True Believers. Two groups of true believers are driving changes in the developed world. The first: single-minded central bankers who spent trillions of dollars pushing government bond yields close to zero (and below). While this unprecedented monetary experiment helped owners of stocks and real estate, its regressive nature did little to satisfy the second group: voters who are disenfranchised by globalization and automation, and who are on the march. What next? The fiscal experiments now begin (again). Prepare for another single digit portfolio return year in 2017.
Click on the video to watch Michael Cembalest, Chairman of Market and Investment Strategy, as he discusses how the themes he covers in True Believers shape his outlook for 2017.

Cover art by Robin Mork.
Expect the unexpected—that was the world’s lesson from 2016. From the U.K.’s decision to leave the European Union to the U.S. presidential election’s surprising results, citizens of the world voiced their desire for change. As investors, such major shifts require our reassessment of almost every assumption, from tax rates to inflation, to global trade, and all the subsequent spillover effects. Thinking through portfolios and any associated balance sheet borrowings are more important now than in many years past.

To that end, I’m pleased to share with you our ever thought-provoking 2017 Outlook. As depicted on the cover, Michael Cembalest and his team analyze the duality of pitchfork problems: the rise of anti-establishment parties around the world and the continued central bank attempts to shovel money at the problems of anemic growth. Both cause the need for a comprehensive portfolio review to ensure your assets are headed in the right direction.

We thank you for your continued trust and confidence in all of us at JPMorgan Chase.

Most sincerely,

[Signature]
Executive Summary: True Believers

Political upheavals and unorthodox central bank actions persist, but it looks like more of the same in 2017: single digit returns on diversified investment portfolios as the global economic expansion bumps along for another year.

How we got here. By the end of 2014, central bank stimulus lost its levitating impact on markets, GDP and corporate profits, all of which have been growing below trend. Proxies for diversified investment portfolios\(^1\) generated returns of just 1%-3% in 2015 and 6%-7% in 2016.

The biggest experiment in central bank history ($11 trillion and counting as of November 2016) helped employment recover in the US and UK, and more recently in Europe and Japan. Across all regions, however, too many of the benefits from this experiment accrued to holders of financial assets rather than to the average citizen. As a result, the political center of a slow-growth world has begun to erode, culminating with the election of a non-establishment US President with no prior political experience, and the UK electorate’s decision to leave the European Union. The market response to Trump’s election has been positive as investors factor in the benefits of tax cuts, deregulation and fiscal stimulus and ignore for now potential consequences for the dollar, deficits, interest rates, trade and inflation (see US section on the “American Enterprise Institute Presidency”).

\(^1\) Weights and indices used for diversified portfolio proxies: 60% equities (using the MSCI All-Country World Equity Index, including emerging markets), and 40% fixed income (using the Barclays US Aggregate for US$ investors, and the Barclays Global Aggregate hedged into Euros for Euro investors).
“True Believer” central banks have created unprecedented distortions in government bond markets. Bond purchases and negative policy rates by the ECB and Bank of Japan led to negative government bond yields. Whatever their benefits may be, they also resulted in profit weakness and stock price underperformance of European and Japanese banks. The poor performance of European and Japanese financials was a driver of lower relative equity returns in both regions in 2015/2016.

For the last few years, I have written about a preference for an equity portfolio that’s overweight the US and Emerging Markets, and underweight Europe and Japan. This has been one of the most consistently beneficial investment strategies I’ve seen since joining J.P. Morgan in 1987 (see chart below, right). It worked again in 2016, and despite the negative consequences of rising interest rates and a rising dollar for US and EM assets, I think it makes sense to maintain this regional barbell for another year as Europe and Japan once again snatch defeat from the jaws of victory.

Eurozone and Japanese banks have underperformed

Benefits of overweighting US/EM, underweighting Europe/Japan, 3-year rolling out (under) performance

2 Eurozone and Japanese bank stocks rallied sharply in Q3 2016, mostly a reflection of steepening yield curves which portend improved bank profitability. As the ECB gradually slows bond purchases in 2017, Eurozone bank stocks could rise further. However, the rest of the Eurozone markets might suffer with less stimulative conditions.

3 Computations are based on an all-equity portfolio that is overweight the US by 10%, underweight Europe by 10%, overweight EM by 5% and underweight Japan by 5%. All overweights and underweights are expressed relative to prevailing MSCI index weights.
We had a single digit portfolio return view for 2015 and 2016 (which is how things turned out), and we’re extending that view to 2017 as well. There are some positive leading indicators which I will get to in a minute, but first, the headwinds:

- While global consumer spending has held up, global business fixed investment remains weak, in part a consequence of the end of the commodity super-cycle and slower Chinese growth
- We expect the emerging market recovery to be gradual, particularly if Trump policies lead to substantially higher interest rates and a higher US dollar
- We expect a near-term US growth boost (amount to be determined based on the composition of tax cuts, infrastructure spending and deregulation), but trend growth still looks to be just 1.0% in Japan and 2.0% in Europe

The global productivity conundrum continues, leaving many unanswered questions in its wake.

- Even though private sector debt service levels are low, high absolute amounts of debt may constrain the strength of any business or consumer-led recovery

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4 Is productivity mis-measured since economists can’t measure benefits of new technology? This is a complicated question, but the short answer is “I don’t think so”. I read two papers on the subject in 2016, one from the Fed/IMF and the second from the University of Chicago. In the first paper, the authors state that “we find little evidence that the [productivity] slowdown arises from growing mismeasurement of the gains from innovation in IT-related goods and services”. And in the second, the authors conclude as follows: “evidence suggests that the case for the mismeasurement hypothesis faces real hurdles when confronted with the data”. One smoking gun: the productivity slowdown is similar across countries regardless of the level of their ICT penetration (information and communication technology).
• And finally, even before Trump takes office, we’re already seeing a rise in protectionism as global trade stagnates. The degree to which Trump follows through on campaign proposals on trade is a major question mark for 2017.

So, with all of that, why do we see 2017 as another year of modest portfolio gains despite the length of the current global expansion, one of the longest in history? As 2016 came to a close, global business surveys improved to levels consistent with 3% global GDP growth, suggesting that corporate profits will start growing at around 10% again after a weak 2016. More positive news: a rise in industrial metals prices, which is helpful in spotting turns in the business cycle (see Special Topic #8).
Furthermore (and I understand that there’s plenty of disagreement on the benefits of this), many developed countries are transitioning from “monetary stimulus only” to expansionary fiscal policy as well. Political establishments are aware of mortal threats to their existence, and are looking to fiscal stimulus (or at least, less austerity) as a means of getting people back to work. The problem: given low productivity growth and low growth in labor supply, many countries are closer to full capacity than you might think. If so, too much fiscal stimulus could result in wage inflation and higher interest rates faster than you might think as well. That is certainly one of the bigger risks for the US.

So, to sum up, here’s what we think 2017 looks like:

- A modest growth bounce in the US from some personal and corporate tax cuts, deregulation and infrastructure spending, with tighter labor markets, rising interest rates and a stronger dollar eventually taking some wind out of the US economy’s sails. If I’m underestimating something, it might be the potential increase in confidence, spending and business activity resulting from a slowdown in the pace of government regulation (see chart, right, and page 13)
- A little better in Europe and Japan in 2017, but no major breakout from recent growth trends
- China grows close to stated goals, supported by multiple government bazookas firing at once
- Emerging markets ex-China continue recovering after balance of payments adjustments; while countries with high exposure to dollar financing will struggle, overall risks around a rising dollar have fallen markedly since 2011
- The world grows a little faster in 2017 than in 2016, but as shown above, a lot of that is already in the price of developed market equities. So, another single digit portfolio year ahead

Michael Cembalest
J.P. Morgan Asset Management
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United States: what will Trumpism look like in practice?

While S&P 500 EPS growth was up 4% in Q3 2016 (8% ex-energy), some of that growth was driven by debt-fueled stock buybacks as companies re-engineered balance sheets rather than upgrading fixed assets. Q3 2016 revenue growth was lower: 2%, and 4% ex-energy.

