EPOCH | Epoch Investment Partners, Inc.

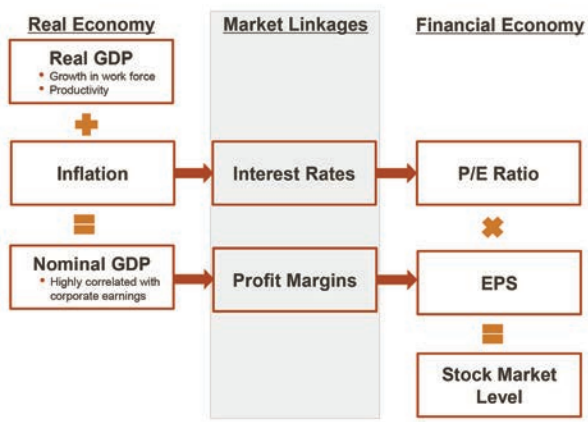
Epoch's Quarterly Capital Markets Outlook

EDITED TRANSCRIPT — JULY 20 , 2017

Each quarter, Epoch Investment Partners' co-CIOs and investment professionals discuss the market themes that are affecting global capital markets. This document contains the summarized transcript of the presentation. A full replay of the webinar is available on our website, www.eipny.com

SLIDE 1

Financial Economy Linked to the Real Economy



Bill Priest:
We begin our outlook with a model of how the financial and real economies interact. Real GDP is driven by two factors: growth in the workforce and growth in productivity. Adding in inflation determines nominal GDP which, over longer time periods, is highly correlated with earnings growth. Further, lower inflation (all other things equal) means lower interest rates, which are inversely correlated with P/E multiples. Finally, if we take the P/E ratio and multiply it by earnings, we have the stock market level. As we go through the remainder of this presentation, we will address each of these variables in some detail and emphasize that all of these metrics are significantly influenced by technology.

Source: Crestmont Research; Epoch Investment Partners

SLIDE 2

Tech is the New Macro: The Second Machine Age Has Arrived

- **First Machine Age**
  The Industrial Revolution, evidenced by the invention of the steam engine which overcame the limitations of both human and animal muscle power

- **Second Machine Age**
  Began with the inflection point of digitization driven by the exponential growth rate of computing power per dollar

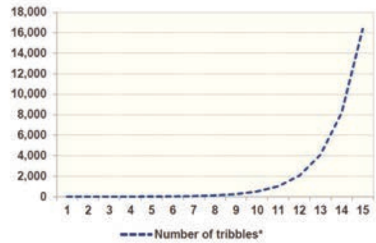
Epoch recently published a paper called "Tech is the New Macro: Impacting all Three Components of Return on Equity." The paper, available on our website, details our thoughts on the impact of the second machine age on capital markets. The second machine age began somewhere around 2010 at the inflection point of digitization. This was driven by the exponential growth rate of computing power.

The Second Machine Age is a book by Erik Brynjolfsson and Andrew McAfee.

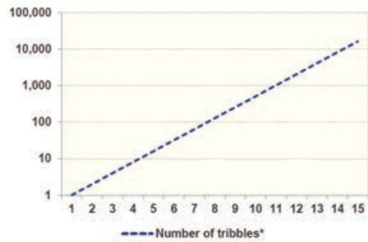
SLIDE 3

Exponential Growth and the Trouble with Tribbles

The number of tribbles exceeds 16,000 after just 15 days



Looks less scary on a log scale, but they still need to be jettisoned



To illustrate exponential growth, we take a little liberty with Star Trek. In a 1967 episode called "The Trouble with Tribbles," cute, fluffy animals arrive on the USS Enterprise. The trouble was that tribbles are born pregnant and double in population every day. Thus, if you start with one of these creatures on day one, 15 days later you have over 16,000. The same data is illustrated in the chart at the lower right, but this time with a log scale. Both charts show a doubling every day, that is, the power of exponential growth.

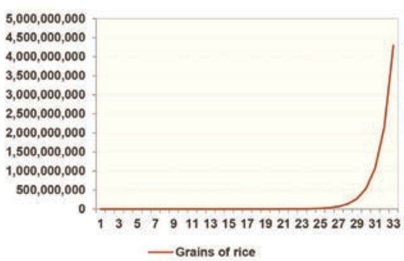
Source: Second Machine Age, Star Trek
** Tribbles are a fictional alien species in the Star Trek universe.*

SLIDE 4

Moore's Law and the Chess Board Analogy

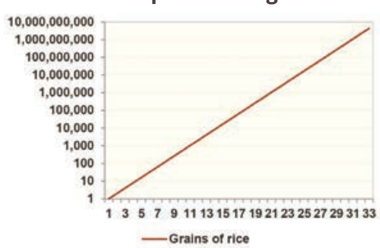
Exponential Growth: We entered the "Back Half" of the chess board circa 2010.

