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Date: November 3, 2017

TO: MEMBERS, INVESTMENT COMMITTEE

I.	AGENDA ITEM # AND TITLE :	Agenda Item 4 – Market Outlook and Economic Update
II.	NAME AND PROGRAM:	Deutsche Asset Management
111.	ACTIVITY:	 Informational Request for Direction Action Proposed Exploratory
IV.	JUSTIFICATION:	 Standard/Required Item Board Request – New Item New Topic from Staff

V. EXECUTIVE SUMMARY:

Mr. Josh Feinman, Chief Global Economist at Deutsche Asset Management will provide a broad macroeconomic update.

VI. ANALYSIS:

Mr. Josh Feinman will provide a broad macroeconomic update focusing on the U.S. The update will focus on economic growth, labor markets, inflation, monetary policy, political/policy risks and other topical broad economic themes.



Economic Outlook: Cyclically strong, structurally still challenged

Josh Feinman Global Chief Economist November 2017



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Investment Committee - November 16, 2017 Open Agenda item 4 - Market Outlook and Economic Update

U.S. outlook: The beat goes on Solid momentum; cyclical wounds largely healed; but inflation progress has slipped



- Recent data encouraging (abstracting from the storms)
- Labor market healing continues; close to full employment, but few signs of overheating
- Inflation is the one missing piece the one area where the economy has not met (or exceeded) expectations this year
- Looking ahead, we expect growth to remain slightly above diminished potential, allowing labor markets to complete their recovery (and perhaps even move a bit beyond full employment)
 - Positive underpinnings:
 - Sound household and business finances
 - Accommodative financial conditions
 - Modest stimulus from washington (regulatory reform, and some tax/
 - spending initiatives)
 - Improved global backdrop
 - The expansion will become the second longest on record by Spring 2018, but is still not harboring major excesses or imbalances
- Inflation to edge gradually back toward target
 - Some of the recent forces holding it down seem transitory
 - Inflation expectations remain generally well anchored
 - Tightening labor markets will likely exert some modest upward pressure
 - But the recovery in inflation may take longer and seems a bit less assured than previously anticipated

As of: October 2017 Source: CBO, IMF, OECD, DeAM

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GDP growth continues to exceed diminished potential



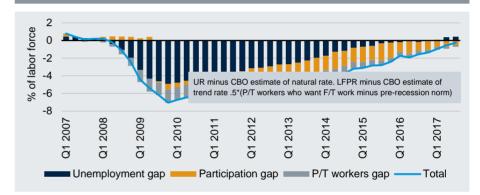
U.S. labor market Cyclical healing nearly completed



- Labor markets continue to tighten
 - Job growth has moderated from break-neck pace of 2014–2015 (even abstracting from the storm effects), but still above what's needed to keep up with trend demographics
- Slack close to depleted
 - There may still be some scope to counter the demographic downtrend in participation rates and reduce the ranks of involuntary part-timers, but that scope has dwindled
- Will full employment near, job growth will eventually have to cool further to prevent overheating, though that cooling need not be abrupt or drastic, especially because labor costs are showing only modest signs of picking up
- Further acceleration in labor costs is likely, but still only gradual and modest because:
 - Slack only very recently depleted (and perhaps not completely)
 - The response of wages to diminished slack is modest and operates with a lag
 - Productivity growth has been sluggish
 - Inflation expectations remain subdued

Slack largely gone

Estimates of labor market slack



Labor costs edging up

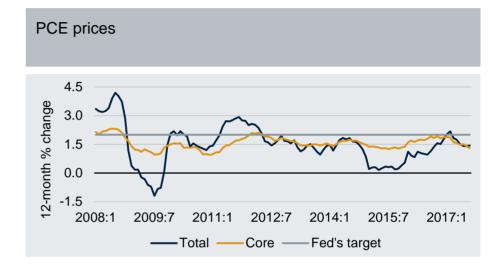


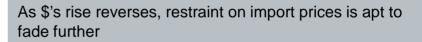
As of: October 2017 Source: BLS, Federal Reserve, DeAM estimates

U.S. inflation Progress has slipped this year; gradual resumption likely, but questions linger



- Underlying inflation still slightly below target
 - Was moving up until recently, when several temporary factors contributed to edging it slightly down again
- Likely to resume inching up
 - As slack continues to diminish, labor costs continue picking up, and the impact of transitory restraints fades
- But any acceleration is apt to remain modest and gradual
 - Because the inflation process has become extremely inertial, its response to changes in slack quite modest, and inflation expectations remain well contained
 - Unknowns in the inflation process