A healthier labor market is good news, but rising wage inflation may create pressure on the Fed to normalize rates faster than markets expect. There’s rising pressure on profit margins, since pricing power is still weak; higher wages need to translate into spending gains for equities to sustain end-of-year gains.
Here’s another way to look at it: employment, housing and consumer activity are doing OK, but businesses remain cautious, even with all-time lows in real interest rates. That yields trend GDP growth of around 2.5%. Fiscal multipliers from government spending are much higher than for tax cuts, so we will have to see what policy mix emerges before making substantial changes to our US growth expectations. The outcome of the infrastructure debate (direct government spending financed through taxes on offshore profits vs. public-private partnerships; see Special Topic #5) will affect our answer.
The big question for 2017: how will Trump policies affect this backdrop? Financial markets appear to be pricing in a benign “American Enterprise Institute Presidency”:

- Plenty of deregulation (healthcare, energy, finance, internet, etc)
- Corporate tax cuts and little disruption from some very transformational tax proposals
- A small amount of personal tax reform that creates a modestly larger budget deficit, but not a massive one
- Limited (if any) action on trade, tariffs and deportations of undocumented workers
- Large military expansion combined with an isolationist foreign policy
- Infrastructure financed through taxes on offshore profits and public-private partnerships
- Gradual, non-disruptive dismantling of the Affordable Care Act
- Given all of the above, a modestly higher and steeper yield curve that’s great for banks, but not high enough to derail the housing expansion or worsen corporate debtor solvency

Whether this benign view is accurate or not is the big question for 2017. The right mix could be stimulative, adding 0.2% to 0.4% to GDP growth without much damage. But too much emphasis on tax cuts, government spending or tariffs could result in large budget deficits, higher interest rates, a spike in the dollar, rising Federal debt ratios (and a possible ratings downgrade) and higher inflation. There are a lot of tea leaves to read, since the outcome depends on the President-elect’s intentions, the disposition of House/Senate majority leaders and the degree to which Democrats filibuster Trump policies.

The charts below show estimates of the deficit and debt consequences of Trump tax and spending plans assuming they’re enacted in full, but I don’t think that’s a good central scenario. I think we will end up somewhere in between, with a mix of infrastructure spending (in sizes way below figures Trump has cited), corporate tax cuts, small personal tax cuts (if any), some trade restrictions on Mexico, deregulation of healthcare/financials/energy, a modestly higher budget deficit and 3%+ on the 10-year Treasury by the end of 2017. Higher interest rates create risks for housing and P/E multiples more broadly, but the impact on corporate income statements should be gradual given the weighted average maturity of S&P debt at 10.4 years, only 14% of which is floating rate.

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5 In November, we wrote about a potential shift at the Federal Communications Commission to end net neutrality, and its impact on content providers and cable companies/internet service providers. This ecosystem represents 12% of the stock market. Substantial changes could happen, and happen fast: [https://www.jpmorgan.com/directdoc/eotmfccease_am.pdf](https://www.jpmorgan.com/directdoc/eotmfccease_am.pdf).
When combining our base case scenario with pre-existing conditions and current equity valuations, 2017 looks to me like a year of single digit profits growth and equity market returns (i.e., 6%-8%). However, there are substantial changes taking place underneath the hood. The second chart shows some of the changing fortunes in the US equity market since the election.

Some market factors have been improving since the US Presidential election:

- Value stocks (with low P/E ratios), such as banks and industrials (presumed beneficiaries of a steeper yield curve, deregulation and greater infrastructure investment)
- Companies with high tax rates (given the prospects for corporate tax reform)
- Companies with high domestic sales (given the possibility of rising tariffs and trade disputes negatively affecting multinational stocks; see next page)
- Higher operating leverage (given the prospects for modestly higher economic growth)
- Stocks with low dividends and higher volatility (since higher interest rates could reduce the frenzy for bond proxy stocks)

Many of these factors have further to run given how distorted market preferences had become due to zero interest rates and the scarcity of organic revenue growth. Once these market factors began to shift in Q3 2016, excess returns in actively managed large-cap, mid-cap and small-cap equity mutual funds improved⁶, a possible sign that Fed-induced distortions have been negatively impacting active manager performance (for more on active management prospects, see Special Topic #2).

While the markets look to us to have already priced in corporate tax reform, the details are not clear yet, and some proposals are quite transformational. While lower statutory rates are a commonly stated goal (a corporate tax rate of 25% could lift S&P earnings by 8%-10%), there are a lot of details to sort out. The House GOP proposal entails fairly radical changes in the corporate tax code. We wrote about it at the end of December in a detailed note; here’s a summary.

- The elimination of interest deductibility, and the ability to immediately expense capital expenditures⁷
- Imports would no longer be deductible, and exports would be exempt from taxation (a step which would raise revenue on a net basis and support a reduction in the statutory rate)
- One-time tax of 10% or less applied to accumulated, non-repatriated offshore profits

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⁷ Most versions of these proposals grandfather deductibility of existing debt, and create carve-outs for financial firms. But what does this mean for short-term obligations like commercial paper; would they no longer be deductible when rolled? Unclear. Note that immediate expensing of capital expenditures for tax purposes is only a timing benefit, and nothing more.
While in the long run these policies could eliminate distortions in the tax code, encourage capital spending, reduce excessive leverage and reduce incentives to shelter income or move HQ offshore through tax inversions, the adjustment period could be disruptive. There are likely to be winners and losers from such changes, particularly if the dollar does not rally as expected by some economists.

On trade, domestically-oriented stocks should get the benefit of the doubt. The President has varying degrees of unilateral influence on trade policy. While campaign promises of across-the-board tariffs of 35% and 45% are unlikely, I believe Trump will take steps which raise tariffs on foreign goods. The risk: more expensive imports and a profit squeeze at import-dependent companies. The Peterson Institute modeled a “full trade war” by assuming that the US imposes 35% tariffs on Mexico and 45% on China, and that these countries retaliate in kind with similar tariffs. The result: roughly stagnant real US GDP for three years, from 2017-2020. The last time that happened: 1979-1982, a period of economic malaise, high unemployment and fragile financial markets. Again, I think the full trade war scenario is highly unlikely, even considering the unilateral power the President has to provoke one.

Rising interest rates should help banks, whose share prices have been negatively impacted by falling rates and a flatter yield curve since 2010. The perception of a changing regulatory environment is also contributing to rising bank valuations, which are still well below pre-crisis levels.

The technology sector outlook is mixed. While higher global growth should help, a higher dollar and trade barriers could hurt since the tech sector has the highest percentage of foreign sales. Tech also has the lowest effective tax rate, reducing relative benefits from any corporate tax reform. The underperformance of tech stocks vs. the market since the election may also reflect rotation out of heavily crowded positions into under-owned bank and industrial names.

**The elimination of import deductibility** is assumed by some economists to result in no disadvantages for importers, or material changes to trade flows, since the dollar is assumed to rally in such a scenario by an amount equal to the value of the foregone tax deductibility of imported goods. If the policy were adopted under a 20% corporate tax rate regime, it would require a roughly 25% appreciation (!!) of the US dollar, pushing it to its highest level since 1990. As I type this, I’m imagining all the ways that real life could intrude on this assumption. For example: will this work in a world of fixed and managed exchange rates of US trading partners? If for whatever reason, exchange rate adjustments do not work as planned, the following sectors have the highest degree of import content, and **stand to be hurt the most: apparel, computers, autos and electrical equipment**.

**Another remarkable thing about destination-basis taxation:** some people like it explicitly because they believe that it is protectionist, and other people like it because they resolutely believe that it’s not.
Policy changes are also afoot in healthcare. The internals of the Affordable Care Act are unstable (sharply rising premiums and deductibles, falling number of insurers on state exchanges), and remind me of the video of the undulation and ultimate collapse of the Tacoma Narrows Bridge in the 1940s. The GOP controls many of the legislative levers needed to change/repeal it. What might the future look like? As per Ryan’s plan, it could be composed of tax credits to purchase private health insurance, interstate competition and Medicaid grants. The proposal eliminates employer and individual mandates, and widens allowable premium variation based on age from 3:1 to 5:1 to encourage younger, healthier people to participate. Most likely timeline: implementation after the 2018 midterm elections.

Should the GOP make changes to the Affordable Care Act, insurers, biotech and large-cap pharma could benefit at the expense of hospitals and medical device companies. As shown below, on a broad sector basis, healthcare valuations are close to the lowest levels relative to the overall market since 1990.