The number of grains of rice exceeds 4 billion after 33 squares



Global production of rice in 2017 will be about 3.1 x 10^{16} grains of rice. This is exceeded by the 56th square. Of course, production in 13th century India was a small fraction of this (and likely exceeded by the 33rd square).

On a log scale: Still spectacular growth



Another way to illustrate exponential growth is with the chessboard fable, which was popularized by the futurist Ray Kurzweil in 2001. After being shown the game of chess, an emperor was so impressed that he allowed the inventor to name his own reward. The clever man said he simply wanted some rice to feed his family and asked "why don't we just put one grain of rice on square one, two on the second, four on the third, and so on, doubling, until square 64 is reached?" After 32 squares, half the chessboard, there would be over 4 billion grains of rice. Further, as the doubling continues, you wind up with a pile that is taller than Mount Everest. Kurzweil's fable does a great job at illustrating exponential growth and the power of Moore's Law.

Source: Second Machine Age

SLIDE 5

Why Now?

- **Moore's Law:**
  - **In 1965 Gordon Moore predicted that the processing power of an integrated circuit would double roughly every 18 months.**
  - **Inflection point: At that pace it should take about 48 years to move through first half of the chessboard; that is, circa 2010.**
- **Massive digitization of information.**
- **Recombinant innovation: The ability to recombine data of all sorts.**

In 1965 Gordon Moore, co-founder of Intel, predicted that the power of an integrated circuit would double roughly every 18 months. We are now in the back half of the chessboard, with the 33rd square being reached somewhere between 2010 and 2013. Technology is going to affect productivity, wages and, especially, corporate finance and we are bound to see headlines about tech every single day. Why would this become more prevalent now, though? The answer is that technology didn't matter as much when we were at square five or square six because it didn't have the scale, to really move the needle. But at the 34th or 35th square it does.

SLIDE 6

Progress Does Not Run Out; It Accumulates

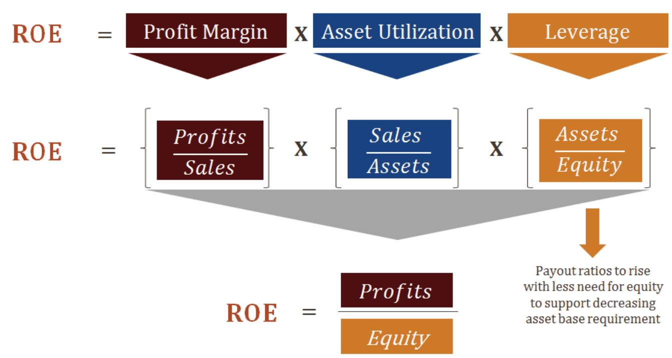
- **Digitization makes massive bodies of data relevant to almost any situation, and this information can be infinitely reproduced and reused (non-exclusivity, unlike a loaf of bread).**
- **As a result of these two forces, the number of potentially valuable building blocks is exploding around the world and the possibilities are multiplying as never before.**
- **These building blocks can never be eaten or used up; they increase the opportunities for future re-combinations.**

Another important feature of technology and digitization is that progress does not run out, it accumulates. Digitization makes massive bodies of data relevant to almost any situation and the information can be infinitely reproduced and reused. Unlike a loaf of bread, which only one person can eat, data can be consumed by multiple people without going away. As a result, the number of potentially viable building blocks is increasing exponentially around the world. These building blocks increase the opportunities for future re-combinations.

SLIDE 7

Where Does The "New Macro" Manifest Itself in Corporate Finance?

