GLOBAL MACRO LANDSCAPE

AFTER 2018’s FALSE DAWN, IT’S TIME TO REFOCUS ON STRUCTURAL RISKS

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The global economy entered 2018 in buoyant mood. Consensus forecasts were rising and global growth was starting to look more synchronized.

This provided a positive backdrop for risk assets. We expected bond yields to move higher and the dollar to rise modestly against the G10 currencies.

What happened? Growth slowed (outside the US), risk assets did poorly, bond yields moved sideways and the dollar rose modestly.

Why? We think it’s because 2017 was an unusual year in the context of the post-crisis period, with global growth receiving a boost from a combination of:
+ Ultra-supportive financial conditions
+ A temporary boom in the global trade cycle
+ The absence of any adverse shocks

Now, it’s back to reality. The key lesson: don’t forget about the secular backdrop.
That Was The Year That Was: False Dawn
A More Challenging Period For Risk Assets

Left and right charts: through December 31, 2018; middle chart: through January 15, 2019

Historical analysis does not guarantee future results.

1G3 is the US, euro area and Japan. G4 is G3 plus China.
Source: Bloomberg
The Secular Battlefield

Secular Forces Acting On Trend Growth, Inflation & The Equilibrium Real Interest Rate

4th Industrial Revolution
Demographics
Debt Overhang
Regime Shift
De-Globalization
Populism

Source: AB
Elevated Debt
Deleveraging, What Deleveraging?

Left chart: through December 31, 2017; right chart: through March 31, 2018

Historical analysis does not guarantee future results.

1Government, households and non-financial companies. 21850 to 1980.
Source: Haver Analytics
Elevated Debt: Heightened Sensitivity To Rising Rates
Where's The Neutral Rate?

Left chart: through December 31, 2017; right chart: through December 31, 2018
Historical analysis does not guarantee future results.
1Government, households and non-financial companies.
Source: Federal Reserve Board of Governors and Haver Analytics

Fed Funds Target & FOMC Neutral Nominal Rate Estimates

US Total Non-Financial Sector Debt

Trend

Fed Funds Target Rate
Elevated Debt: Policy Constraints
Chinese Policy Uncertainty Reaches Record High

Left chart: through September 30, 2018; middle and right charts: through March 31, 2018

Historical analysis does not guarantee future results.

1Government, households and non-financial companies.
Source: Haver Analytics
Elevated Debt: Australia’s Long Boom Under Pressure
Household Debt Chickens Coming Home to Roost

**House Prices Falling Sharply…**

**…as is Household Saving….**

**…and Construction Soon Will**

Left chart: through Q4-2018; middle chart: through Q3-2018; right chart: through June 2018.

**Historical analysis does not guarantee future results.**

Source: Australian Bureau of Statistics, Bloomberg, Thomson Reuters, AB estimates
Demographics
Running Out Of People

As of December 31, 2018
Historical analysis does not guarantee future results.
1UN Population Database, Median Scenario.
Source: Haver Analytics

Working Age Population: DM plus China

Working Age Population Growth: Next 25 Years

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent per Annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>0.7%</td>
</tr>
<tr>
<td>US</td>
<td>0.3%</td>
</tr>
<tr>
<td>Canada</td>
<td>0.2%</td>
</tr>
<tr>
<td>UK</td>
<td>0.1%</td>
</tr>
<tr>
<td>France</td>
<td>(0.1)%</td>
</tr>
<tr>
<td>DM</td>
<td>(0.3)%</td>
</tr>
<tr>
<td>Euro</td>
<td>(0.5)%</td>
</tr>
<tr>
<td>China</td>
<td>(0.6)%</td>
</tr>
<tr>
<td>Germany</td>
<td>(0.6)%</td>
</tr>
<tr>
<td>Italy</td>
<td>(0.9)%</td>
</tr>
<tr>
<td>Japan</td>
<td>(1.0)%</td>
</tr>
</tbody>
</table>
Historical analysis does not guarantee future results.

1UK until 1918; US thereafter. 2Projected working-age population growth plus long-term average productivity growth (1.4%).

Source: Haver Analytics and Maddison Project Database.
Populism

“A Spectre Is Haunting The World: Populism”

Populism: Here to Stay?

Is “Populism” here to stay?

No

Temporary Hangover:
+ GFC
+ EU Sovereign Crisis
+ Austerity

“Back to Normal”
Policy & Politics

Global Openness
Rules-Based Policy
Deregulation

Yes

Structural Theme:
+ Inequality
+ Disruption
+ Derailed democracy

Anti-establishment
Re-engineering the Centre

Raising the Drawbridge
Institutional Erosion
Redistribution

Source: AB
Populism: Rising Momentum

Is Democracy Falling Out Of Fashion?