**Healthcare versus the market**

![Graph showing healthcare versus the market](image)

Price-to-forward earnings ratio relative to S&P 500, 3-month average


**Biotech** stocks plummeted in 2015 when Clinton indicated that she would act on multiple fronts after Turing’s price increase on Daraprim. Her plan included (a) creation of a drug pricing oversight committee with the ability to impose fines, (b) acceleration of FDA generic approvals and (c) approval of emergency imports. Trump also commented on the need to rein in drug price increases, but if his solutions are focused on (b) and (c) and not (a), the market impact may be smaller. If so, biotech may recover some of what was lost in the prior couple of years when its valuations converged to large-cap pharma.

**Nasdaq Biotech performance following Clinton and Trump comments**, 100 = index level on day before comment

![Graph showing Nasdaq Biotech performance following Clinton and Trump comments](image)

Source: Bloomberg, Twitter, Time, JPMAM. December 28, 2016.

**Biotechnology and pharmaceutical stocks priced at similar levels**, Price-to-forward earnings ratio

![Graph showing biotechnology and pharmaceutical stocks priced at similar levels](image)


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9 In 2015 and 2016, pending FDA approvals were 6x-8x the rate of actual FDA approvals.
What about a Clinton Presidency?

There are multiple pathways by which Trump policies could result in adverse outcomes given deficit and tariff issues, and his lack of experience. Still, it’s also worth thinking about the counter-factual: how would a Clinton administration have delivered a positive jolt to an aging, highly indebted US economy that has lost its productivity mojo, and whose entitlement payments are increasingly crowding out discretionary spending that contributes to future growth? Clinton’s agenda included high frequency trading fees and risk fees on banks; a drug pricing oversight committee with the ability to impose fines and penalties; regulations impeding corporate tax inversions; regulations on a variety of niche for-profit industries; Federal support for labeling guidelines and soda/sugar taxes; further Medicaid expansion; new regulations on paid leave; revised energy efficiency standards; expansion of insurance coverage requirements; and policies Clinton described as effectively eliminating hydraulic fracturing, even though she also described natural gas as a bridge fuel to a renewable energy future in one of the debates.

While each proposal has its merits, they would have further expanded the regulatory footprint of the Federal Government. Compared to B. Clinton and G. W. Bush, the pace of Obama regulation was considerably faster, a trend which has been affecting small business sentiment. As the business cycle ages, productivity becomes more important as a means of preventing inflation. It’s unclear how Secretary Clinton’s regulatory agenda would have helped on this front.

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10 Examples of discretionary spending: job training/worker dislocation programs; Federal spending on education; consumer and occupational health and safety; Federal law enforcement/judiciary; pollution control and abatement; air, ground, water infrastructure; US Army Corps of Engineers; science research, NASA; energy R&D demonstration projects; NIH/CDC spending on disease control and bioterrorism; international drug control and law enforcement.

11 See our December 20, 2016 Eye on the Market for more on corporate tax inversions, and the House GOP proposal for a destination-based cash flow corporate tax as a means of reducing the incentive to engineer them.
Europe: a modest recovery, an underperforming corporate sector and a heavy political calendar

Europe’s economy is stable, but trend growth is still well below pre-crisis levels. While business surveys have been in expansion territory since the beginning of 2015 and consumer confidence has risen, all of this simply corresponds to GDP growth of around 2.0%. The growth news is better in Spain (3% in Q3 2016), but at just 10% of Eurozone profits, GDP and employment, let’s not get carried away with its overall importance. While Italy has its problems (see box) and 50% of Italian bank retail bonds mature in 2017, I expect Italy and the European Commission to find ways of avoiding an unwanted banking crisis by coming up with a variety of accommodations.

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**Eurozone business surveys: manufacturing/services**

Composite output PMI, Index (50+ = expansion), 3-month average

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**Eurozone consumer confidence**

Net balance of positive and negative response

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**Eurozone real GDP growth: cresting at 2%?**

Y/Y % change, history extended from individual countries

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*La Forza del Destino.* The Italian referendum “no” vote reduced the likelihood of Italy enacting structural reforms to close its productivity gap with Germany. A short list of Italy’s problems include the weakest growth and productivity trends in the region; slow uptake of information and communication technology (Italy ranks alongside Romania and Bulgaria); a high share of small and medium-size enterprises which limits economies of scale, particularly compared to the UK, Germany and France; labor market rigidities, low labor participation rates, inefficiency of public administration, archaic legal treatment of non-performing loans, etc, etc.

In last year’s Outlook, we showed some broad measures of economic vibrancy and competitiveness by country. The gap between Italy and Germany was around the same as the gap between Mexico and the US. Currency unions make strange bedfellows.
Bank lending has picked up now that the ECB has provided banks with incentives to lend, but still, this is another Eurozone trend that’s growing at just 2%. The charts below on bank lending are perhaps the best way of understanding how the Eurozone is fundamentally changed compared to its pre-crisis self: much less reliance on explosive growth in household and corporate borrowing in the European periphery. When I look at Italy and Spain from 2005 to 2008, it brings to mind a sentiment attributed to Marcel Proust: “Remembrance of things past is not necessarily a remembrance of things as they were”\textsuperscript{12}. The mid-decade surge in Southern European growth was never as real as it seemed, and was built on the faulty edifice of monetary union among countries with radically different growth and productivity characteristics.

Fiscal stimulus in Germany might help, but I’m not sure how much we will see. Germany’s Council of Economic Experts wrote in its annual report to Merkel that “the extent of monetary easing is no longer appropriate”, and that “additional fiscal stimulus is currently not appropriate” either. While German home prices are rising after a couple of decades of stability, German wage growth and other inflation measures are stable. As a result, when it chooses to, the ECB should be able to slowly step back from its stimulus campaign, rather than abruptly. Still, it’s striking to see the continued outperformance of Germany vs. France, which is not a healthy dynamic between the Eurozone’s two largest countries.

\textsuperscript{12} Proust was a Neuroscientist, J. Lehrer, 2007.
European equities underperformed again in 2016, culminating in its worst decade of relative performance vs. the US since we can track both series in 1970. This outcome has tempted many strategists to recommend Europe as a non-consensus pick every year over the last few years. However, Europe’s underperformance is almost entirely explained by inferior corporate results, rather than by pessimistic pricing of European equities:

- **Earnings.** Over the last 10 years, Europe posted its worst EPS growth vs. the US since the 1970s. An illustrative data point: through November, European EPS was still 46% below its pre-crisis peak, while US EPS was 10% higher. Europe has lagged the US on every component of profitability since 2007, particularly stock buybacks.

- **Return on equity.** Europe’s relative return on equity is also close to the lowest levels since the 1970s. Currently, the ROE of the median European industry group is 4.4% lower than its US counterpart. Of 24 industry groups, only 3 have ROEs which are higher in Europe than in the US (the largest positive difference in favor of Europe is for a sector that only has a 0.5% index weight).

- **Multiples.** Despite all of this, European P/E multiples are actually not trading at much of a discount vs. US equities (less than 1 P/E point lower during November and December 2016).

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**Europe vs. US: equity performance**

10-year rolling relative equity performance, local currency

Europe underperforms

Europe outperforms


**Europe vs. US: earnings per share growth**

10-year rolling relative EPS growth

Europe underperforms

Europe outperforms

Source: MSCI, Datastream, JPMAM. November 2016.

**Europe vs. US: return on equity**

Difference in ROE by sector, Europe minus US

Source: MSCI, Bloomberg, JPMAM. November 2016.

**Europe vs. US: profitability components**

Contribution to earnings per share growth since 2007

What about European politics?

For active readers of *Eye on the Market*, you’re probably aware of our research indicating that politics (whether local or global) tend not to have a large impact on markets. That’s why we generally pay more attention to the business cycle than to politics.

That said, half of the Eurozone’s population will vote in Presidential elections in 2017. If populist parties take control, it could result in heightened market volatility, since in addition to risks around Eurozone referendums, most European populist parties (unlike Trump) are generally not advocating deregulation, lower corporate tax rates and other pro-business policies as the core part of their agenda. To be clear, however, most of these parties are still in the minority and not on the cusp of being asked to be part of a majority government. Also, popular support for the Euro remains at 70%.

### Support for populist parties in Europe

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### French, Italian, Spanish, and Greek real GDP per capita

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</tr>
<tr>
<td>2015</td>
<td>3%</td>
</tr>
</tbody>
</table>


Why did anti-establishment parties emerge in Europe, despite recent economic improvements?