Return on Equity Components



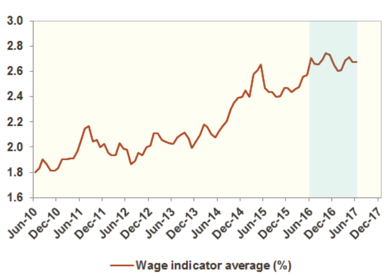
Technology will improve all three components

To explain the implications of the previous slides for investors, we use the DuPont formula, showing that technology is positive for all three components of RoE. First, new technologies improve profit margins as you can have lower labor and capex costs per dollar of sales. The retail sector, where internet sales are growing in importance, offers a good example of this. Second, asset utilization improves, as you have higher sales per dollar of physical assets, reflecting that we are in an asset-light world. Third, leverage increases, as you don't need the same amount of equity for the assets involved. This also means you can pull equity out of the business and increase payout ratios, which we expect to occur over the coming years in many sectors. Technology is probably the most powerful force in finance today.

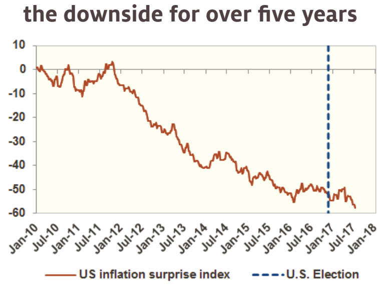
SLIDE 8

U.S. Wage and Price Inflation: Much Weaker Than in a Typical Cyclical Recovery. This is Good News for Equity Multiples.

U.S. wage growth has been surprisingly flat for the last 12 months



Inflation surprises: Consistently to the downside for over five years



David Pearl:

The U.S. labor market is quite tight. In previous cycles, this would have resulted in wages going up much faster than they have. While there has been some wage growth, it's been surprisingly flat over the last 12 months. We believe this is largely due to technology substituting for labor. This is, in turn, keeping inflation down. In fact inflation surprises have been coming in consistently below expectations for the last five years.

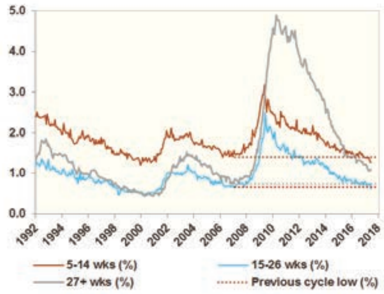
Source: (left chart) Bloomberg, Epoch Investment Partners
Average of four series: Atlanta Fed, NY Fed Median, AHE, ECI

Source: (right chart) Bloomberg, HSBC, Epoch Investment Partners
Index tracks how inflation releases come in relative to consensus expectations.

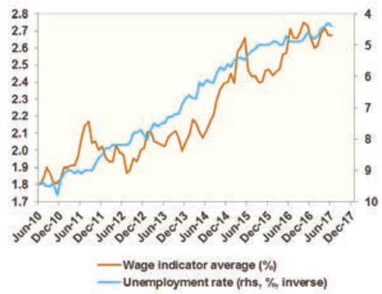
SLIDE 9

Tight U.S. Labor Market: Low Unemployment and Solid Jobs Growth Should Ensure a Robust Consumption Outlook

Unemployment rate declined to previous cyclical lows (true for most durations of unemployment)



Tight labor and low unemployment implies slightly higher wage growth ahead



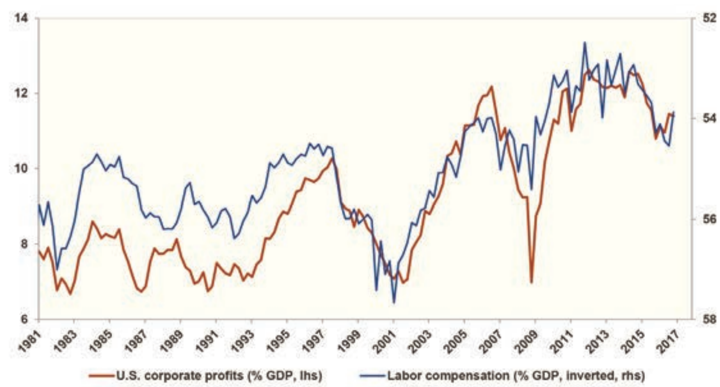
The labor market is in a prolonged recovery with solid employment growth and a declining jobless pool. Many of the people who became unemployed in the last recession have found new jobs. Further, even with fewer unemployed, wage inflation is quite moderate, with the exception of occupations like nursing and software engineering, where few tasks can be automated. Unlike previous low wage growth cycles, consumer prices face little upward pressure and interest rates are likely to increase only slowly and gradually. This implies that market multiples can stay high, making this a pretty good environment for the stock market.

