EPOCH | Epoch Investment Partners, Inc.

Advantage from Perspective

JULY 2019

Quarterly Newsletter

IN THIS ISSUE

IN THE NEWS

- CEO and Co-CIO Bill Priest joined BNN's Money Talk to discuss the ongoing trade tensions between the U.S. and China and how "blitzscaling," low interest rates, smartphones and social media are contributing to a booming market for IPOs.
  — June 5, 2019
  U.S.-China "Cold War" Heats Up
  Booming Market for IPOs

- Portfolio Manager John Tobin joined *BNN's Money Talk* to discuss what risks to be mindful of and companies he's looking at this earnings season. He stresses the importance of focusing on companies that are generating free cash flow and have transparent capital allocation policies, with dividends always being positive.
  — April 11, 2019

Spotlight — *The Future of Autonomous Vehicles: The Road Ahead*

A conversation with Jérôme Van Der Ghinst, CFA — Director, Research Analyst

QUESTION. *What exactly is an autonomous vehicle and are we likely to see them on our streets anytime soon?*

ANSWER. We should think about autonomous vehicles and the road to full automation on a spectrum. The Society of Automotive Engineers (SAE) has defined six levels of vehicle automation ranging from "No Automation" (Level 0) to "Full Automation" (Level 5). We have already reached "High Automation" (Level 4), which implies that a vehicle is able to perform all driving functions under certain conditions. This is currently limited, however, to fixed routes and/or relatively small geofenced areas. To achieve "Full Automation" (Level 5), we will need to make progress in terms of regulation, infrastructure and technology. The technology is now clearly more advanced than the regulation, and it will take time for the regulation (as well as the infrastructure)

Article continued on page 3

Quarterly Investment Update — *2% Bond Yields: Implications for Equity Investors*

By William W. Priest, CFA — CEO, Co-CIO and Portfolio Manager

The U.S. 10-year Treasury yield hit a cyclical peak of just over 3.2% last November, driven higher by two factors: the fleeting growth spurt that resulted from the Tax Cuts and Jobs Act (passed in late-2017) and the Fed's valiant attempt to normalize policy rates. However, the prospect of higher rates had a surprisingly swift and adverse impact on the growth trajectory (particularly housing, autos and capex), reflecting the massive economywide buildup of leverage that has occurred over the last decade or so.

Article continued on page 4

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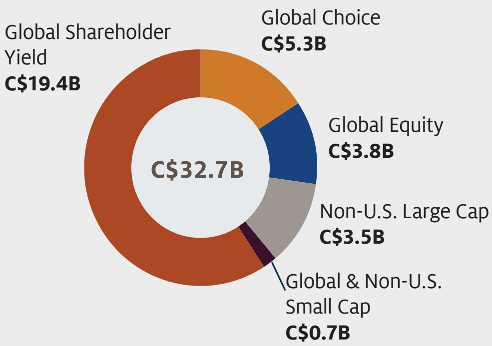
Firm Update

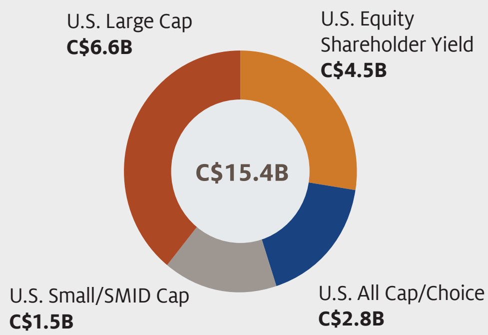
ASSETS UNDER MANAGEMENT C$48.1B

As of June 30, 2019

GLOBAL STRATEGIES



U.S. STRATEGIES



Totals may not add due to rounding.

EVENTS AND ANNOUNCEMENTS

Epoch is excited to announce its *Actively Speaking* Podcast!