First, the improvement is pretty modest if you look over a longer period. The chart (above, right) shows per capita GDP growth in France, Italy, Spain and Greece. The last few years have been terrible, similar to results seen during WWII, WWI, the Spanish Civil War (1930s), the Franco-Prussian War (1870s) and the Phylloxera epidemics in France (1880s) and Spain (1890s). Secondly, if we take Eurobarometer surveys at face value, Europeans are very concerned about immigration and the surge of asylum-seekers.

### What do you think are the two most important issues facing the EU?, % of respondents

- Economic situation
- State of the member state’s public
- Unemployment
- Immigration
- Terrorism
- Crime

Source: Eurobarometer. 2016.

### Asylum-seekers and illegal migration to Europe

- Asylum seekers in Germany
- Illegal migration into the EU
- EU ex-Germany asylum seekers

Source: Eurostat, Frontex, Pew. 2015.
At a client event we held in Paris last November, Henry Kissinger and I debated why Europe is doing little in the Middle East to slow the pace of asylum-seekers. We concluded that two factors help explain why: [1] gradual European disarmament (only 4 of 24 European countries are meeting NATO military spending targets), and [2] increasing European reliance on Russian oil and gas, which now accounts for almost as much energy as Europe produces for itself.

**Bottom line on the Eurozone.** 2% GDP growth, stable bank lending, a modestly steeper yield curve (which helps bank stocks), improved earnings at commodity companies and a weak Euro should deliver single digit earnings growth, and single digit growth in equities as well. If so, Europe should muddle through another year in 2017 without too much drama. The next big existential challenge for the Eurozone will probably be the Italian General election in late 2017/early 2018, assuming that the National Front does not win the French Presidential election in May 2017 (if it does, all bets are off). But to be clear, even if the Eurozone survives these challenges, it is fundamentally changed when compared to its pre-crisis self, a model which had relied on unsustainable leverage and consumption in the European periphery to drive growth and profitability.

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13 For some French citizens, as my friend Louis Gave says, “the National Front is an intellectual descendant of Vichy France and not an acceptable option”. If Thatcherite candidate Francois Fillon is elected and is able to liberalize France’s labor laws (ending the 35-hour work week), cut corporate tax rates, reduce pension burdens on companies and abolish the wealth tax, there could be a positive market reaction.
Brexit: the hard part lay ahead, but so far, UK economy holding up better than expected

It’s too soon to tell, but as I wrote before the vote, some commentary on Brexit seems overwrought. In much of the Brexit research I read, I can’t tell how much of the fears expressed by the authors are based on dispassionate assessments of the risks, and how much is based on their anger and frustration at the vote’s outcome.

After a prolonged period of de-industrialization, it will be hard for the UK to immediately reap the benefits of a weaker pound (which has further to fall in 2017, and which is already feeding into higher inflation). However, since Brexit, business surveys and commercial property enquiries bounced back from their initial swoon, retail sales are holding up and job listings reflect logical responses to a weaker pound. Measures of UK economic surprises rose sharply in November 2016, mostly since dire outcomes expected by many economists didn’t happen. Perhaps the most important thing to watch is business investment plans, which plummeted after the vote. More recently these plans have improved a little, as businesses wait and see what the deal with the EU will look like once Article 50 is triggered.
Japan: delusions of inflationary grandeur

Abenomics was designed to reflate Japan. Inflation picked up in 2014, but then rolled over. While the Bank of Japan has been projecting higher inflation (brown dots, right chart), their forecasts have been way too optimistic. I’m not going to spend too much time this year dissecting all the Japanese data, since the core objective of Abenomics isn’t working.

For investors, I leave you with this. Where I grew up, every few years, insects called cicadas emerged after spending a decade or more underground, and then flew around for a few weeks before dying. In Japan, the cicada is known as the higurashi, and it’s a good metaphor for the Japanese equity market. The chart below (left) shows the benefits of overweighting Japanese equities and underweighting a mix of US, Europe and Emerging Markets equities since 1988. For a few short periods over the last 28 years, Japanese equities had their place in the sun, flying around for a while before submerging again. Otherwise, they weren’t really worth owning on a relative basis.

Renewed weakness in the Yen should help Japanese exporters in 2017, fiscal spending is rising, and investors may benefit from Japanese companies increasing buybacks and M&A (cash holdings in Japan are roughly 3x US levels as a % of market capitalization). I’d be comfortable with a neutral position in Japan in 2017 but not an overweight, since I don’t think 2017 will be the year of the higurashi, particularly if the Yen starts to rally again.

Higurashi Moments: the benefits of overweighting Japan

3-year rolling out (under) performance


Bank of Japan overestimated the inflationary benefits of quantitative easing, Y/Y % change, ex-fresh food

Source: Japan MIC, Bank of Japan, Haver Analytics, JPMAM. Nov. 2016.

Japanese core inflation

Y/Y % change, both adjusted for 2014 VAT

Source: Japan MIC, Haver Analytics, JPMAM. November 2016.

Higurashi Moments: the benefits of overweighting Japan

3-year rolling out (under) performance


Japan equities and the Yen: a one-trick pony


14 Computations are based on an all-equity portfolio that is overweight Japan by 7.5%, underweight the US by 3.5%, underweight Europe by 2.5% and underweight emerging markets by 1.5%. All overweights and underweights are expressed relative to prevailing MSCI index weights.
China: stabilization, courtesy of coordinated stimulus

2016 was a year of stabilization in China, and 2017 looks like it will be more of the same. As shown below (left), a massive, coordinated stimulus effort involving bank lending, government spending and fixed investment by state-owned enterprises took place towards the end of 2015. In response, the Chinese economy stabilized in 2016 (see 2nd chart on employment, exports, business surveys, corporate earnings, GDP, industrial production, retail sales, etc).

While stabilization is welcome, parts of China’s corporate sector are still highly indebted and suffering from both chronic overcapacity and an overvalued exchange rate. China’s corporate debt surge is now by some measures as large as the Japanese version of the 1980s. Some consequences: 25% of listed Chinese companies have cash flow that is less than the interest they owe to banks and bondholders, and a meager 1.5% return on assets at state-owned enterprises. All things considered, and given the difficulties involved with running massive stimulus indefinitely, Chinese GDP growth is probably headed to 5.5%-6.0% by 2018.

The good news: markets have come closer to pricing in the realities of Chinese fundamentals. The premium for A shares (onshore stocks trading in Shanghai and Shenzhen) relative to H shares (Hong Kong-listed) has come down by half, indicating less of a frenzy in the local markets. Furthermore, margin balances declined sharply after the boom-bust fiasco in 2015, and institutional protections were put in place (higher reserve requirements, limits on structured finance vehicles). Finally, many of the circuit breakers and trading suspensions have been lifted. As a result, equity-raising has resumed in China, allowing many companies to recapitalize and pay down debt.

However, some remnants of China’s reaction to the 2015 equity market collapse remain: corruption investigations into “market manipulators” continue, regulators still tightly control the IPO market, and the government still appears to own a lot of the stock it bought as the equity market was declining. Eventually, the depth of the Chinese equity market should improve as domestic institutional investors such as pension funds increase their allocations. Currently, individuals still account for 80% of the trading and 70% of free float ownership.

Investors should also remember that the Chinese financial system is a work in progress, and that the government continues to clean up the shadow banking system. The government is currently imposing new capital charges and risk provisions on distributors of asset management products. Good news in the long run, but potentially destabilizing in the short run.
The gradual rebalancing of the Chinese economy should continue in 2017, with consumption growing relative to capital spending. Real incomes and real consumption are still growing at 6%-7% per year, and for investors, it’s worth paying attention to the continued rapid growth in the number of affluent Chinese households. One illustrative consequence: faster growth in SUV purchases than sedan purchases, faster growth in overseas travel, preference for fresh coffee (vs. instant) and maturation in the internet penetration rate at around 55%.

For investors interested in China/Asia consumption, I always caution against looking to Chinese public equity markets as a way of expressing this view. In countries like China, Taiwan and Hong Kong, the combined weight of consumer staple and consumer discretionary stocks is less than 10% of stock market capitalization. What makes more sense to me: a targeted strategy, either in public or private equity markets. As shown below, on an industry-wide basis, private equity and venture capital managers have outperformed public equity markets in Asia. Part of the explanation lay in manager decisions to overweight consumer-related companies and underweight state-owned enterprises, banks, heavy industry, airlines and utilities.