Source: Bloomberg, Epoch Investment Partners
Chart on right is the average of four series: Atlanta Fed, NY Fed Median, AHE, ECI

SLIDE 10

Labor Share of U.S. GDP has Declined Since 2000, Providing a Nice Tailwind for Corporate Profits

Even with the cyclical recovery and tight labor market, wages are not posing much of a challenge for profit share



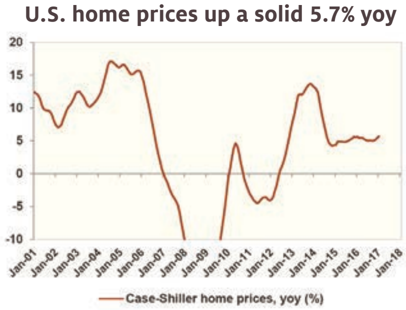
Further, moderate wage growth implies that labor's share of U.S. GDP is unlikely to pose much of a challenge for overall corporate profits. In fact, the profit share has increased markedly since 2000, largely due to the impact of technology. While what's good for corporate profits isn't always terrific for consumers, we are at a nice point in the trade-off, as job and wage growth are solid and the corporate profit share remains elevated. We believe this can continue, allowing households to drive consumption and corporations to increase investments.

Source: Bloomberg, Epoch Investment Partners

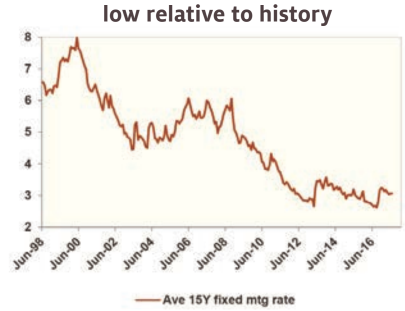
SLIDE 11

U.S. Housing Fundamentals are Constructive: Solid Income Growth, Starts Well Below Trend and Low Mortgage Rates

U.S. home prices up a solid 5.7% yoy



Mortgage rates extremely low relative to history



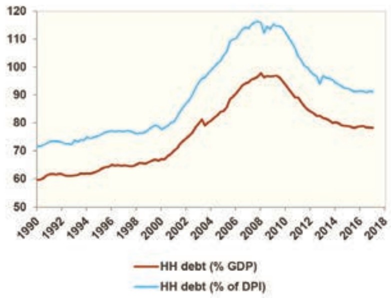
Housing fundamentals are highly supportive and the sector has experienced a terrific recovery. Overall home prices are up a solid 5.7%, largely due to strength at the lower end of the market. There are still shortages in starter homes, as many of the millennials who graduated around the financial crisis did not find jobs for a number of years. As the economy recovered they are now obtaining employment, getting married, and moving into their first house, helped by extremely low mortgage rates.

Source: Bloomberg

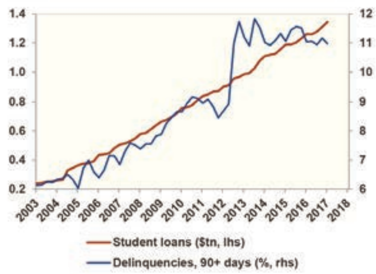
SLIDE 12

Household Debt Levels Remain a Concern, Especially if Rates Rise Sharply

Household debt is still elevated, but down dramatically from ten years ago



Student loan balances have soared with delinquencies in the low double digits



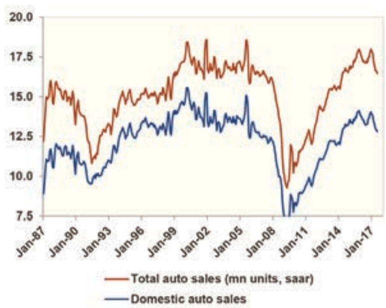
One area of concern is that household debt levels remain elevated, though they are down dramatically from the historically high pre-crisis levels. Further, with interest rates continuing to be rather low, debt-to-service burdens are much more manageable. Another concern is student loan balances, which have soared over the last decade or so, with delinquency rates worryingly high. Ultimately, this is a governmental issue and will probably require a governmental solution, but it is a headwind nonetheless.