As of: September 2017 Source: BLS, Federal Reserve

Fed policy On course for continued "low and slow" removal of policy accommodation

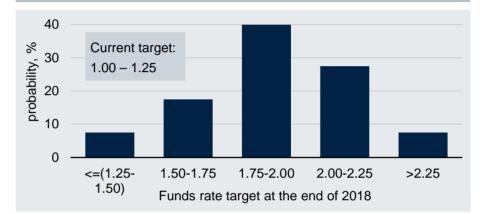


- As long as labor markets continue to tighten, Fed policymakers will remain inclined to reduce accommodation
- But as long as inflation remains subdued, they won't feel an urgency to move aggressively
- Fiscal policy initiatives will be factored into the Fed's calculus, but only if and when they are enacted and begin to impact the economic outlook
- Balance sheet shrinkage has begun, as expected
 - It will proceed on a gradual, pre-set course, running in the background, subordinated to the main policy lever of the funds rate, but its effects will be taken into account when the Fed sets the funds rate
 - Over the next two years, balance sheet changes may substitute for ≈ 50 bps of funds rate hikes, to achieve whatever degree of policy tightening Fed deems appropriate
- Gradual rate hikes to continue
 - Next hike likely in Dec; followed by perhaps two more in 2018 (though three hikes more likely than one)
- Arguing against aggressive tightening:
 - Lower neutral rate; recent weakness of inflation; job growth has moderated; few signs of imminent overheating
- Arguing for some additional tightening:
 - With labor market close to full employment, growth continuing to run above trend, and financial conditions accommodative, some further tightening likely needed to reduce the risk of an overshoot that could ultimately imperil the expansion
- Fed appointments: Base case is that the makeup of the Fed (including the leadership) will remain reasonably "mainstream," with no major shifts in near-term Fed policy
 - Likely candidates for Fed chair:
 - Yellen: Obviously offers the greatest continuity and proven expertise
 - Powell: Closest to Yellen in terms of continuity and views
 - Warsh: A bit more hawkish, a former Fed governor, was opposed to QE (though that is less relevant now that balance sheet is on a path of reduction), and has said that inflation of 1% to 2% (rather than 2%) might be suitable
 - Cohn: Little known about his monetary policy views, but he has deep financial market knowledge and would likely work within the Fed mainstream
 - Taylor: Favors a more rules-based approach, but would likely be practical

As of: October 2017 Source: Federal Reserve, Deutsche AM Macro Research estimates

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Likely Funds rate target at end of 2018



Likely runoff of Fed's balance sheet



U.S. expansion still has legs Expansions don't die of old age



- The probability of an expansion ending is independent of its duration
- "Long" expansions have no greater probability of ending than "short" ones
- Expansions die of a cause
- And the normal culprits seem largely absent right now
 - Private sector doesn't seem to have overindulged in spending/lending/ borrowing/investing
 - Overheating pressures don't seem likely to build intensely enough to prompt the kind of aggressive Fed tightening that has historically killed expansions
 - Economy less vulnerable to global energy shocks
- Also, expansions have been lasting longer
 - Four of the five longest have occurred since the early 1980s
 - Statistically we can reject the hypothesis that the recent four expansions are drawn from the same distribution as the first eight of the post-WWII era in favor of the alternative that they have longer duration
- Reasons economy may be more stable:
 - More service oriented
 - Defter use of countercyclical policies
 - Growing prevalence of automatic stabilizers
 - Better inventory management
 - Improved safety and soundness of financial system
- None of this means recessions are obsolete
- Another one will surely occur
- Just doesn't seem likely on a near-term horizon

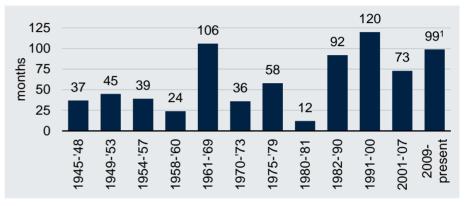
As of: October 2017

Source: Federal Reserve, NBER, Deutsche AM Macro Research estimates

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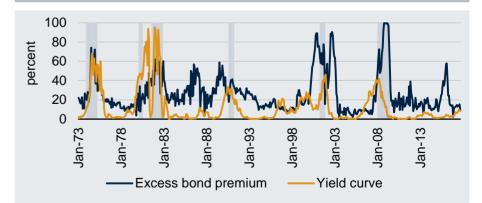
State Compensation Insurance Fund Investment Committee - November 16, 2017 Open Agenda item 4 - Market Outlook and Economic Update