As of December 31, 2018

Historical analysis does not guarantee future results.

1Percentage of respondents in each age cohort who believe that having a democratic political system is fairly bad or very bad.

Source: Timbro (data extracted using WebPlotDigitizer), World Values Survey

47% of the <29 year-old age cohort thought having a strong leader who doesn't bother with parliament or elections is very good or fairly good.
Populism: Three Key Channels
From Politics to Policy

Raising the Drawbridge
- Increased trade protection
- Restrictions on capital flows, FDI
- More restrictions on immigration/cross-border flows of labour
- Withdrawal from Supranational relationships

Institutional Erosion
- Erosion of monetary policy independence—fiscal dominance
- Greater use of fiscal policy—structural budget deficits; loose constraints
- Regulation & the rule of law?
- Re-nationalisation of key industries

Redistribution
- Increased taxation of companies/high-income earners
- Higher minimum wages/labour market regulation/universal basic income
- Return of collective bargaining
- Use of price controls

Source: AB
Populism In Action: Italy
What’s the Euro Ever Done For Us?

As of December 31, 2017

Historical analysis does not guarantee future results.

1Germany adjusted for the impact of reunification.

Source: Haver Analytics
Populism In Action: Italy
Populism Pays; And Hurts!

Italian Voting Intentions

<table>
<thead>
<tr>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>45</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>35</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>25</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13 14 15 16 17 18</th>
</tr>
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<tbody>
<tr>
<td>PD</td>
</tr>
<tr>
<td>M5S</td>
</tr>
<tr>
<td>League</td>
</tr>
<tr>
<td>FI</td>
</tr>
</tbody>
</table>

Italy Real GDP Growth

<table>
<thead>
<tr>
<th>QoQ % Chg.</th>
</tr>
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<tbody>
<tr>
<td>0.9</td>
</tr>
<tr>
<td>0.6</td>
</tr>
<tr>
<td>0.3</td>
</tr>
<tr>
<td>0.0</td>
</tr>
</tbody>
</table>

| (1.2) |
| (0.9) |
| (0.6) |
| (0.3) |

Left chart: through December 31, 2018; right chart: through June 30, 2018

Historical analysis does not guarantee future results.
Source: Haver Analytics and Wikipedia
Populism In Action: Asian Trade Cycle Continues to Slow
Risks: Trade Wars, Product Cycle, Tech Prices

Through December 2018
Historical analysis does not guarantee future results.
Source: Datastream
Populism: Three Key Channels
With Common Consequences

**Raising the Drawbridge**
- Increased trade protection
- Restrictions on capital flows, FDI
- More restrictions on immigration/cross-border flows of labour
- Withdrawal from Supranational relationships

**Institutional Erosion**
- Erosion of monetary policy independence—fiscal dominance
- Greater use of fiscal policy—structural budget deficits; loose constraints
- Regulation & the rule of law?
- Re-nationalisation of key industries

**Redistribution**
- Increased taxation of companies/high-income earners
- Higher minimum wages/labour market regulation/universal basic income
- Return of collective bargaining
- Use of price controls

- Lower Growth
  - Higher Inflation

- Greater Macro Volatility
  - Higher Inflation

- Lower Profit Share
  - Higher Inflation

Source: AB
Populism: The Next Battlefield
Labour vs Capital

Labour Share¹: US/Euro-Area Average

Change in Labour Share¹: 1980 - 2017

UK Profit Share²

Left chart: through December 2017; right chart: through June 2018
Historical analysis does not guarantee future results.
¹Labour income as a percentage of national income. ²Profits of private non-financial corporations as a percentage of national income.
Source: Haver Analytics
The Secular Backdrop: Less Favourable Growth/Inflation Trade-Off

- Barring a tech-driven boost to trend productivity growth, recent growth rates will be difficult to sustain

- The debt overhang will likely continue to shape the medium-term outlook, weighing on growth, placing strict limits on the extent to which nominal interest rates can rise and biasing the monetary regime in favour of higher inflation

- Populism isn’t going away and is likely to reinforce a secular shift towards a less favourable growth/inflation trade-off

- The outlook for real rates is less certain: savings/investment determinants point to a modest increase but debt and the monetary regime are likely to exert persistent downward pressure

Source: AB
GLOBAL MACRO OUTLOOK: 2019
Global Macro Outlook: Past The Cyclical Sweet-Spot

Europe and China Lead The Downturn; Will The US Follow?