Source: Bloomberg

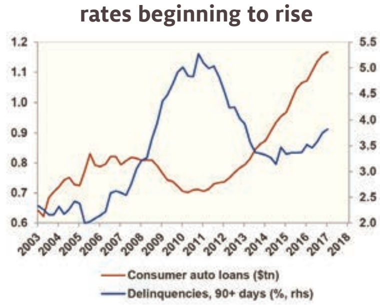
SLIDE 13

Auto Loans are a Particular Concern, but Unlikely to be Systemic

Auto sales have clearly rolled over



Auto loan balances have accelerated with delinquency rates beginning to rise



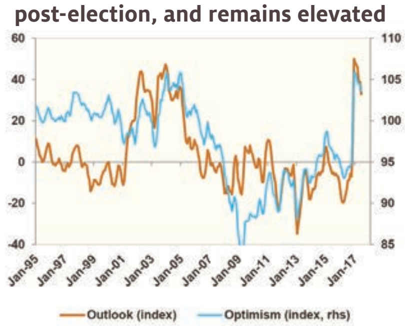
Following many post-crisis years of low sales, the automobile industry had a lot of pent-up demand. This led to a strong burst in auto sales, but did not stop there. Credit became very loose and, like subprime loans last decade, pulled demand forward. Some people who really couldn't afford a car received car loan approvals. Credit quality has clearly gotten worse and delinquency rates have begun ticking up, suggesting the best of the auto cycle is likely behind us.

Source: Bloomberg

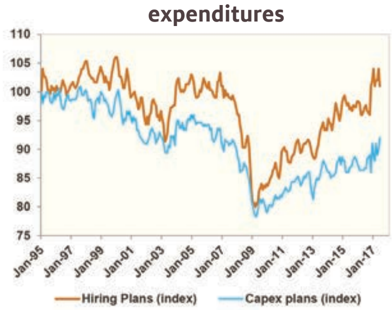
SLIDE 14

U.S. Small Business Outlook has Improved Markedly, With Only a Marginal Pullback in Recent Months

Small business outlook: big jump post-election, and remains elevated



Small businesses plan to ramp up both hiring and capital expenditures



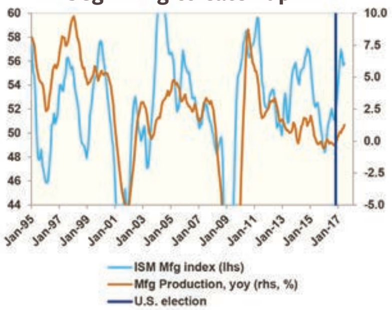
The very important small business sector, the biggest job creator in the U.S, had been stagnant for quite a few years before jumping sharply following last November's election. It's come down a little bit since then, but remains elevated and should benefit from the cyclical recovery and a more pro-business government that favors deregulation. This has led many small businesses to plan to ramp up their hiring and increase their investments, particularly in technology, where something like cloud technology is significantly cheaper than having to expand CapEx and buy in-house computer systems. Overall, small businesses are beginning to benefit from the same technologies that larger companies have benefited from.

Source: Bloomberg, NFIB diffusion indices

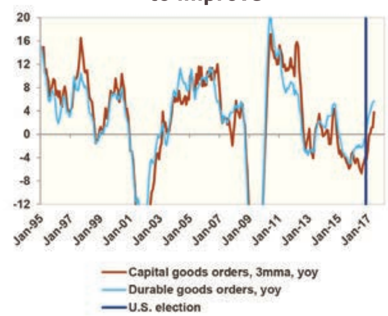
SLIDE 15

The Production Side of the U.S. Economy Continues to Rebound: Reflecting the Global Cyclical Recovery

U.S. Manufacturing ISM remains elevated, with production beginning to catch up



Capex-related orders continue to improve



Production is beginning to rebound and manufacturing companies are exhibiting more confidence. As orders improve, manufacturers are increasing CapEx. Further, through technology they are improving asset utilization, making themselves more profitable. For example, many manufacturing companies now employ software that monitors all of their equipment and predicts when it will fail, so that they can proactively service the equipment and not take their production line down.

All in all, it is a pretty constructive environment for the U.S. stock market. The restrained inflationary conditions mean multiples can remain extended. Further, we believe the equity market is likely to be driven more by earnings growth which, in turn, is being supported by solid consumer demand and corporate spending.