Durations of U.S. expansions



Source: NBER; (1) Through Sept 2017

Fed recession probability models



Downside risks to the U.S. base case Growth slows sharply, labor market healing stalls (or even begins to reverse), inflation slips further



Possible catalysts:

- Policy disappointment and political turmoil in Washington intensify
 - But we're not assuming much stimulus (and markets seem to have scaled back overly optimistic expectations)
 - Even if political/legal pressures on the Administration increase, that is likely to have only transitory economic effects (via confidence, temporary market jitters)
- The expansion (now the third longest in history) simply runs out of steam
 - But expansions don't die of old age something kills them; and the normal catalysts (private sector overindulgence, excessive Fed tightening) still seem largely absent
- Global shocks
 - But global activity looking better overall; downside risks by no means eliminated, but seem reduced
- Financial conditions tighten and begin to bite
 - But they've actually been easing; they'd have to tighten a lot and quickly to hit activity hard in next 12 months
- Inflation slips further
 - But some of recent dip owes to transitory factors; labor market tightening and generally stable inflation expectations should help prevent sudden, sharp disinflation

Probability of this downside risk scenario over the next 12 months: ≈ 15% to 20%

As of: October 2017 Source: Deutsche AM Macro Research

Upside risks to the U.S. base case Growth picks up sharply, labor markets overheat, inflation jumps, Fed "behind the curve"



Possible catalysts:

- Bigger stimulus out of Washington than we currently expect
 - Seems unlikely given the current state of politics in Washington
- "Animal spirits" kick in
 - We're expecting some of this; hard to see what the catalyst would be for a lot more
- Financial conditions too accommodative
 - But Fed is likely to continue tightening, and the neutral rate is lower than in the past, suggesting today's low rates may not be as supportive of activity as they would have been in previous cycles
- Potential growth rebounds sharply
 - We have a slight acceleration built into our base case; hard to see what would prompt a major surge (especially on a 12month horizon, and given the demographic challenges)
- Inflation jumps abruptly
 - Unlikely given tame inflation expectations, flattish Phillips curve, and inertia in the inflation process

Probability of this upside risk scenario materializing over the next 12 months: ≈ 15% to 20%

- Even if this risk case doesn't materialize, labor markets may continue to grind tighter, pushing past full employment, especially looking beyond the 12-month forecast horizon
 - This could ultimately imperil the expansion in 2019 and beyond (not least by prompting the Fed to "overtighten")

As of: September 2017 Source: Deutsche AM Macro Research

Fed risks Potential policy errors, and uncertainty surrounding leadership change



- Fed tightens too much causes economy to roll over
 - But they've been treading very carefully, and we expect they'll keep going quite slowly
 - Despite the moves they've made so far, financial conditions have eased, and the economy has held up well
 - Little sign they've over-tightened as yet
 - Perhaps a risk for 2019 and beyond but not much on 12-month horizon
- Fed tightens too little economy overheats, inflation jumps, financial excesses boil over
 - Given inertia in inflation process, benign inflation expectations, flattish Phillips curve, and only scattered, limited signs of financial excesses, this seems quite unlikely over the 12 months
 - More possible as a risk looking beyond our one-year-ahead forecast horizon, especially if labor markets continue to tighten and/or financial market risk appetite continues to build
- Fed leadership changes
 - If, as we expect, any replacements for Fed leadership are well within the mainstream, that would likely be greeted with relief/calm in financial markets
 - But there is a (small) risk that this Administration chooses people outside the mainstream parameters of the macro/monetary
 policy debate, which could cause consternation/uncertainty in financial markets

As of: October 2017

U.S. political/policy risks Areas of concern



- Debt ceiling/gov't shutdown risks have been averted, for now
 - But they could re-emerge
 - In Dec for gov't shutdown; in Spring 2018 for debt ceiling
 - Base case remains that they will be averted, but risk case can't be dismissed entirely
- Tax cuts/reform may falter
 - We've long expected only modest changes to be enacted here; markets seem now to agree, but there is a risk that even that
 may not happen especially if political dysfunction in Wash persists/intensifies
 - And economy doesn't need demand-side stimulus
 - With full employment near, such a boost could raise the risk of overheating, possibly imperiling the expansion
 - What's needed is help on the supply side to lift paltry potential growth
 - Tax and regulatory reform could help on this front
 - But the effects are likely to take time to be felt, are hard to calibrate, and could easily be exaggerated sufficient perhaps to mitigate but not fully offset other structural drags on potential (like demographics)
- The specter of protectionism and immigration restrictions still looms, and if realized (say, through a collapse of NAFTA), would damage the economy's potential growth
- Possibility of increased legal/political pressure on the Administration
 - This could jeopardize the legislative agenda, increase uncertainty in financial markets, and raise the risks that the Administration takes rash action
 - (e.g., on the trade/geopolitical fronts) to divert attention

