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Bailard Wealth Management
Quarterly Review of Economic and Market Developments*

Q2 2018

Inside Q2 2018:

**Please see page 15 for important disclosures.*

Q & A

WITH BAILARD'S DIRECTOR OF HEALTHCARE INVESTMENTS

Developing cures, not just treatments

Selena Chaisson, MD, Bailard's Director of Healthcare Investments, highlights recent advancements in healthcare.

Selena, nearly every week in the news we seem to hear about new treatments and breakthrough technologies that are upending current medical paradigms. How do you view the state of the biotechnology sector?

The last ten years have provided a very accommodating environment for companies to raise money and to run research and development programs for extremely sophisticated technologies. And now, a number of new treatments are reaching patients. Many of these treatments are providing healthcare professionals and patients with better outcomes for devastating diseases.

Remarkably, we are beginning to characterize some of these treatments as "cures": such as, curing Hepatitis C in the majority of cases, curing types of cancer by manipulating patients' immune systems, and maintaining and even restoring functional sight to those with genetic mutations that lead to blindness. I believe these remarkable success stories will help sustain this ecosystem of access to capital, leading to more breakthrough technologies. It's simply fantastic that we can realistically use the term "cure" for more and more diseases. I am excited about the current state of the sector and expect the fast pace of innovation to continue.

Would you tell us about some of the more impressive technologies approved over the last year or so?

We can view a large portion of this current period of advancement as one that takes us to the nucleus of the cell: in other words, we are using technologies that are repairing the genetic machinery of a defective cell. These repairs are accomplished with both RNA (promoting or removing protein transcription) and DNA (restoring function of a mutated gene) technologies,

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which is a major development. Historically, we relied on small molecules to alter the chemistry of most cells (e.g., chemotherapy). The 1980s' advent of antibodies moved the science toward more targeted cell signaling.

With this current wave of advances, three landmark approvals stand out. The first, in December of 2016, was a drug based on a technology called antisense therapy for the treatment of spinal muscular atrophy (SMA). SMA is the leading genetic cause of infant death in the U.S. and is predominately caused by a mutation in the survival motor neuron 1 gene.[1] This genetic defect causes degeneration of motor neurons in the spinal cord and brainstem, ultimately leading to skeletal muscle atrophy and general weakness.[2] An antisense oligonucleotide—or a small, specific piece of RNA—can now be administered to patients with this gene mutation. This therapy promotes the production of healthy, full-length SMN proteins resulting in a treatment for the motor neuron loss.

Second, in the summer of 2017, the first Chimeric Antigen Receptor T-Cell (CAR-T) therapy was approved by the FDA. CAR-T therapies are now used to treat relapsed acute lymphoblastic leukemia and refractory non-Hodgkin lymphoma. The basic premise is to genetically manipulate a patient's own t-cells (the white blood cells that participate in an immune response to fight disease). The modified t-cells, now armed with new surface receptors, are intended to recognize and attack previously undetected cancer cells.

Finally, in December of 2017, the FDA approved the first gene therapy to be directly administered into a patient to target a disease caused by mutations in a specific gene. In this instance, patients with a mutation in a gene called "RPE65" do not produce a protein required for vision. Most patients will progress to blindness by adolescence. The treatment utilizes a virus carrying a healthy gene to deliver a normal copy of the RPE65 gene to retinal cells. The patient can now produce the important protein that is responsible for turning light into an electrical stimulus in the retina.