Join us each episode as host and Portfolio Manager Steven Bleiberg takes on current topics and issues facing today's investor. Here's a look at the topics you can expect from our first episodes:

- Active Management
- Autonomous Vehicles
- Capital Markets Updates
- The Limits of Modern Portfolio Theory
- The U.S. Retail Sector
- The Small Cap Size Paradox
- Trump, Tech and Trade
- Unicorns and IPOs

Actively Speaking is available on:

- Apple Podcast
  Click to Listen
- Google Play
  Click to Listen
- Epoch's Website
  Click to Listen

Capital Markets Outlook Webinar

Co-CIOs Bill Priest and David Pearl were joined by Investment Strategist Kevin Hebner to discuss:

- The Digital Iron Curtain: A New Cold War — The role of technology in the current trade war between the U.S. and China and the possibility that the dispute represents a new cold war
- U.S. Outlook: Moderation, Not Recession — Why U.S. economic growth may slow, but not reverse
- Blitzsale and Hope: Unicorns, IPOs and the Dot-Com Bubble — The reasons for and against the belief that the current market environment is a repeat of the dot-com bubble

Replay available at www.eipny.com/webcasts-transcripts

RECENT INSIGHTS

Blitzscale and Hope: Unicorns, IPOs and the Fear of Repeating the Late 1990s

Is the current surge in IPO listings indicating a repeat of the excesses of the dot-com boom? We look at the reasoning used by those who think it is — IPO supply, profitability and VC funding. We also look at why some believe that the current situation is different — median age of tech IPOs and sales growth. Finally, we see how investors can look at these companies through a free-cash-flow lens.

Read More

The P/E Ratio: A User's Manual

Does the a P/E ratio tell you if a company it is fairly valued? We explore the discounted cash flow (DCF) valuation model and importance of return on invested capital (ROIC); how the P/E ratio does not tells us what most think it does; and how to use the DCF model to deconstruct P/E ratios to better understand what they do tell us.

Read More

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SOCIETY OF AUTOMOTIVE ENGINEERS AUTOMATION LEVELS

0	**No Automation**	Driver performs all tasks
1	**Driver Assitance**	Driver controls vehicle; some driving assist features may be included
2	**Partial Automation**	Vehicle has automated functions (e.g., acceleration, steering); driver must remain engaged and monitor the environment
3	**Conditional Automation**	Driver doesn't need to monitor the environment but must be able to take control with notice
4	**High Automation**	Vehicle can perform all functions under certain conditions; driver has option to take control
5	**Full Automation**	Vehicle can perform all functions under all conditions; driver has option to take control

Source: NHTSA.gov, SAE

to catch up. As a result, it will likely be a decade or more before we see fully autonomous vehicles regularly on the roads.

QUESTION. *Who is developing these cars?*

ANSWER. Many automakers and technology companies are working on various aspects of autonomous vehicle development. While traditional automakers were slow and unprepared to handle the pace of technological change initially, auto industry leaders have enhanced their internal capabilities and invested significantly to contribute meaningfully to autonomous vehicle development. Today an average high-end luxury car's software has more lines of code than a Boeing 787, Microsoft Office or the Large Hadron Collider. Many technology companies operating in a variety of segments like ride-sharing (Uber), transportation (Waymo), consumer electronics (Apple) and semiconductors (Intel and NVIDIA) are also working on various aspects of autonomous vehicle development. The technology companies have significant competitive advantages in software development compared to the automakers, which have been more focused on hardware traditionally. The main challenge facing the technology companies is that auto industry protocols are very different than those they encounter in their primary industries. To achieve full automation, we believe that there will need to be continued and increased collaboration between existing auto industry incumbents and new technology entrants to leverage each side's core competencies.