As of: October 2017

Cyclical improvement is global

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- Europe has turned the corner
- Even Japan improving
- China: Downside risks reduced, at least in the short run
- EM recovering as commodity prices find their footing

As of: October 2017

Eurozone Growth comfortably above potential; geopolitical risks diminished, though not gone



Economic fundamentals solid:

- — Business sentiment indicators like PMIs or consumer confidence, hard
 data like industrial production, orders, employment, wages → in line with
 above potential growth
- Fiscal policy: No huge spending programmes, but rather a slower decrease in budget deficits can be expected. E.g. Italy and EC agreed on "flexibility" on budget deficit → more govt spending e.g. in Germany on defence, infrastructure/education or less income via tax cuts (e.g. France, Germany after the elections). Political uncertainties in the EUZ slowly fading: Austrian, German elections acc to the polls not challenging regarding populist parties. Italian election, however, could cause uncertainty and thus dampen growth in 2018 Forza Italia threatening to form coalition with Lega Nord.
- Trade: still no clarity on U.S. trade policy yet. Risk to EUZ growth due to strong exports to the USA. EUR appreciation could dampen

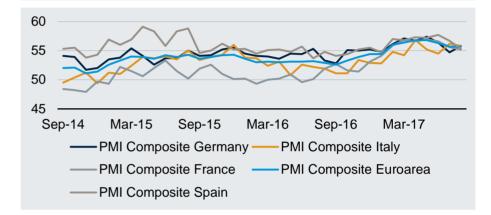
Inflation: Making slow progress

- Core inflation expected to move up, although slowly, as domestic demand provides support
- Headline inflation sensitive to oil, food and USD
- Inflation expectations (consumer survey) calmed down somewhat with energy prices moving up late 2016/ beginning 2017(after building a bottom during the last year).

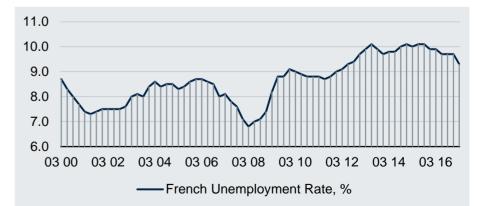
As of: October 2017 Source: Eurostat, Markit, Bloomberg, Deutsche AM Macro Research

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Eurozone PMIs



French Unemployment finally declining



Growth outlook: Inflation hits consumption, investments soon to be hit by Brexit uncertainty



Growth

U.K.

- We continue to expect a modest further deceleration of household consumption on the back of rising inflation. Also, we expect investment to decline further in 2017 and, in particular, in 2018 reflecting the uncertainty around Brexit

Inflation

- The ongoing devaluation of GBP is putting upward pressure Policyon headline inflation

Monetary Policy

- Makers think that Brexit may be undermining the economy's supply capacity and could thus keep inflation higher
- We expect the BOE to reverse the post-Brexit 25 bp rate cut, and possibly add another hike after that
- But given our subdued economic outlook, we do not expect this to be the starting point of a hiking cycle: In general we expect rate increases to be very limited on a very shallow path

Brexit

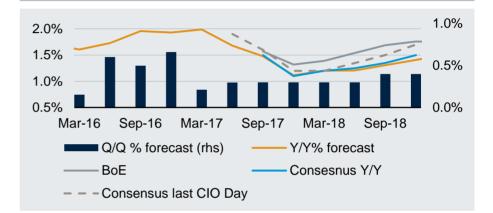
 Base Case: We continue to animate our reverse association agreement scenario (80%) in which the U.K. exits the EU through an EEA style transition agreement.

