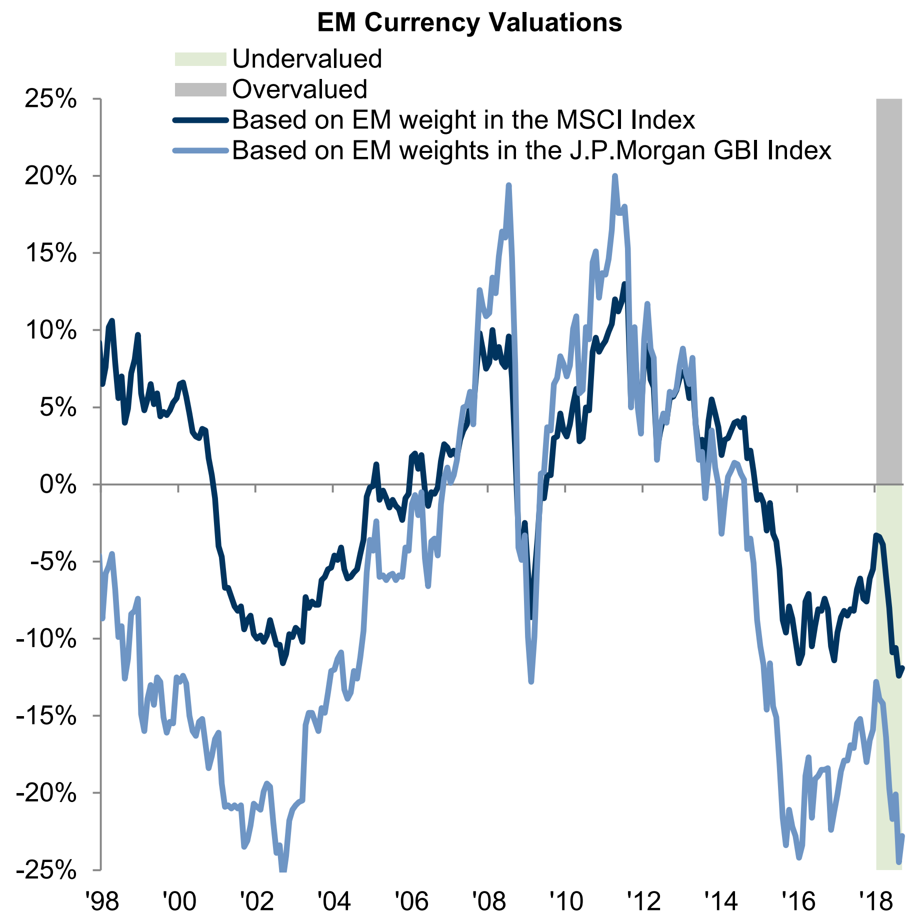
Goldman Sachs Asset Management

US dollar: Unclear direction in this hiking cycle



Source: Macrobond. As of December 2018.