Global Real GDP Growth$^1$ and PMI Tracker

- Pre-Crisis Trend
- PMI Tracker
- Real GDP

Manufacturing PMIs

- Euro Area
- US
- China

Left chart: through June 2018; right chart: through December 2018

Historical analysis does not guarantee future results.

$^1$At market exchange rates. $^2$Standard deviations from post-2010 average; 3-month rolling average. The euro area and China are Markit data; the US is the ISM index.

Source: Haver Analytics and Markit
Global Macro Outlook: New Mix

Slower Growth; Higher Inflation

G7 Unemployment Rate

G7 Wage Growth

Source: Haver Analytics

Through June 2018

Historical analysis does not guarantee future results.

1G7 is the US, euro area, Japan, UK and Canada.

Source: Haver Analytics
Global Macro Outlook: Brexit, Trade Wars and Negative Trade Shocks

It’s Not Just About Demand

Left and middle charts: through June 2018; right chart: through October 2018

Historical analysis does not guarantee future results.

1In manufacturing and services. Bank of England Survey.

Source: Haver Analytics
Global Macro Cycle: How They Look Today

- **Growth Rising/Inflation Low**: Risk Assets: ++, Duration: +
- **Growth Stable/Inflation Rising**: Risk Assets: +/-, Duration: -/-
- **Growth Low/Inflation Falling**: Risk Assets: +/-, Duration: -/+
- **Growth Slowing/Inflation High**: Risk Assets: -/-, Duration: -

Source: AB
Global Macro Outlook: Dwindling Liquidity Support
From Quantitative Easing to Quantitative Tightening

As of December 2018
Historical analysis does not guarantee future results.

1Three-month rolling average of monthly net purchases. G3 is the US, euro area and Japan. 2Net issuance = budget deficit less central-bank government bond purchases.

Source: Haver Analytics
Global Macro Outlook: 2019 Outlook
New Mix

+ Growth in ALL core countries is set to slow:
  + Baseline forecast is for a gradual slowdown from above-trend growth to a more trend-like pace
  + But a crystallization of one or more event risks could easily tip the balance towards recession
+ In spite of this slowdown, core inflation is likely to move higher and central banks are unlikely to abandon their plans to withdraw monetary policy stimulus
+ A less favourable growth/inflation mix means the outlook for risk assets will remain challenging; volatility is also set to increase
+ We continue to expect bond yields to rise, though speed and timing is less certain

Scenario Probabilities

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Nov-18</th>
<th>Jan-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downside</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td></td>
<td>50% 50%</td>
</tr>
<tr>
<td>Upside</td>
<td></td>
<td>25%</td>
</tr>
</tbody>
</table>

As of December 2018
Historical analysis does not guarantee future results.
Source: AB
Guy Bruten joined AllianceBernstein (AB) in 2004 and is a member of the firm’s Global Economic Research team. In that role, he provides macro research coverage for a number of countries in the Asia Pacific region, and is also responsible for conducting thematic research—looking at the impact, for example, of demographic change, the commodity price supercycle and the global surge in populist politics on the outlook for economies and asset prices. Prior to joining AB, Bruten worked in economics and market strategy roles for Macquarie Bank’s Funds Management Group and for SBC Warburg. He started his career in the early 1990s at the Commonwealth Department of the Treasury in Canberra. Bruten holds a BEc from the University of Adelaide and a MEc from the Australian National University. Location: Melbourne
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A short strategy may not always be able to close out a short position on favorable terms. Short sales involve the risk of loss by subsequently buying a security at a higher price than the price at which it sold the security short. The amount of such loss is theoretically unlimited (since it is limited only by the increase in value of the security sold short). In contrast, the risk of loss from a long position is limited to the investment in the long position, since its value cannot fall below zero. Short selling is a form of leverage. To mitigate leverage risk, a strategy will always hold liquid assets (including its long positions) at least equal to its short position exposure, marked to market daily.

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Investing in emerging-market debt poses risks, including those generally associated with fixed-income investments. Fixed-income securities may lose value due to market fluctuations or changes in interest rates. Longer-maturity bonds are more vulnerable to rising interest rates. A bond issuer’s credit rating may be lowered due to deteriorating financial condition; this may result in losses and potentially default, or failure to meet payment obligations. The default probability is higher in bonds with lower, noninvestment-grade ratings (commonly known as “junk bonds”).

There are other potential risks when investing in emerging-market debt. Non-US securities may be more volatile because of the associated political, regulatory, market and economic uncertainties; these risks can be magnified in emerging-market securities. Emerging-market bonds may also be exposed to fluctuating currency values. If a bond’s currency weakens against the US dollar, this can negatively affect its value when translated back into US-dollar terms.