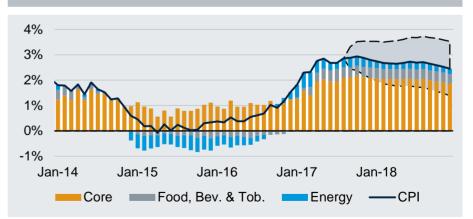
While we do not yet know the final relationship, we see a soft transmission into this new setup - also reflected by our slow slowdown growth scenario Risk Case (20%): Cliff Edge Brexit - time is running down without any solution, hard exit into WTO



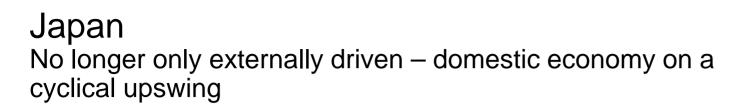
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GDP growth forecast





Inflation forecast





- Solid string of GDP increases; growth above diminished potential
- Improved global backdrop is helping, but domestic demand has improved as well
- Corporate sentiment has brightened, and with that, investment has firmed
- Household income and spending have recovered after sentiment improved, thus consumption has been strong, especially among the elderly
- The labor market is cyclically tight, as suggested among other things by a very high jobs-to-applicants ratio, but structural problems (e.g., weak demographics, limited mobility) persist. Wages could rise more as growth outlook improves

Monetary policy

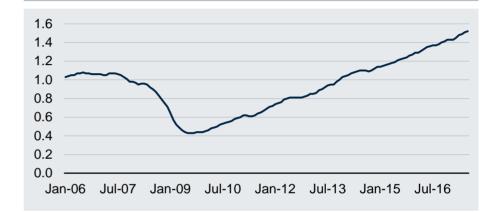
- After Kuroda became BoJ governor in April 2013 the targets were very clear: Higher inflation (about 2% in the medium term)
- The instruments were JGB purchases and loan programs, gradually increasing in size
- "QQE with Yield Curve Control" was introduced in September 2016 under which the 10y yield is anchored at 0%
- BoJ has succeeded in breaking the deflation psychology, but not in bringing inflation back up to 2%
- We expect they will continue to try, maintaining accommodative stance (including asset purchases and 10y yield target
- Tactically, BoJ likely to put more weight on yield curve control downplaying its purchase program and accept a somewhat weaker currency. As the total assets of BoJ reach the size of GDP, the purchase program comes under scrutiny
- Policymakers are willing to be behind the curve, thus any tightening in policy would be a story for 2018, at the earliest

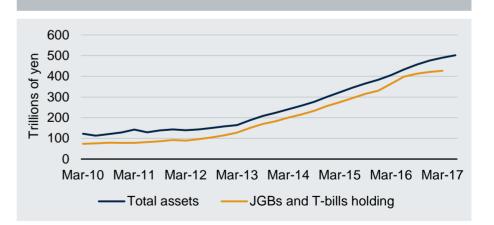
As of: October 2017 Source: BoJ, MoF, DeAM Macro Research

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Jobs-to-applicants ratio

BoJ balance sheet





China Structural reforms help to improve the near-term outlook



- Capacity cuts, SOE reforms and new regulations in the financial sector are the recent steps which are positive for the economic outlook
- PBoC has changed monetary policy to tightening since the beginning of year and a deleveraging process has started in the economy. PBoC is expected to keep this policy for some time as the economic performance is encouraging and no easing is needed.
- Policymakers try to reduce leverage in the economy without disturbing investments and regulating certain new business areas at the same time
 – so far it has been successful, but challenges remain
- Overcapacity ion housing has been cut, but target still not achieved
- Property prices have stabilized in nearly all cities → The long awaited rebalancing is underway
- As the economic growth outlook brightened in the Spring, the government started to address the SOE problem by 1) hiring private managers, 2) mixed ownership and 3) closing inefficient SOEs.
- The result is more efficient SOEs, partly reflected in the improved profit situation of industrial companies
- But here too, much reform and rebalancing still needs to be done
- Summary: China's near-term outlook has improved, but formidable structural challenged remain

Deleveraging



Bank credit growth has slowed



As of: October 2017 Source: National Bureau of Statistics, PBoC, :, DeAM Macro Research

Monetary policy: Shifting gears

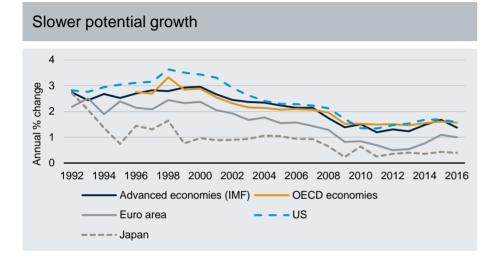
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- ECB to slow QE and end it in 2018
- Bank of Canada has begun hiking
- BoE apt to reverse post-Brexit easing move
- BoJ likely to be the last to change course