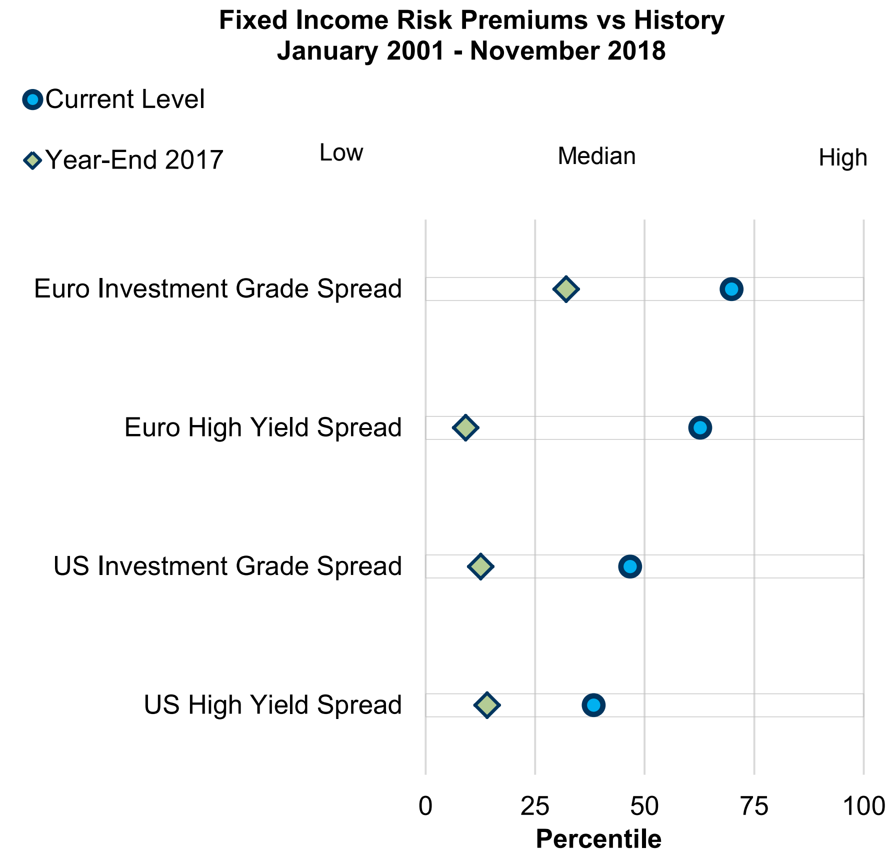
EM currencies: Cheap relative to fundamentals



Source: GSAM, Bloomberg, as of September 2018.

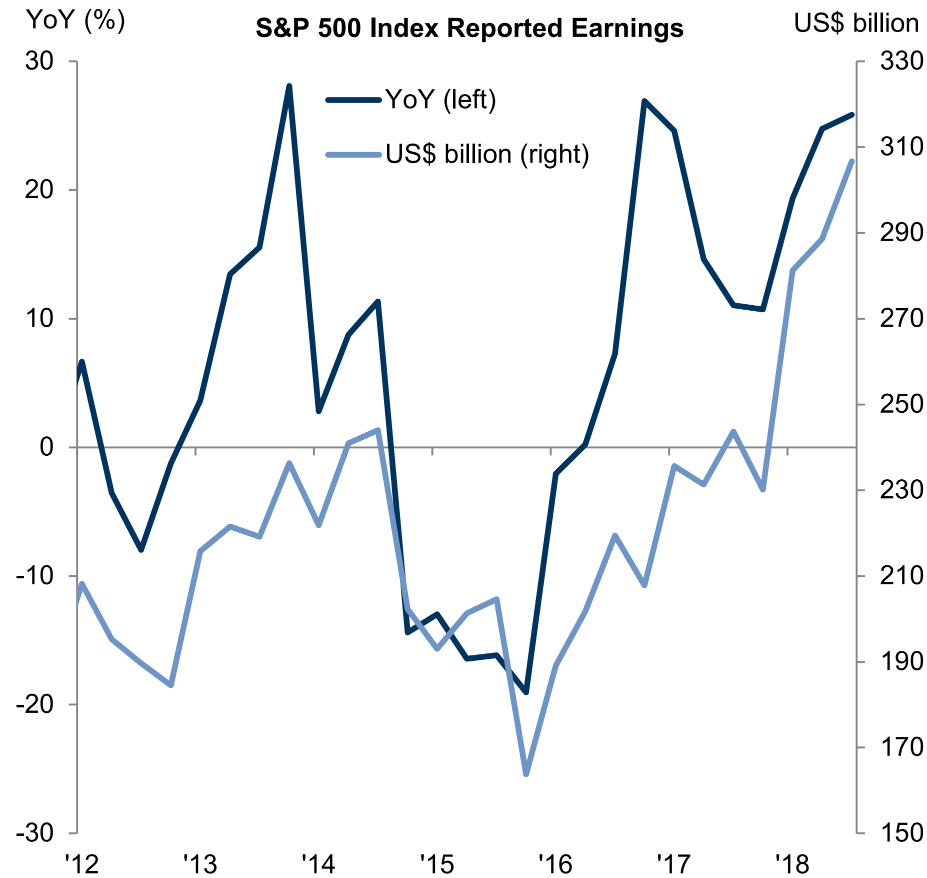
Corporate Credit: Attractive valuations for healthy fundamentals

Corporate Credit: **Adding exposure on attractive valuations**



Source: GSAM, Bloomberg. As of November 2018.