QUESTION. *How will the development of autonomous vehicles impact car companies?*

ANSWER. Autonomous vehicles will have an impact on traditional automakers, but the timing and magnitude of the impact remains largely unclear. Based on the current development trajectory, autonomous vehicles are being used for robo-taxi applications rather than sold for individual ownership. Waymo's Early Rider program in Phoenix where vehicles are being used to offer taxi-like services in a metro area is an example of "High Automation" (Level 4). Only "Partial Automation" (Level 2) and to a lesser extent "Conditional Automation" (Level 3) vehicles are being sold for individual ownership by automakers today. Ultimately, the potential impact will be determined in large part by how vehicles are being owned and/or used. If we move from a traditional vehicle ownership model to a mobility as a service model, the implications for the traditional automakers will be significant, as their existing business models will be disrupted.

QUESTION. *What other industries might be impacted by the development of autonomous vehicles?*

ANSWER. Many industries will likely be impacted by autonomous vehicles, but one of the more obvious ones to highlight is the insurance industry. Autonomous vehicles have the potential to save many lives and reduce injuries. In the United States, more than 37,000 people die in motor-vehicle-related crashes each year, and it is estimated that more than 90% of serious crashes are due to human error. If autonomous vehicles deliver on their promise to reduce drastically the number of vehicle-related injuries/deaths, the insurance industry will need to revisit the need for and pricing of its relevant policies. One industry that will be impacted that may seem less obvious is real estate. Autonomous vehicles would allow for a significant amount of unnecessary parking spaces to be redeveloped into more productive commercial or residential property. For example, it is estimated that the land used for vehicle parking in Los Angeles is more than 17 million square meters, which is equivalent to nearly 1,400 soccer fields. As autonomous vehicles allow for parking lots in urban centers to be repurposed, the real estate landscape in major cities could be transformed significantly.

QUESTION. *Will autonomous vehicles have the same impact across developed and emerging markets?*

ANSWER. Autonomous vehicle development plans and adoption rates are likely to vary widely across developed and emerging markets. Regulation, infrastructure, technology and affordability will be some of the most important factors driving the potential impact across developed and emerging markets. While regulation may evolve more quickly in some emerging markets, infrastructure, technology and affordability could be significant rate-limiting factors compared to many developed markets for some time. The potential impact of autonomous vehicles is likely to vary meaningfully because of these critical factors, and it is difficult to ascertain the likely differences between developed and emerging markets today.

Jérôme is an equity research analyst. Prior to joining Epoch in 2014, Jérôme was an analyst at AllianceBernstein, where he focused on emerging and frontier markets. Before AllianceBernstein, he held research positions at Hutchinson Capital Management, The Capital Group and Citigroup. Jérôme received his BA in Political Science and International Studies from the University of Chicago.

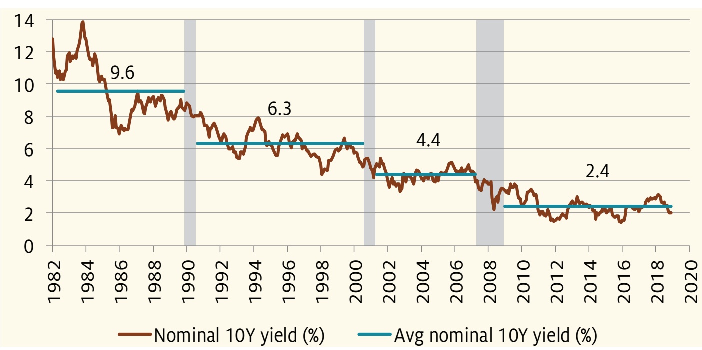
Actively Speaking

For a more detailed discussion on autonomous vehicles, tune into the Actively Speaking podcast Episode 3, available on July 25, 2019

At the same time, downside risks to the economy increased as trade tensions came to the fore and economic momentum rolled over in the world ex-U.S. Further, in spite of the record-setting expansion and tight labor market, inflation failed to accelerate (in our view this largely reflects the deflationary impact of technology). This set the backdrop for the "Powell Pivot," in which a vacillating and unmoored Fed promised multiple insurance cuts, just in case downside risks materialized. As a result, the 10-year Treasury yield dropped by over 100 bps and even managed to break through 2% on a number of occasions, while the S&P 500 charged ahead, chalking up its best first half since 1997.