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16 Gavekal Dragonomics Consumer Chartbook, November 2016.

17 This comment is based on the MSCI China Index, which includes H shares, B shares, Red chips and P chips.
Emerging markets ex-China: recovering from balance of payment adjustments

Emerging market equities and currencies declined after the US election due to fears of a rising dollar and protectionism emanating from the US. These concerns are well-founded (particularly with respect to Mexico\(^\text{18}\)), and I expect more weakness in EM FX rates in the next few months as markets price in implications of higher US interest rates as well. The reason a rising dollar worries investors is generally due to EM reliance on US dollar financing. However, as shown in the 2\(^{nd}\) chart, EM and global reliance on foreign capital has declined over the last few years. So, a rising dollar may hurt EM borrowers, but not as much as it would have 3-4 years ago when balance of payments and balance sheet adjustments were just beginning. As a result, buying EM on any pronounced weakness seems like the best strategy for 2017.

How did sensitivity to dollar financing decline? Mostly via sharp capital spending cuts by EM commodity companies that are very large dollar borrowers, which in turn contributed to stabilization in commodity prices (see Special Topic #8). In aggregate, their free cash flow is now positive after being sharply negative in 2015. Signs of reduced stress are seen in the sharp declines in credit default swap rates for Petrobras, Pemex, Vale, Rosneft and Gazprom.

The chart below (left) is a rough measure of sensitivity to dollar financing conditions for EM countries. EM Asia is generally better positioned than Latin America to ride out another surge in the US dollar.

\(^{18}\) As of December 15, the MSCI EM equity index (in local currency terms) is roughly flat since the election. Mexico is a possible target for some of Trump’s trade agenda, which explains the 5% decline in the MSCI Mexico equity index and another 8.5% decline in the Peso. Russian equities, on the other hand, are up the most. Plenty of room for some interesting conclusions, should you want to draw them.
In two prior cycles, after a sharp decline in EM currencies, EM equities outperformed the developed markets (shaded area in the first chart). Then, as EM exchange rates rose over the next few years, EM assets eventually underperformed again. In theory, structural reforms could reduce the magnitude of these cycles, but I don’t think we’re anywhere near that point. **As a result, EM is best thought of as a value play that makes the most sense after a balance of payments crisis, when imports and unit labor costs have declined, and when competitiveness has been (temporarily) restored.** Signals that indicate that this view is on track: the stabilization of portfolio inflows into EM countries, and a modest improvement in earnings estimates for the EM corporate sector. We will have to watch both closely now that the dollar has started rising again.

**A good example of post-crisis deep value investing: Brazil.** In last year’s Eye on the Market Outlook, we discussed how Brazil’s economy was as bad as anything I had seen since 1994 (growth, current account deficit, trade balance). Nevertheless, I wrote that the risk of Brazilian sovereign default on external debt was lower than in 2002, primarily due to a shift in sovereign financing from external to domestic debt. In other words, while Brazil has a lot of problems, unlike Greece (2009) and Argentina (2001), Brazilian sovereign external debt is NOT the core problem, and defaulting on it would probably not be a part of a solution. The chart above shows the rally in Brazilian sovereign external debt that began in January 2016.
<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
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<td>Leverage</td>
<td>What amount of leverage can survive a world of volatile markets? Now that the window for low-cost borrowing may be closing, we look at history and the future</td>
<td>27</td>
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<tr>
<td>Active management</td>
<td>The end of “peak central bank intervention” may reduce distortions and help active managers</td>
<td>29</td>
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<td>LNG</td>
<td>Rising US natural gas prices due to large-scale US LNG exports? Unlikely on both counts. What Dep’t of Energy LNG export approvals mean, and what they don’t</td>
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<td>How to simultaneously employ tax loss harvesting and generate market returns</td>
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<td>38</td>
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In each section click on the video icon to watch Michael discuss each topic.
[1] What amount of portfolio leverage can survive a world of volatile markets?

In our study of state pension plans, we found that median expected long-term returns on plan assets were around 7.5%. While corporate plans discount liabilities at lower rates than state plans, Milliman cites a funding ratio of 76% for the 100 largest corporate plans, indicating that many may need higher returns. As a result, some pensions, endowments, foundations and individuals have contemplated leverage (in one form or another) to increase portfolio returns. Since the window of opportunity to borrow at historically low levels may be closing, we wanted to take a closer look at leverage this year.

How much leverage can a portfolio sustain in a world of volatile markets, particularly since correlations among asset classes can rise close to 1.0 during a crisis? For purposes of this analysis, we define successful use of leverage as a scenario in which a portfolio does not experience “failure” over a 10-year period. We also assume that leverage is implemented through long-term fixed rate borrowing, and that leverage proceeds are used to gross up existing portfolio holdings on a pro-rata basis.

We looked at leverage from two perspectives: historical, and forward-looking. Our definitions of failure differ in each approach. The goal: develop some rough estimates of how much leverage a portfolio could carry without causing regret and recriminations at some point down the road.

The empirical, historical analysis

In the first approach, we start with a representative diversified portfolio of marketable securities that is rebalanced quarterly. We then compute the following: over each ten-year period, using actual daily returns on each asset class, what is the maximum amount of leverage that the portfolio could have employed without experiencing failure? In this approach, failure is defined using a “margin call” concept, one which is imposed by the provider of the financing, and which is triggered when/if the portfolio declines to a 75% loan to value.

As shown in the chart, during the 1990s, our prototype portfolio could have employed 60%-70% leverage and not hit the margin call trigger. However, as you might imagine, the tech collapse and the financial crisis then redefined the universe of bad market outcomes. In early 2008, based on this analysis, the diversified portfolio could not have taken on more than 40% leverage. To be clear, while the portfolio could have carried 40% leverage, that doesn’t mean that leverage would always have delivered positive returns. We are simply measuring the portfolio’s ability to sustain a market decline and keep going, without forced sales of assets along the way.

Maximum leverage possible to avoid margin call
Leverage, defined as a % of the gross portfolio value

<table>
<thead>
<tr>
<th>Asset class</th>
<th>Index</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-cap US equities</td>
<td>S&amp;P 500 Total Return</td>
<td>30%</td>
</tr>
<tr>
<td>Small-cap US equities</td>
<td>Russell 2000 Total Return</td>
<td>5%</td>
</tr>
<tr>
<td>International equities</td>
<td>MSCI EAFE Total Return</td>
<td>10%</td>
</tr>
<tr>
<td>Emerging mkt equities</td>
<td>MSCI EM Total Return</td>
<td>10%</td>
</tr>
<tr>
<td>Investment grade bonds</td>
<td>US Aggregate Total Return</td>
<td>20%</td>
</tr>
<tr>
<td>US high yield</td>
<td>US Corp HY Total Return</td>
<td>10%</td>
</tr>
<tr>
<td>Commodities</td>
<td>S&amp;P GSCI Total Return</td>
<td>5%</td>
</tr>
<tr>
<td>Leveraged loans</td>
<td>S&amp;P/LSTA LL Total Return</td>
<td>5%</td>
</tr>
<tr>
<td>Emerging mkt debt</td>
<td>JPM EMBI Global Total Return</td>
<td>0%</td>
</tr>
<tr>
<td>REITs</td>
<td>DJ Equity REIT Total Return</td>
<td>5%</td>
</tr>
<tr>
<td>Cost of debt</td>
<td></td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Source: JPMAM, Bloomberg. Assumes margin call at loan-to-value of 75%.

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19 This is a theoretical exercise in portfolio leverage; rules around maximum allowable collateralized leverage differ by jurisdiction.
Should the universe of bad market outcomes forever be impacted by the implosion in 2008, given increases in bank capitalization, the reduction in the shadow banking system, the migration of certain derivative contracts to centralized exchanges, the decline in non-conforming mortgages, etc? That is something that every portfolio manager, risk manager, chief investment officer and investor has to grapple with. If your answer is “yes”, then leverage of 40% would be as high as you would go based on the historical analysis.