Corporate Credit: **Still-healthy fundamentals**

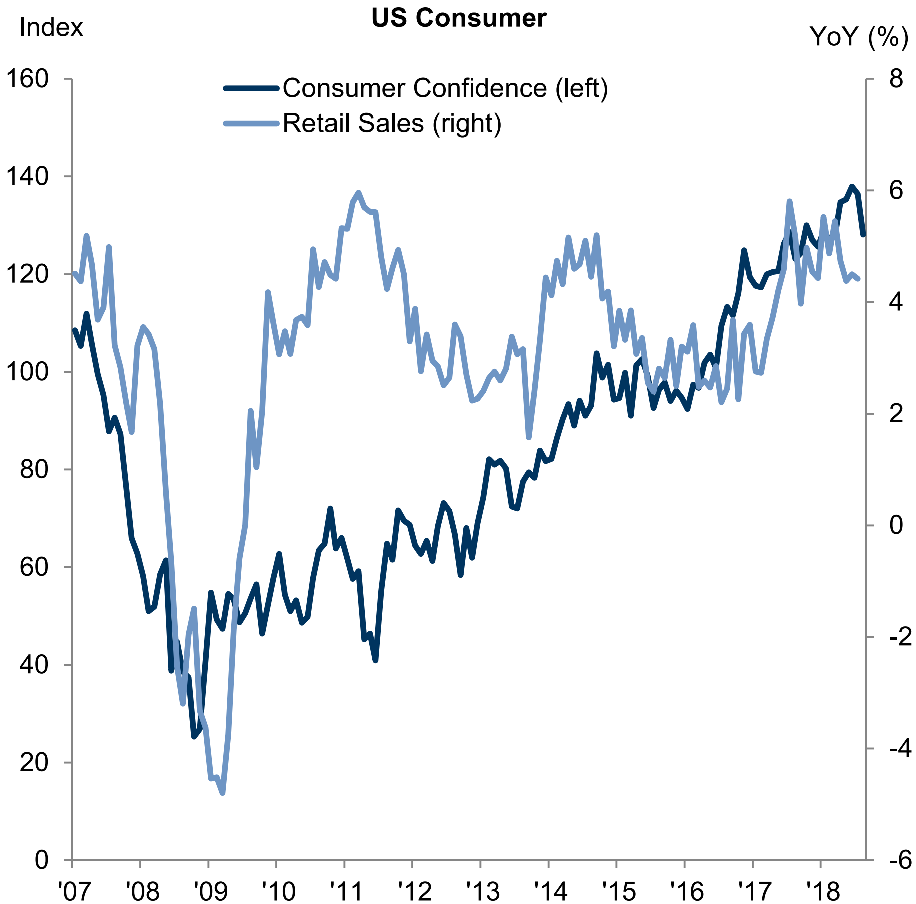


Source: Macrobond. As of Q3 2018.