The decline in bond yields over the last couple quarters has provided a strong boost to equity markets and has been the subject of a great many headlines. However, we believe the longer-term picture is arguably even more important, although it has received much less attention. In particular, note that the average 10-year bond yield during the current recovery is only 2.4%, leagues below that experienced in previous expansions (Figure 1). Moreover, the Bloomberg consensus expects the 10-year yield to remain low, forecasting it to end 2019 at 2.3% and 2020 at 2.5%.

FIGURE 1: U.S. BOND YIELDS HAVE RATCHETED MARKEDLY LOWER DURING EACH OF THE LAST FOUR EXPANSIONS

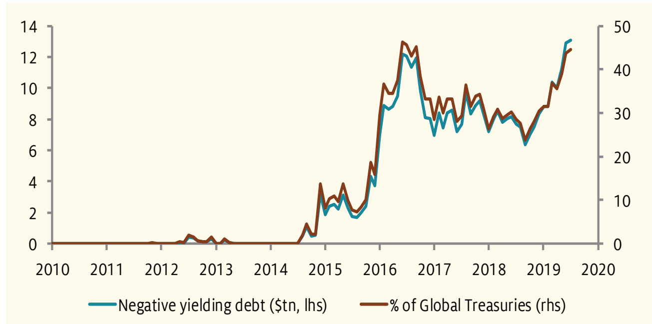


Source: Bloomberg, Epoch Investment Partners

What has caused the dramatic decline in nominal bond yields over the last four decades? While lower inflation accounted for the majority of the decline from the 1980s to the 1990s, it has played only a minor role since then. Much more important has been the decline in the real yield, which has averaged only 0.9% during the current expansion (down conspicuously from a mean of 4.2% in the 1990s and 2.5% the following decade).

It is crucial to keep in mind that the decline in bond yields is a global phenomenon, and has been even more severe in many European countries. Partially due to the European Central Bank's QE policies, 10-year nominal bond yields are negative in Germany, France, Switzerland and six other European countries. Globally, there now exists over US$13 trillion of negative yielding bonds, representing 45% of global sovereign issuances (Figure 2).

FIGURE 2: UNTIL RECENTLY, NEGATIVE YIELDING BONDS WERE A RARITY, BUT THEY COULD SOON REPRESENT A MAJORITY OF GLOBAL SOVEREIGN BONDS



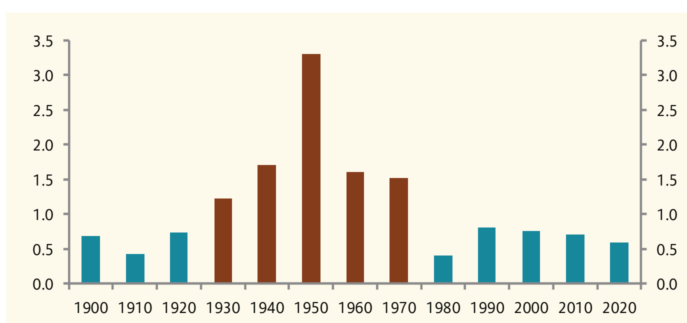
Source: Bloomberg, Epoch Investment Partners

To a large extent, we believe the decline in bond yields over recent decades reflects a more modest growth outlook. For example, U.S. real GDP growth averaged over 4% in the 1950s and 1960s, followed by just over 3% in the 1970s, 1980s and 1990s. However, over the last two decades, growth has decelerated to roughly 2% (which also happens to be the post-1870 mean).

Moreover, the San Francisco Fed estimates that the new normal pace for U.S. GDP growth is somewhere between 1.5% and 1.75%, noticeably slower than the typical pace experienced since World War II. The slowdown stems mainly from two developments: demographic trends that have reduced labor force growth, about which there is relatively little uncertainty; and declining productivity growth, which is more difficult to comprehend and poses a larger challenge.