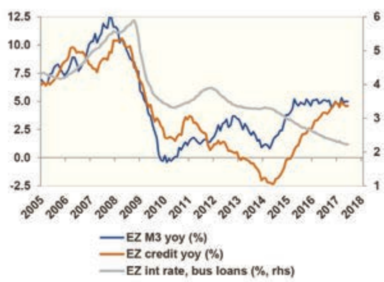
Source: Bloomberg, Epoch Investment Partners

SLIDE 16

Revisiting the Case For Europe: Economic Data Continue to Improve and Credit Growth is Solid on Historically Low Interest Rates

European Commission confidence measures have rebounded solidly, following Germany's lead

Eurozone M3 and credit are growing at roughly 5%, while the average interest rate on business loans has declined to 2.3%



Bill Booth:

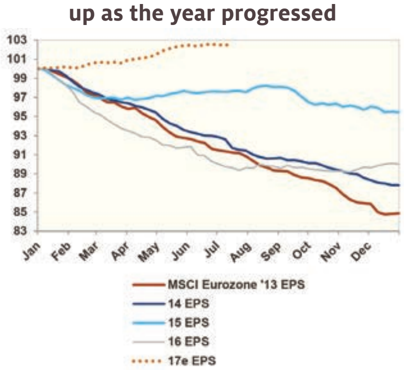
Confidence measures are approaching decade highs. It's not just the so-called soft survey data that is positive. Credit extension is picking up with loans growing roughly 5% yoy. We could point to a host of other economic series (such as retail sales, consumer confidence and housing starts), that paint a similar picture. Europe is experiencing a synchronized upturn across most of the Continent, and leading indicators suggest this momentum can continue. In fact, in the first quarter of 2017, Europe grew faster than the U.S. So that's the real economy, but what about company fundamentals?

Source: (left chart) Bloomberg, Epoch Investment Partners
Series indexed to 100 on 1/2005.
Source: (right chart) Bloomberg

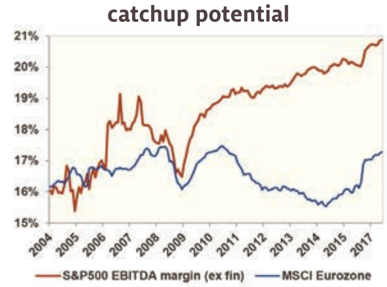
SLIDE 17

Company Fundamentals: Outlook Has Improved and Appears to Have Further to Run

2017 is the first time in many years that eurozone EPS has been revised up as the year progressed



Eurozone margins are leagues below those for the U.S., suggesting catchup potential



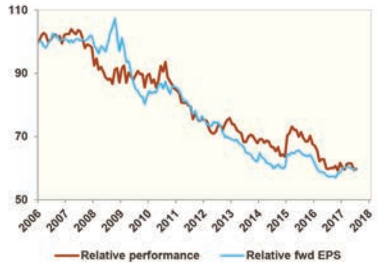
In stark contrast to the previous four years, earnings expectations for 2017 are actually higher today than they were at the beginning of the year. Further, margins for both the U.S. and Europe are improving. That said, labor law rigidities in Europe have made the substitution of technology for labor much harder to accomplish. However, there is potential for Europe to close some of the margin gap if reforms proposed by the new French government succeed.

Source: JP Morgan Research.
Chart on left - EPS indexed to 100 at start of each year

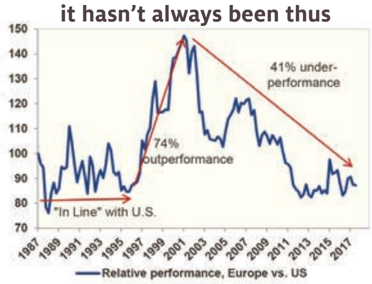
SLIDE 18

Eurozone's Equity Performance Relative to the U.S. Appears to Have Bottomed

Eurozone vs. U.S. equities: Underperformance has largely reflected relative weak EPS



This cycle has been a difficult one for European equities, but it hasn't always been thus



Europe has lagged the U.S. equity market over the last five years, largely due to disappointing earnings growth. A longer-term perspective is provided by the chart on the right, which illustrates the Continent's dramatic underperformance since the tech bubble. Year-to-date, in U.S. dollar terms, Europe's done a bit better, but that is driven by the euro's appreciation and not local share price performance. Still, if the eurozone economy continues to improve, we could see earnings performance become a positive driver, providing better prospects for European equity performance.