The forward-looking analysis

In this approach, future returns are based on J.P. Morgan’s Long-Term Capital Markets Assumptions, and are subject to various “non-normal” and “fat left tail” shocks. In this approach, financing is assumed to be non-recourse. As a result, failure is effectively defined by the CIO, who would have to decide if it was a good or bad idea in hindsight to have used leverage. This is obviously a subjective question, but we can try to put some parameters around it. We define failure as follows: when the portfolio’s value falls to the point where, given the time remaining and our expected returns, it would be very unlikely to earn its way back.

The chart below shows the rising probability of failure at different levels of leverage. The bar is higher here since, unlike the prior analysis which simply has to avoid a margin call, this portfolio needs to generate a return at least equal to the cost of its leverage over the entire horizon. That’s one reason why the failure rate is never zero. Looking again at the 40% leverage case, is an incremental 15% failure rate “too high”? That’s a subjective determination that has to be considered against the consequences of unlevered portfolio returns that are below target levels, the ability to restructure pension obligations if needed, and the ability of the plan and/or its workers to make emergency contributions. Our Multi-Asset Solutions Quantitative Research and Strategies group looks closely at these questions on behalf of our institutional clients, and can go into greater detail regarding the calculations and assumptions used in this part of the analysis.

<table>
<thead>
<tr>
<th>Asset class</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global equities</td>
<td>40%</td>
</tr>
<tr>
<td>US investment grade bonds</td>
<td>30%</td>
</tr>
<tr>
<td>US high yield bonds</td>
<td>5%</td>
</tr>
<tr>
<td>Diversified hedge funds</td>
<td>5%</td>
</tr>
<tr>
<td>US private equity</td>
<td>5%</td>
</tr>
<tr>
<td>Commodities</td>
<td>5%</td>
</tr>
<tr>
<td>US real estate</td>
<td>10%</td>
</tr>
<tr>
<td>Cash</td>
<td>0%</td>
</tr>
<tr>
<td>Cost of debt</td>
<td>3.5%</td>
</tr>
</tbody>
</table>


In each scenario, we assume a target return of at least the cost of the debt on the entire portfolio over the 10-year window. We then assume failure occurs when the investor has less than a 20% chance of achieving the stated goal based on the portfolio’s value at that point and future expected returns.

The last few years have been difficult for some large-cap US active equity managers. In my view, this outcome is partially explained by distortions resulting from the most extreme monetary policy experiment in history. Now that markets are beginning to price in gradual exits from these policies, prospects for active equity management may improve.

While it’s hard to generalize, the typical large-cap US active equity manager employs many of the following approaches:

• Prefers low P/E stocks to high P/E stocks
• Prefers to equal-weight portfolios rather than market-cap weight them
• Underweights high-dividend, low-volatility stocks such as consumer staples, REITs, telecom and utilities (the “bond proxy” stocks)
• Does not prefer stocks simply based on their positive price momentum
• Holds some cash rather than being fully invested
• Often has an out-of-index position in European, Asian or US mid-cap stocks
• Prefers stocks with high degrees of idiosyncratic risk (i.e., stocks whose returns are not easily explained as a function of other factors)

The first chart shows how many of these 10 factors that “worked” over time (blue bars). There have been 3 swoons in factor performance since 2006. These swoons fit reasonably well with the percentage of large-cap US equity managers that outperformed on a net of fee basis (red line). With the US Federal Reserve moving slowly toward rate normalization, the ECB announcing its tapering plans and the BoJ moving to a yield targeting regime, I believe we are now past “peak monetary intervention”, which may explain improving factor performance since the middle of 2016. The second chart shows the return for each of the ten factors since June 30, 2016.
As additional signs that market conditions are changing in ways that may help active managers, consider the following charts on sector dispersion (rising), realized correlation amongst stocks (falling) and implied correlations between stocks (falling). These patterns may be signaling a return to a more normal stock-picking environment for active managers.

**Sector dispersion is rising...**

4-day difference in top vs. bottom sector performance

![Sector Dispersion Chart](image1)


**...as realized stock correlation is falling...**

Average 3-month correlation

![Realized Correlation Chart](image2)


**...and implied stock correlation is also falling**

CBOE implied correlation index

![Implied Correlation Chart](image3)

Rising US natural gas prices due to large-scale US LNG exports? Unlikely on both counts

I was reading reports that mentioned how the US Department of Energy has approved applications for US firms to export 50 billion cubic feet per day of liquid natural gas (LNG), an amount equal to 2/3 of current US natural gas production. Some analysts see this as a catalyst for much higher US natural gas prices. A closer look: first, it would be surprising if US LNG exports were to exceed 20% of production, and second, much of the US LNG export arbitrage opportunity disappeared over the last three years as Asian LNG import prices fell.

The chart shows Japanese and Korean LNG import prices on the left axis, and on the right axis, US natural gas production (green line) and current export applications (blue dots), both in billions of cubic feet (bcf) per day.

Here’s how we see it:

- **Understanding what DOE approvals really mean.** The DOE has “approved” 50 bcf per day of US LNG exports to Free Trade Agreement countries (point A on the chart). However, approvals to FTA countries are basically a rubber stamp and do not entail substantial documentation requirements. Korea is the only FTA country of 20 with large LNG import demand, and now Korean LNG import prices have fallen, reducing the arbitrage potential which existed three years ago. A large price differential vs. the US is needed to justify LNG exports given the high cost of constructing LNG import/export facilities and shipping costs.

- **We mostly focus on DOE approvals to NON-FTA countries.** What matters more are DOE approvals to non-FTA countries that are large LNG importers: China, Taiwan, Japan and India. While the DOE has received export applications for 46 bcf per day (point B), they have only approved 14-15 bcf (point C). Around 2/3 of these approved projects are now under construction at 6 US LNG facilities (point D).

- **Some non-FTA projects are unlikely to proceed given Asian LNG price declines, and rising costs of project approval.** What about the 31 bcf of non-FTA LNG export applications that have been received but not approved? Given the decline in Asian LNG import prices, we’d be surprised to see many of these projects proceed, particularly given new rules which require DOE applicants to first obtain costly approvals from the Federal Energy Regulatory Commission. A shortage of investment-grade counterparties is also a challenge for LNG project developers, given the need for long-term bond/bank financing.

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22 Most FTA countries import natural gas via pipeline from Russia, Norway and the Netherlands.
• How does the DOE make decisions on LNG export projects? The DOE takes a lot of things into account when considering non-FTA approvals, including the adequacy of the domestic natural gas supply, US energy security, impacts on the US economy (particularly the cost of electricity and gas-related input costs for manufacturers), international considerations and environmental impacts. As part of this process, the DOE issued a study in October 2015 that considered the macroeconomic impact of US LNG exports reaching 20 bcf per day, which may represent an upper bound in their thinking on the subject. Their primary conclusion: any increase in US LNG exports would mostly result from increases in US domestic production, and not result in much higher US prices or constrained demand.

The bottom line: given the decline in Asian LNG import prices, lower-cost gas import options for Eastern and Western Europe (pipelines from Russia, Norway and the Netherlands, and LNG from Algeria), the high costs of constructing LNG plants, the need for high-quality counterparties to secure long-term financing, the cost and complexity of the US approval process and the likelihood that higher US natural gas prices would unleash a domestic production response, we’d be surprised to see US LNG exports exceed 20% of US production. We also do not expect US natural gas prices to change much when LNG facilities under construction come online.

As for the increase in natural gas prices since February 2016 (their all-time low), this appears to be more a reflection of falling US shale production than of the prospect of rising US LNG exports.

### Natural gas price and US production

<table>
<thead>
<tr>
<th>Year</th>
<th>$ per MMBtu</th>
<th>Billion cubic feet per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>'06</td>
<td>$1</td>
<td>45</td>
</tr>
<tr>
<td>'07</td>
<td>$3</td>
<td>50</td>
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<td>85</td>
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<td>'15</td>
<td>$11</td>
<td>80</td>
</tr>
<tr>
<td>'16</td>
<td>$13</td>
<td>75</td>
</tr>
</tbody>
</table>


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23 Residential and commercial electricity prices in the US are roughly 30%-40% lower than in Europe and China.

Tax-loss harvesting has been around for a long time. The general premise: securities sold at a loss can be used to offset capital gains for tax purposes. This technique particularly benefits investors with large short-term capital gains, which are taxed at almost twice the rate of long-term gains. This asymmetry suggests that accelerating short-term losses can be valuable for investors.