US: Robust domestic activity in 2018, moderating in 2019

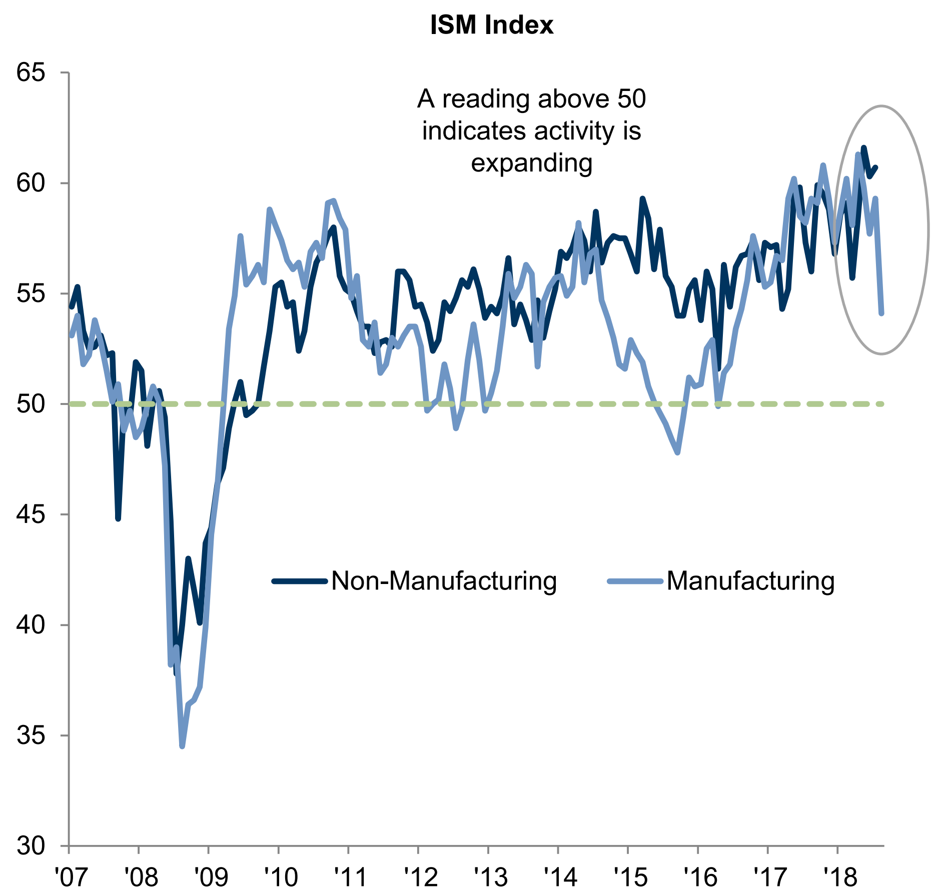
Goldman Sachs
Asset Management

US Consumer: Confidence moderates from a cycle-high



Source: Macrobond. Conference Board Consumer confidence as of December 2018. Retail sales (control group) as of November 2018.

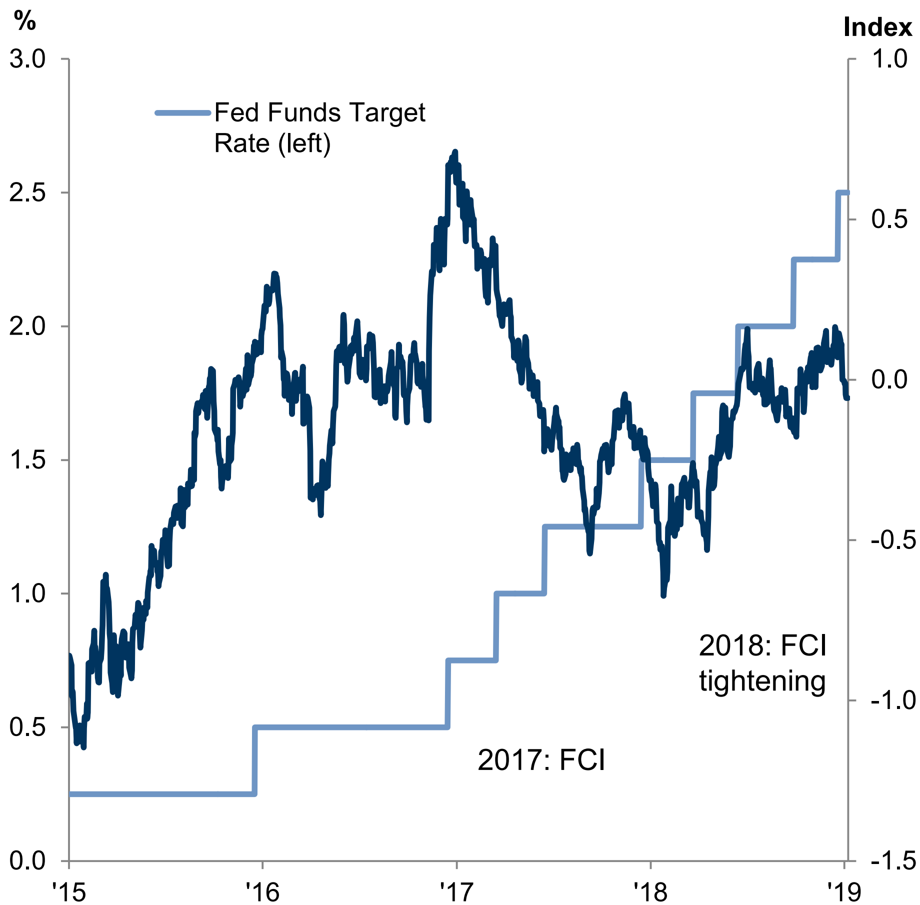
US Businesses: Activity is still expanding but has slowed