Source: Bloomberg, Epoch Investment Partners

SLIDE 19

Eurozone Valuations: Not Obviously Cheap

Europe's PE relative to the World : Bang on 15Y median

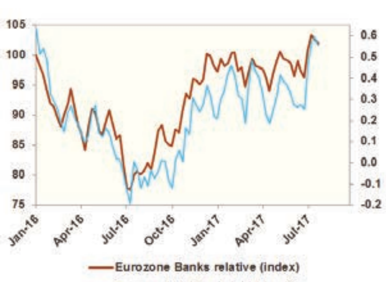
We would describe valuations as reasonable, but not particularly cheap. You can see on a sector-neutral basis, that Europe is trading in line with its long-term average valuation relative to the rest of the world. So while the overall economic and earnings backdrop is positive, the valuation picture reinforces the need to be disciplined with bottom-up analysis and individual stockpicking.

Source: JP Morgan Research

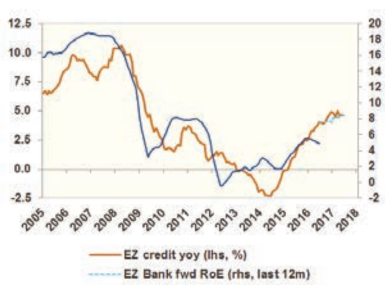
SLIDE 20

European Financials: Stock Performance Remains a Yield Call

If Bund yields continue to climb, then banks are likely to keep outperforming



The recovery in eurozone credit growth is a positive for bank RoE



The relative performance of banks is tied to the direction of 10-year interest rates, which in turn reflects the performance of the domestic economy. The strong relationship between credit growth and bank RoE suggests that, if we're in an environment in which the ECB is normalizing policy because they have confidence in the strength of the underlying economy, this would presumably increase rates and continue to drive relative performance for the financial sector.

Source: Bloomberg, Epoch Investment Partners

SLIDE 21

Eurozone Economic and Market Outlook: Conclusions

- Economic data: continue to improve.
- Company fundamentals: Appear to have bottomed and the outlook is improving.
- Relative performance: Has been better recently, but still poor in a longer-term context.
- Valuations: In the aggregate, and when adjusted for sector differences, are closer to "fair" than "cheap."
- Election outcomes: Have generally been positive and supportive for the European project. Italy remains the key wildcard and risk (see below).
- Investing perspective: Focus on bottom-up opportunities within Europe. Recent developments may argue for a preference for domestic Europe over domestic U.K.

Elections: So Far, So Good

- France (+): Le Pen was defeated and Emmanuel Macron won a majority in the National Assembly.
- UK (?): Early election backfired on PM May. Increased chance of a "soft" Brexit.
- Germany (+): Polls show Angela Merkel's support improving. Martin Schulz not a bad alternative (at least for the EU project). Both can work well with France's Macron to lead Europe forward.
- Italy (?): Wildcard and biggest known risk. Election timing in limbo (possibly 1Q18).

To summarize our more positive view on Europe, we would stress the strengthening economy, which is driving an improvement in company fundamentals, while valuations remain reasonable. This context is crucial, but we can't emphasize enough the importance of our bottom-up stock selection process, especially given that valuations really are fair and not cheap. The key risk remains the next Italian election, which will likely be held in the first quarter 2018.

SLIDE 22

Summary

1. Equity multiples unlikely to increase further: Multiples expanded on QE, but the period of looser monetary policy is now well behind us. Consequently, equity return drivers are likely to shift from broad multiple expansion to earnings growth.
2. Tech is the new macro: Technology is positive for all three return on equity (ROE) components — profit margins, asset utilization, and leverage. Among other things, this implies corporate margins can remain high for a prolonged period and don't necessarily need to revert.
3. Muted wage and price inflation: Much weaker than in a typical cycle, likely due to technology. Still, given the global cyclical recovery, we expect moderate reflation and slightly higher bond yields.
4. Robust U.S. outlook: Regardless of policy (which doesn't appear to be moving the needle, one way or another), domestic demand is solid and the production side of the economy is picking up. This provides a robust backdrop for earnings growth in the coming quarters. Risks include excessive household debt and declining auto sales.
5. European growth continues to improve, but political risks loom: Corporate fundamentals appear solid, earnings growth is picking up and valuations are "fair." Further, election outcomes have generally been supportive, but Italy remains a wildcard. Overall, we are focused on bottom-up opportunities within Europe.
6. Investment approach: As a result of the above points, we believe it is ever more important to favor companies with a demonstrated ability to produce free cash flow and allocate that cash flow wisely between return of capital options and reinvestment/acquisition opportunities.

A replay of our quarterly webinar is available on our website

www.eipny.com

For more insights visit
http://www.eipny.com/epoch_insights