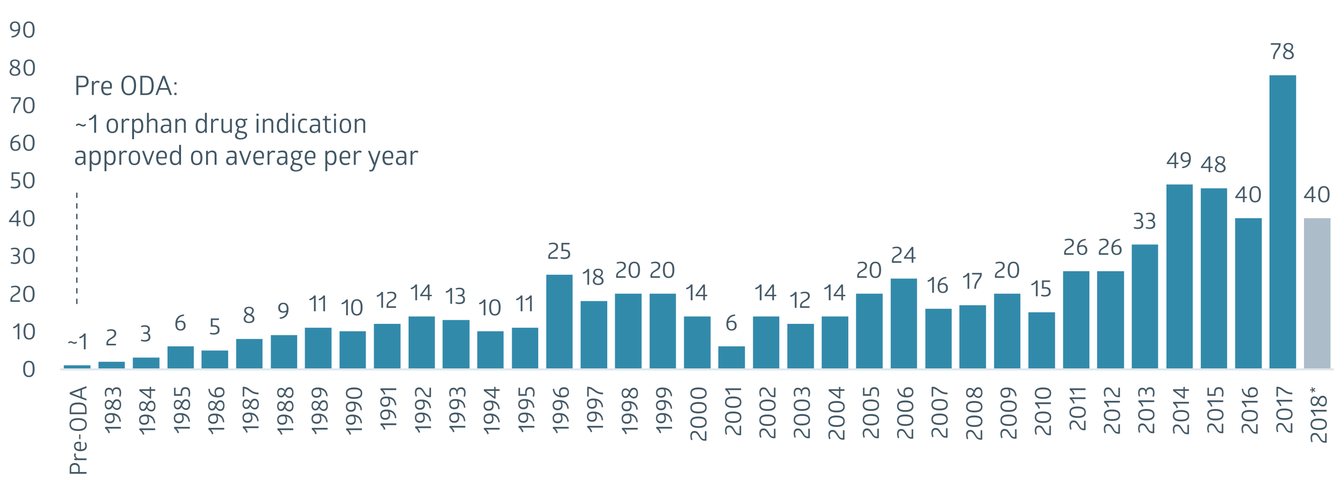
With these remarkable advances come remarkable prices. Each of the three treatments you highlighted cost more than $375,000. From an investment perspective, how do you square these two forces: cutting edge advancements and their stunningly-high list prices?

There are a number of ways to approach this important question. The simplest answer is that we believe that companies developing important new therapies, with meaningful benefits to current treatments, will be valued and sought after by the healthcare system, leaving room for interesting investment opportunities.

These new drugs do often have list prices that come with a significant level of sticker shock. However, it should be noted, these are all focused on small and well-defined patient populations. These aren't drugs for the masses and they won't break the healthcare system. They are part of an important emerging trend: increased development of drugs for targeted patient populations based on the underlying mechanism of the disease.

A confluence of events has created today's environment, starting in the early 1980s. The Orphan Drug Act of 1983 was enacted to promote the development of treatments for rare diseases by offering financial incentives (exclusive market access for a period of seven years) as well as

Orphan Drug Indication Approvals: 709 Since the Orphan Drug Act (ODA) of 1983 through June 30, 2018



*Sources: Bailard Research, FDA. *Figure for 2018 is through June 30, 2018.*

statutory incentives (faster review times/future review vouchers for unrelated products) to companies that embarked on drug development for rare, neglected diseases. Today—with more precise diagnostic capabilities and the wealth of knowledge that the sequencing of the human genome has afforded us—we are seeing more and more companies designing drugs to treat patients of so-called orphan indications (diseases afflicting less than 200,000 patients). We believe, based on the statistics offered by the FDA, the legislation's incentives are resulting in more and more approved drugs, which is positive for patients and drug developers alike.

Still, with fewer patients to share the burden, costs are higher. Drug companies are responding by beginning to offer new payment models. For example, a handful of companies have struck deals with some payors to utilize a pay-for-performance structure with respect to their drugs. For example, a company will only seek full payment for the treatment if a patient responds to treatment.

Why invest in biotech now? What's next?

From an investor perspective, we believe there are three crucial considerations for investment in biotech: 1) the science or data, 2) the management team, and 3) the availability of cash (to allow the development of the drug). From the medical perspective, we are seeing plenty of exciting new science, including microbiome and immunome initiatives, artificial organs, liquid biopsies and in situ analyses technologies, refined gene therapies and gene editing techniques.