Source: Macrobond. Manufacturing as of December 2018. Non-manufacturing as of November 2018.

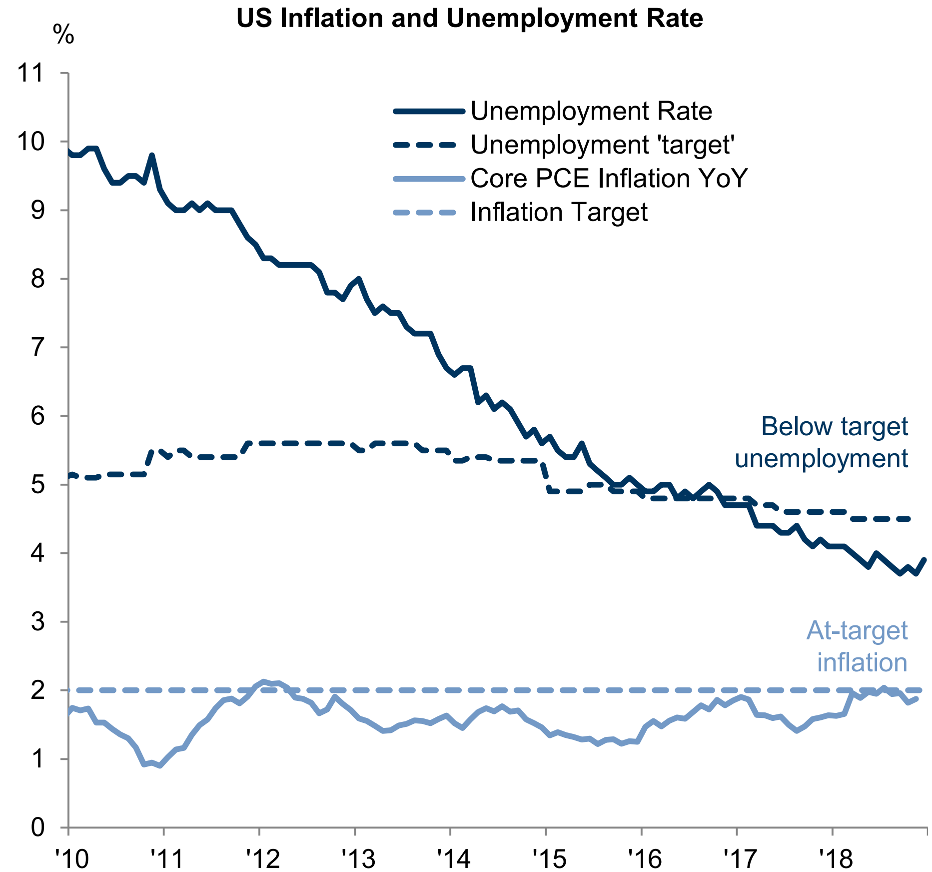
US: Growth set to slow in 2019 but remain above-trend

Growth: Slowing on tighter FCI and as fiscal fades



Source: Macrobond, GSAM. As of December 7, 2018.

Fed mandate: Good progress on inflation and unemployment



Source: Macrobond. Unemployment as of December 2018, PCE Inflation as of November 2018. Unemployment 'target' reflects the Feds estimate of long-run structural unemployment.