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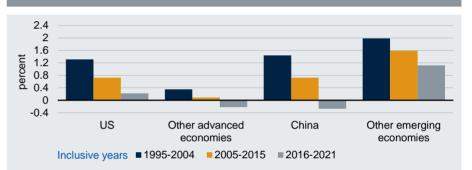
Structural challenges



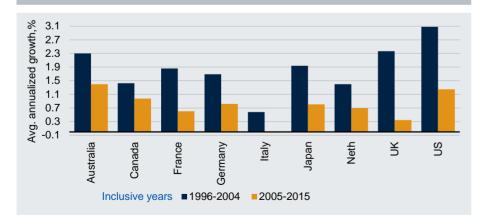


Weaker demographics

working-age populations (avg annual growth)



Sluggish labor productivity



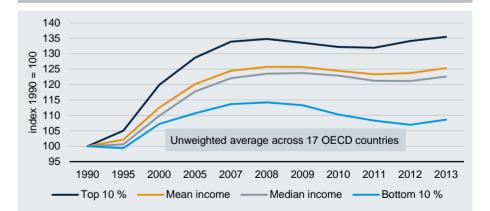
As of: October 2017

Source: IMF, OECD

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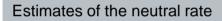
Rising income inequality

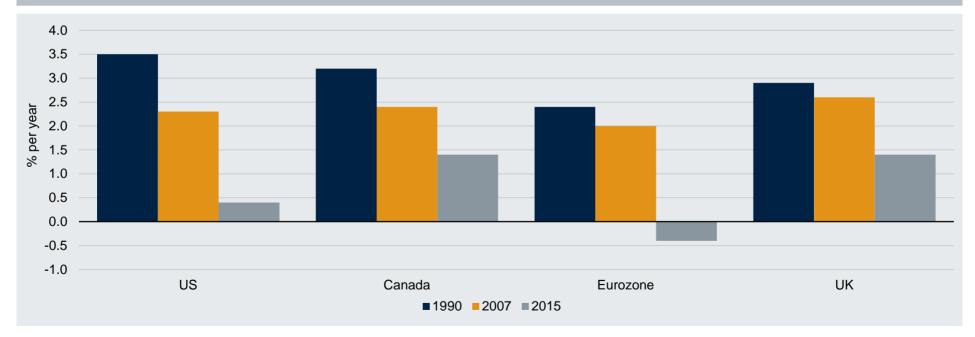


Lower neutral interest rates



- Consequence of:
 - Slower potential growth
 - Increased saving proclivity
 - Reduced investment inclination





As of: October 2017

Source: Holston, Laubach and Williams (2016). "Measuring the Natural Rate of Interest: International Trends and Determinants FRB San Francisco Working Paper (June).

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Consequences

Ζ

- Monetary policy: Less accommodative than it appears
 - Need higher inflation target?
- Fiscal policy: Room for more stimulus?
 - Only if neutral rate has fallen by more than potential growth
- Financial market valuations
 - Discount rate vs. cash flows

As of: October 2017

Backlash against globalization

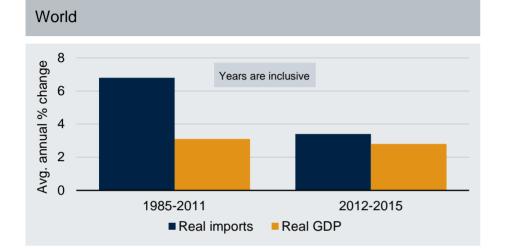
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- Manifestations
- Causes
- Consequences
- Historical parallels

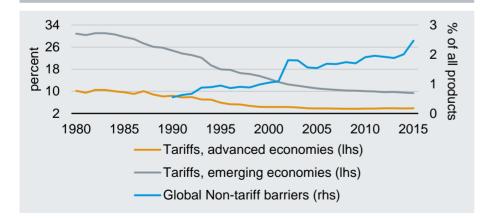
As of: October 2017

Globalization slowdown





Free trade momentum slowing?



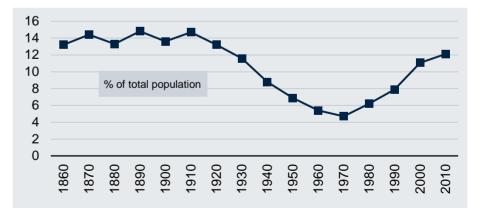
As of: October 2017 Source: IMF, U.S. Census

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State Compensation Insurance Fund Investment Committee - November 16, 2017 Open Agenda item 4 - Market Outlook and Economic Update Global supply chains peaking?



Foreign-born population in the U.S.



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