However, mutual funds and exchange-traded funds are typically not ideal vehicles for individuals to use for tax-loss harvesting. The reason: when units are sold, tax consequences are based on the changing price of the unit itself, which reflects all of the gains and losses in the fund and not just the losses. In many years (see 1st chart), S&P stocks with substantial declines are offset by stocks that rise sharply. To isolate the tax losses inside a portfolio, it makes more sense to use a separately managed account.

Here’s the goal of this exercise: can a separately managed equity account isolate tax losses while still tracking a specific equity index closely? We asked a manager we work with that specializes in this approach to illustrate how it can be done. As shown in the 2nd chart, the performance of indicative separately managed portfolios is almost identical to the S&P 500 (the performance series are practically superimposed on each other).

Low return dispersion vs. the benchmark is a good sign, but what about the portfolio’s tax-loss harvesting capabilities? A manager of such a strategy tries to realize short-term capital losses, and when gains must be taken to rebalance the portfolio, they are generally deferred until they qualify as long-term. As shown in the final chart, illustrative tax-aware portfolios have done exactly that: the tax realizations are dominated by short-term capital losses and long-term capital gains. Ultimately, this is all about maximizing tax efficiency while minimizing return deviation from an index. The ample liquidity and depth of the US equity market enables these kinds of strategies to pursue both goals.

Even if some parts of Trump’s tax plan are enacted, tax-aware investing will still make sense given the spread between tax rates on short-term gains and long-term gains.
[5] Infrastructure investing and the role for public-private partnerships

The GOP and Democrats seem to agree that infrastructure investment is a high priority. However, there’s disagreement about how to do it. Clinton’s plan relied on direct government spending on infrastructure, financed through taxes on accumulated and untaxed offshore corporate profits. Trump’s plan appears to rely more on private sector investment by offering tax breaks to private enterprises to construct and operate new revenue generating projects in concert with public agencies (i.e. public-private partnerships, or PPPs). Some commentators have criticized Trump’s plan (Krugman called it “basically fraudulent”24 and Sanders described it as “corporate welfare”25). However, there are ways that PPPs can drive infrastructure investing, particularly if the use of proceeds is to finance new greenfield projects. It all depends on the details.

Let’s start with the recognition that the current system does not produce the necessary amount of US infrastructure spending26. Since Federal debt ratios are close to the highest levels since WWII and since most municipalities are constrained on spending (due to unfunded pension and retiree healthcare costs), some analysts believe that PPPs can play an important role. In fact, Obama’s Treasury department issued a report in 2015 on the subject which strongly endorses PPPs as a means of building infrastructure for the future27. Here are some of its conclusions:

- “The need to reverse years of underinvestment in infrastructure, despite tighter budgets at every level of government, calls for us to rethink how we pay for and manage infrastructure investment”
- “When the private sector takes on risks that it can manage more cost-effectively, a PPP may be able to save money for taxpayers and deliver higher quality or more reliable service over a shorter timeframe compared to traditional procurement”
- “When sponsors contract with private partners that support strong labor standards, PPPs can also provide local economic opportunity and create good, middle-class jobs that benefit current and aspiring workers alike”
- “While PPPs cannot eliminate the need for government spending on infrastructure, we can help meet our nation’s infrastructure needs by expanding the sources of investment and using those dollars, whether public or private, as effectively as possible to advance the public’s interest”
- “Other advanced economies, including Australia, Canada, and the United Kingdom, rely more heavily than the United States on PPPs to secure equity financing for infrastructure”
- “Although the role of PPPs in the US market is limited, the US Department of the Treasury’s research and engagement with stakeholders indicate that significant private capital could be mobilized for infrastructure investment”
- “However, in order to attract this capital, US public infrastructure assets will have to support higher rates of return than are currently generated through 100 percent low-cost debt financing in the municipal bond market”

26 In 2013, the American Society of Civil Engineers graded the United States infrastructure in a 74-page report. The grades: B- for solid waste, C+ for bridges & railways, C for ports, D+ for energy, D for aviation systems, dams, drinking and waste water, schools, transit, and roads, and D- for inland waterways and levees.
27 “Expanding the market for infrastructure public-private partnerships: alternative risk and profit sharing approaches to align sponsor and investor interests”, US Department of the Treasury, April 2015.
I asked our infrastructure group at J.P. Morgan Asset Management to weigh in on the subject. Here’s what they had to say about PPPs:

- PPPs require some combination of federal grants, taxes and user fees to incent private capital to participate. This framework has to exist before PPPs can be launched, and must often be preceded by political outreach to gain support from taxpayers and other constituents. While user fees often seem like a nuisance or private sector profiteering, they are essentially a replacement for public sector spending and related taxes paid by citizens.

- While the privatization of existing assets may not appear to generate much in the way of investment or hiring on the asset privatized, the use of proceeds can accelerate greenfield (new) projects that have higher multiplier effects.

- In principle, a PPP that allocates responsibilities optimally would have governments deal with legislation, jurisdictional considerations, procurement, permitting, siting, appeals, etc. Then, private sector operators would focus on project delivery and management.

- There are examples of successful PPPs, some of which have taken place outside the US, as noted in the Treasury report:
  - Local privatization of 11 Canadian airports, with the Ministry of Infrastructure quid pro quo that it be able to use proceeds for new greenfield projects.
  - Australian infrastructure program, in which existing infrastructure assets are sold to finance the construction of new projects at the national and local level (similar in concept to Canada).
  - In the UK, the £4.2 billion Thames Tideway wastewater project was financed through a PPP which took advantage of low interest rates on project financing. The UK government took the timing and construction cost overrun risk (immunizing private sector capital from a Boston-esque “Big Dig” outcome), which then lowered the return requirement for private capital. The UK intends to use the same approach for future electricity transmission and aquifer projects.
  - In Texas, with guidance and direction from government entities, private capital (a combination of utilities, cooperatives and private investors) financed $7 bn of wind farm transmission lines from 2007 to 2013, supporting Texas’ 18.5 GW of installed wind capacity, the highest in the US.
  - In Los Angeles, major public transit projects are being financed in part by an increase in the sales tax until 2062, based on a bill approved this fall. Projects include extending light rail to LAX, extending the subway to Westwood, earthquake retrofits and highway improvements. Projected tax proceeds of $120 bn will be used as the government’s contribution to projects that also entail private sector capital and private sector project management and construction (thereby limiting permanent employment increases for California’s public sector).
  - Denver’s airport train system received a $1 bn Federal grant as part of a larger PPP in which private sector bidders identified design efficiencies that resulted in significant cost savings (one example: double tracking wasn’t necessary for the entire route given train frequencies); the grant would not have been available if it were a public-only project.

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28 A good example of the constructive role that government can play: the Path-15 electricity transmission project in California. An impasse between the California Energy Commission and the California Public Utilities Commission had prevented improvement of transmission bottlenecks that led to blackouts in 1996 and 2001. The Western Area Power Administration (a Federal entity) was able to use the threat of jurisdiction and eminent domain to get both parties to the table to complete the project.

“Clean coal” is a euphemism for coal powered electricity in which carbon capture and storage of CO₂ takes place (CCS). By the end of 2016, CCS facilities in operation will be able to capture and store just 0.1% of the world’s CO₂ emissions. Let’s put aside issues of large cost overruns on recent projects, the Department of Energy withdrawing support from several large projects (FutureGen in Illinois), project cancellations in Europe, legal uncertainties about liability associated with CO₂ leaks, evidence of leakage and earthquake risk from CCS operations in the Middle East and the North Sea, and the ~30% energy drag on coal facilities required to perform CCS in the first place.

Let’s assume that all of these problems can be solved via technological innovation and legislation (an aggressive assumption, for sure). The bigger problem with CCS is the scope required to make a difference. To see why, let’s assume the world aims to sequester just 15% of global CO₂ emissions.

- In 2015, global CO₂ emissions were 33.5 billion tonnes
- To sequester 15%, that would mean capturing, transporting and burying 5.0 billion tonnes of CO₂
- That amount of CO₂ by weight is equivalent to 6.3 billion cubic meters of CO₂ by volume (assuming 0.8 tonnes per cubic meter of CO₂ when compressed)
- How much volume is that? Global crude oil extraction in 2015 was 4.4 billion tonnes by weight, which is equivalent to around 5.1 billion cubic meters of oil by volume

**Compare the two bolded numbers above, and you can see the problem.** Even capturing a small portion of global CO₂ emissions would require a CO₂ compression/transportation/storage industry whose throughput is even greater than the one used for the world’s oil transportation and refining, which has taken 100 years to build (see map); and that’s without the benefit that oil provides as an energy input to vehicle transportation and industry. There may be applications where CCS makes sense (enhanced oil recovery, and meeting small amounts of commercial CO₂ demand). But as a big picture solution to CO₂ emissions, CCS infrastructure needs and costs are very daunting.