Appendix

Global Fixed Income and Liquidity Solutions

Goldman Sachs Asset Management

Co-Heads: Jonathan Beinner[1] & Andrew Wilson

Co-CIOs: Sam Finkelstein & Ashish Shah

FISG
11 Investors

Jonathan Beinner
Andrew Wilson
Jonathan Bayliss
Simon Dangoor
Sam Finkelstein
Chris Hogan
Iain Lindsay
Ashish Shah
Michael Swell
Mark Van Wyk
Whitney Watson

24+ yrs avg experience*

Oversees portfolio strategy, key risk positions, investment process, medium to long-term themes and outlook

Global Portfolio Construction & Risk

Whitney Watson
+7 professionals
6+ yrs avg experience*

Monitors portfolio construction and provide risk oversight

Product Management

Alicia Keenan
+39 professionals

Provides product support across all strategies

Quantitative Research and Strategists

Ersen Bilgin
Fred van der Wyck
+22 professionals

Build proprietary research and analysis platforms to support investment teams

Top-Down Strategy Teams

Macro Rates (Jonathan Bayliss)

Duration

Jonathan Bayliss
+4 professionals
18+ yrs avg experience*

Anticipates direction of markets and changing shape of yield curve using fundamental, quantitative and technical analysis

Country

Simon Dangoor
+3 professionals
15+ yrs avg experience*

Develops individual country views using a "balance sheet" research approach, using quantitative tools as an overlay to the process

Cross-Macro

Jonathan Bayliss
+6 professionals
22+ yrs avg experience*

Invests across asset classes to take advantage of market inefficiencies arising from investor segmentation between assets & to get efficient exposure to specific macro themes via a basket of assets

Currency

Sam Finkelstein
+7 professionals
15+ yrs avg experience*

Employs a flexible, economics-based process to determine the relative attractiveness of currencies

Commodities

Michael Johnson
+1 professional
15+ yrs avg experience*

Alpha strategies: timing, curve shape, relative value, and volatility trades
Beta strategies: seek exposure to commodities index and manage roll on futures or enhanced swaps

Cross-Sector

Ashish Shah
+5 professionals
21+ yrs avg experience*

Employs top-down fundamental analysis in allocating capital to bottom-up strategies

Bottom-Up Strategy Teams

Securitized

Chris Creed / Chris Hogan
+8 professionals
15+ yrs avg experience*

Agency mortgage selection and analysis
Securitized credit selection and analysis

Government / Swaps

Mark Van Wyk
+12 professionals
11+ yrs avg experience*

Duration & curve
Relative Value
Issuer /Issue Selection
Interest rate hedging

Municipals

Ben Barber
+16 professionals
15+ yrs avg experience*

Taxable & tax-exempt
Tax adjusted return and income
Rates and curve strategies
Municipal credit analysis

EMD

Sam Finkelstein
+24 professionals
13+ yrs avg experience*

External and local sovereign, quasi-sovereign, corporate debt and EM currencies
Fundamental research of country balance sheets
Long-term orientation

Liquidity Solutions

Dave Fishman
+15 professionals
13+ yrs avg experience*

Provide investment solutions for all liquidity tiers
Incorporate liquidity issues with strategic view to determine optimum curve exposure

Global Corporate Credit Team (Ashish Shah)

Investment Grade

PM / Trading
Ben Johnson
+11 professionals
12+ yrs avg experience*

Research
Stephen Waxman
+16 professionals
13+ yrs avg experience*

High Yield & Bank Loan

PM / Trading
Michael Goldstein / Rachel Golder
+13 professionals
17+ yrs avg experience*

Research
Rob Magnuson
+18 professionals
14+ yrs avg experience*

Portfolio Managers

Multi/Single Sector

Michael Swell	Matthew Maciaszek
Iain Lindsay	Avik Mittal
Ronald Arons	Philip Moffitt
Angus Bell	Jonathon Orr
Hugh Briscoe	Owi Ruivivar
Jeremy Cave	Jasper Sagoo
Sabriyah Denham	Diana Sands
Russell Gao	Paul Seary
Rachel Golder	Jason Singer
Michael Goosay	Ben Trombley
Matthew Howden	Jonathan Tung
Matthew Kaiser	Tetsuya Ukai
Michael Kashani	Ayumu Urata
Nini Lakew	Weiliang Zhang
Alex Lawson	