Achieving GDP growth consistently above 1.75% will require much faster productivity growth than the U.S. has typically experienced since the 1970s (Figure 3). This is true even if we agree with the Fed that output and productivity are being underestimated by at least 0.3 percentage points per year, because of difficulties in measuring the impact of new technologies (including "free" digital goods).

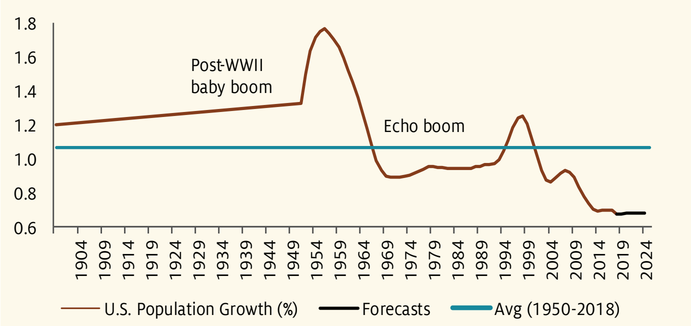
FIGURE 3: TOTAL FACTOR PRODUCTIVITY GROWTH HAS AVERAGED A TEPID 0.6% THIS DECADE



Source: Gordon (2014) and San Francisco Federal Reserve (2019) Note: Averages for preceding decade (except 2020, which is decade to 1Q2019)

Although demographic trends and labor force growth are much more predictable than productivity, the prevailing direction is equally troubling, at least in terms of its impact on economic growth. Recently the U.S. population has been increasing at a rate of about 0.7% per year, down dramatically from its post-1950 mean of 1.1% (Figure 4). However, according to the UN's latest population projections, this is expected to decline even further, to 0.3% to 0.4%, by 2050.

FIGURE 4: U.S. POPULATION GROWTH RATE HAS DECLINED DRAMATICALLY AND IS EXPECTED TO FALL EVEN FURTHER OVER COMING DECADES



Source: IMF, Bloomberg, Epoch Investment Partners

The demographic headwind is even more pronounced for the developed world ex-U.S., where the population is currently growing by only 0.2% per year and will turn negative during the next decade or two. The populations of Japan and Italy are already shrinking. Last year, fewer than 440,000 children were born in Italy, a 4% decline from 2017, and the lowest number since the country's creation in 1861. This development is also a challenge for many emerging market countries, such as China, where population growth is forecast to turn negative within the decade. At that point we believe China's trend growth rate will be close to 3%, down dramatically from that experienced over the last decade or two.

LOWER FOR LONGER: INVESTMENT IMPLICATIONS

While there are many ramifications of the low-growth, low-rate environment discussed above, this note touched on just two of them. First, if trend nominal GDP growth is now 4% to 5%, it might prove unrealistic to expect S&P 500 earnings to grow at 8%+ on a sustainable basis. That said, in today's capital-lite world, we expect many companies to return a large and possibly growing proportion of their free cash flow to shareholders, either via dividends or buybacks. This strongly suggests the importance of shareholder yield is likely to increase over the medium to longer term.

Second, in most markets, the equity yield is far superior to bond yields. The U.S. has a dividend yield of just under 2%, with buybacks running at 3.5% (although it is important to distinguish between the roughly one-third of buybacks that are funded by issuing debt versus the remainder that are paid for out of cash flow). The corresponding numbers for Europe are 3.7% and 1.4%, while those for Japan are 2.5% and 2.0%. These equity yield numbers are very powerful and make a strong case for owning equities, especially where the shareholder yield total is both sustainable and likely to grow.

As a result of the above points, it is ever more important to favor companies with a demonstrated ability to produce free cash flow and allocate that cash flow wisely between reinvestment/acquisition opportunities and return of capital options.

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