Global oil pipeline and refining networks


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29 According to the *New York Times*, the Kemper clean coal plant in Mississippi is more than two years behind schedule, more than $4 billion over its initial budget of $2.4 billion, and still not operational.
[7] User-based digital business models and the monetization challenge

How helpful is information about user growth when digital internet companies go public? The answer: not very, or at least not without a lot of other accompanying information. The 1st chart shows growth in active users for a variety of different internet-based companies that went public over the last few years. For each one, user growth is indexed to 100 at month zero (the time of the IPO). The companies whose stocks eventually fell well below their IPO price are shown in red; the winners are shown in green.

Among stocks that performed poorly after IPO, Zynga is actually the exception: a poorly performing stock whose declining user base was a clear, coincident signal. For many of the other poorly performing stocks, user growth was strong both before and also after the IPO, at least during the first year or two. Some examples: Pandora, Zulily, Groupon, Etsy, Angie’s List and Twitter had rapid user growth out of the gate post-IPO, sometimes faster than user growth at Yelp, Facebook and LinkedIn. Nevertheless, the former group’s stocks substantially underperformed the latter.

It might seem with the benefit of hindsight that some of the red-lined stocks in the chart on the left were challenged from the beginning. But at the time these stocks went public, that wasn’t the case, at least not among the analyst community that covered them. The chart on the right shows consensus price forecasts for each company. With the exception of Groupon and Pandora, the consensus was that these stocks would either remain stable or rise sharply after IPO.

Here’s some additional information that we look for when evaluating pre-IPO and post-IPO investments in companies like these: “lifetime customer value”, which incorporates churn rates, revenues and variable costs; user engagement, measured either in time or in features accessed; daily active users (rather than monthly active users); customer acquisition costs, which include total marketing expenses; and data on both “bookings and “revenues”, with the latter recognized only when service is provided.

However, this kind of information is often not available before or at the IPO, requiring investors to make a lot more assumptions than usual about what the future holds for these businesses. That’s one reason (among many) why J.P. Morgan Asset Management has generally not included pre-IPO positions in its equity mutual funds, despite a small allowable allocation to do so. The liquidity, disclosure and overall risk of pre-IPO positions, particularly in digital/internet companies, are better suited to vehicles specifically designed for them.

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30 We collected the user metric that each company reports. Facebook, Pandora, Twitter, LinkedIn, and Yelp report monthly active users. Other companies report daily active users (Zynga), trailing twelve month active users (GrubHub, Zulily, Groupon, Etsy), quarterly visits (RetailMeNot) or paid memberships (Angie’s List).

All companies referenced are shown for illustrative purposes only, and are not intended as a recommendation or endorsement by J.P. Morgan in this context.
A large capex decline set the stage for rising industrial metals prices

In January 2016, some colleagues showed me a report on commodity super-cycles dating back to 1779, and how on average, they took 15 to 30 years to bottom after the peak. The implication: there’s a long way to go before the damage from the current super-cycle ends, since we’re only 4-5 years into its unwinding. However, as I wrote in February 2016, commodity prices typically declined by 50%-70% when these prior super-cycles unwound. In that regard, the damage had been done: commodity prices had already declined by roughly half from their peak by the end of 2015. For investors, I think “price” is more important than “time”, which is why we became more optimistic on industrial metals prices in early 2016.

The 1st chart shows the stabilization in industrial metals prices. Why did prices stabilize if inventories are still at or close to multi-year highs (2nd chart)? Note: while zinc is an outlier given its declining inventory levels, it is much less important than the other three: the dollar value of zinc inventory is only 7% of the total inventory value of the 4 metals shown.

In our view, markets are looking past the current inventory glut and paying more attention to the sharp decline in capital spending on industrial metal extraction. This capex decline is very similar to the one taking place in oil, which is also having a stabilizing effect on oil prices. Our view on commodity prices is “stabilization” rather than a sharp upward spike like 2006 or 2009; that should be sufficient to stabilize conditions in many EM commodity exporters as well.

On Oil. In our 2016 Outlook, we wrote that the supply-demand adjustment in oil would be well underway by 2017, which pointed to higher prices. In June 2016, we wrote again about the oil capex decline, large investor short positions, rising non-OPEC field decline rates, stable oil demand growth and the utter irrelevancy of renewable energy when discussing prospects for oil markets. Where to from here? An oil supply deficit is now in plain sight by the end of 2017, particularly if OPEC countries adhere to their historical 50% compliance rate with announced cuts. Peaking shale oil productivity per rig is another factor which may contribute to further tightening in supply-demand conditions.
Time capsule on the 1970s: what if True Believer central banks lost control of inflation?

I don’t think it will get nearly this bad, but as a reminder, this is what can happen if central banks lose control of inflation and are forced to play catch-up from behind. During the 1970s, real returns on commodities were substantial, particularly when compared to the zero real returns earned on stocks and bonds over the course of the decade. Richard Nixon may have opened the door to China, but he also opened the door to stagflation, through the imposition of wage/price controls, and through interference in the inner workings of the Federal Reserve (see box).

Real total return on stocks, bonds and commodities in the 1970s, January 1970 = 100

Remembering Richard Nixon

Interference at the Federal Reserve. When Fed chairman Arthur Burns resisted pressure from Nixon to guarantee full employment, the White House planted negative stories about Burns in the press. Nixon’s people also floated stories about diluting the Fed Chairman’s power by doubling the Board’s members. Nixon wrote to Burns: “There is no doubt in my mind that if the Fed continues to keep the lid on with regard to increases in money supply and if the economy does not expand, the blame will be placed squarely on the Fed.” In 1971, H.R. Haldeman spoke about the effectiveness of Nixon’s strategy: “We have Arthur Burns by the [expletive deleted] on the money supply”.

Sources:
"Secrets of the Temple: How the Federal Reserve Runs the Country" by William Greider
"Before the Fall: An Inside View of the Pre-Watergate White House" by William Safire
"Monetary Policy and the Great Inflation in the United States: The Federal Reserve System and the Failure of Macroeconomic Policy" by Thomas Mayer

Political shenanigans. It’s hard to talk about Nixon without also recalling how he and his operatives conducted themselves during elections; Watergate was not an isolated event. Some examples: President Nixon and an aide discussed planting McGovern campaign literature in the apartment of the man who shot George Wallace; Nixon operatives produced counterfeit mailings on Muskie letterhead that were critical of Ted Kennedy, and that accused Hubert Humphrey and Henry Jackson of sexual misconduct; Nixon aides hired phony Muskie volunteers to call people at home in the middle of the night, ringing back multiple times with the same questions; Nixon aides hired a woman to strip outside Muskie’s hotel room yelling “I Love Ed Muskie!”; and invitations to non-existent events with (alleged) free food and alcohol were distributed by Nixon operatives on behalf of other candidates, angering people when there was none.

Sources:
New York Times, December 14, 1992
William Manchester and J. Anthony Lucas in “Nightmare: The Underside of the Nixon Years”
LinkedIn updates

Since August 2016, we have posted the following market and economic updates on LinkedIn:

12/12/2016  Life Away from Home, Part 2 (Holiday Eye on the Market)
11/30/2016:  Japan equities: Higurashi moments are rare
11/2/2016:  Why voter clustering matters and the battle for the House
10/26/2016:  Electric cars: a 1% solution? (with commentary on renewable energy)
10/12/2016:  The tell-tale heart of the Buffett Rule
10/5/2016:  After the fall, own some emerging markets
9/28/2016:  Presidential debate chart-watch
9/21/2016:  The distant meteor of unfunded pensions
9/14/2016:  War on savers retirement kit
9/7/2016:  Worst moments from the Party conventions
8/30/2016:  China’s environmental mess
8/25/2016:  The high price of bond-like stocks
8/23/2016:  The limited impact of geopolitics on markets

Sources and acronyms


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