Liquidity Solutions

Dave Fishman
+5 professionals
19+ yrs avg experience*

Portfolio construction and customized investment solutions

Insurance

Matthew Armas
+17 professionals
13+ yrs avg experience*

Portfolio construction and customized investment solutions for insurance clients

Stable Value

David Westbrook
+5 professionals
16+ yrs avg experience*

Customized capital preservation solutions for retirement plans and other investors

Source: GSAM. As of January 1, 2019. *Average years of experience includes investment professionals, VP and above.
[1]Effective March 29, 2019, Jonathan Beinner will be retiring from the firm and Andrew Wilson will become the head of GSAM Global Fixed Income & Liquidity Solutions

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The indices referenced herein have been selected because they are well known, easily recognized by investors, and reflect those indices that the Investment Manager believes, in part based on industry practice, provide a suitable benchmark against which to evaluate the investment or broader market described herein. The exclusion of “failed” or closed hedge funds may mean that each index overstates the performance of hedge funds generally.

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Goldman Sachs Business Principles

Goldman Sachs Asset Management

1. Our clients' interests always come first. Our experience shows that if we serve our clients well, our own success will follow
2. Our assets are our people, capital and reputation. If any of these is ever diminished, the last is the most difficult to restore. We are dedicated to complying fully with the letter and spirit of the laws, rules and ethical principles that govern us. Our continued success depends upon unswerving adherence to this standard
3. Our goal is to provide superior returns to our shareholders. Profitability is critical to achieving superior returns, building our capital, and attracting and keeping our best people. Significant employee stock ownership aligns the interests of our employees and our shareholders
4. We take great pride in the professional quality of our work. We have an uncompromising determination to achieve excellence in everything we undertake. Though we may be involved in a wide variety and heavy volume of activity, we would, if it came to a choice, rather be best than biggest
5. We stress creativity and imagination in everything we do. While recognising that the old way may still be the best way, we constantly strive to find a better solution to a client's problems. We pride ourselves on having pioneered many of the practices and techniques that have become standard in the industry
6. We make an unusual effort to identify and recruit the very best person for every job. Although our activities are measured in billions of dollars, we select our people one by one. In a service business, we know that without the best people, we cannot be the best firm
7. We offer our people the opportunity to move ahead more rapidly than is possible at most other places. Advancement depends on merit and we have yet to find the limits to the responsibility our best people are able to assume. For us to be successful, our men and women must reflect the diversity of the communities and cultures in which we operate. That means we must attract, retain and motivate people from many backgrounds and perspectives. Being diverse is not optional; it is what we must be
8. We stress teamwork in everything we do. While individual creativity is always encouraged, we have found that team effort often produces the best results. We have no room for those who put their personal interests ahead of the interests of the Firm and its clients
9. The dedication of our people to the Firm and the intense effort they give their jobs are greater than one finds in most other organisations. We think that this is an important part of our success
10. We consider our size an asset that we try hard to preserve. We want to be big enough to undertake the largest project that any of our clients could contemplate, yet small enough to maintain the loyalty, the intimacy and the esprit de corps that we all treasure and that contribute greatly to our success
11. We constantly strive to anticipate the rapidly changing needs of our clients and to develop new services to meet those needs. We know that the world of finance will not stand still and that complacency can lead to extinction
12. We regularly receive confidential information as part of our normal client relationships. To breach a confidence or to use confidential information improperly or carelessly would be unthinkable
13. Our business is highly competitive, and we aggressively seek to expand our client relationships. However, we must always be fair competitors and must never denigrate other firms
14. Integrity and honesty are at the heart of our business. We expect our people to maintain high ethical standards in everything they do, both in their work for the firm and in their personal lives