From the management team side, it should be noted that the biotechnology sector is a fairly nascent sector

Orphan indications: diseases afflicting less than 200,000 patients

that has roots only back to the late 1970s/early 1980s. To put a finer point on it, according to Bloomberg, in the last year there were ten companies that posted greater than $500 million in free cash flow (cash a business generates after accounting for capital expenditures like buildings or equipment). Compared to ten years ago, there were only three companies generating that kind of cash flow. With an increase in successful companies comes more experienced individuals in drug development looking to build the next great company. We expect to see new, and highly-talented, C-suite operators taking the helm of biotechnology startups and welcome that development.

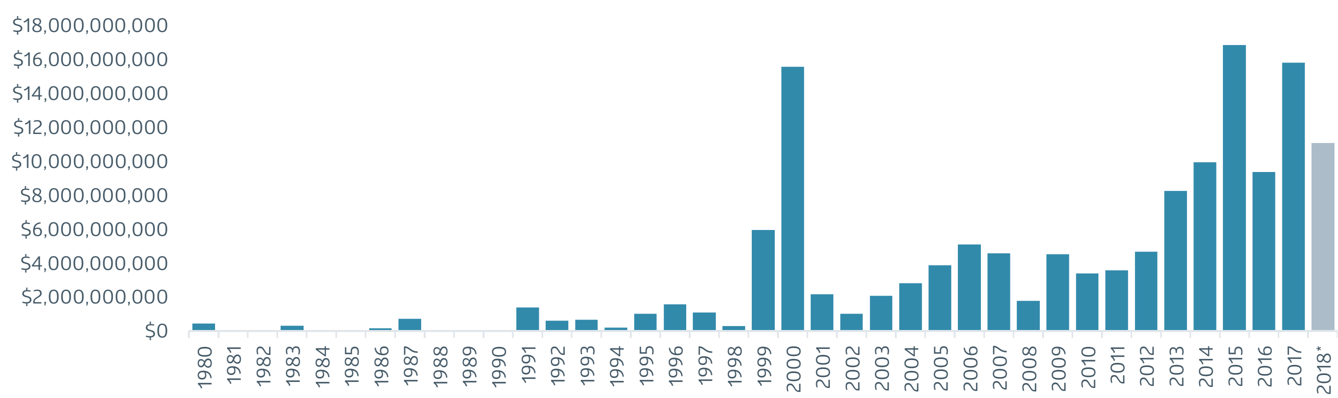
Finally—while cash can occasionally be tough to come by (see 2001-02 and 2008 on the following chart)—the financing window for development stage biotechnology companies is open. We are currently seeing a healthy amount of capital currently being deployed into the sector.

All in, we believe there are a number of exciting new medical technologies on the horizon that could impact health outcomes in a positive way.

1 Sugarman EA, Nagan N, Zhu H, et al. Pan-ethnic carrier screening and prenatal diagnosis for spinal muscular atrophy: clinical laboratory analysis of >72,400 specimens. Eur J Hum Gen. 2012;20(1):27-32.

2 Lunn MR, Wang CH. Spinal muscular atrophy. Lancet. 2008; 371(9630): 2120-2133.

Biotechnology Initial Public Offerings and Secondary Financings



*Sources: Bailard Research, Bloomberg IPOs and additional financings of public companies classified as U.S. domiciled, consumer noncyclical-biotechnology-medical-biomedical-gene focused. *Figure for 2018 is through June 30, 2018.*

U.S. ECONOMY

Continued Slow Growth and Low Inflation, But Financing Risk Slightly Increased

After averaging 3% annualized growth during the last three quarters of 2017, GDP returned to the slow growth path we previously expected, rising only 2.0% in the first quarter of 2018. That said, the Bloomberg Economic Consensus for full-year 2018 GDP growth stands at 2.9%. With first quarter GDP having slowed to 2.0%, GDP would need to rise at an annualized rate of 3.3% for the rest of the year in order to meet the consensus expectations. Growth is benefitting from tax cuts, regulatory reform and strong confidence. We previously estimated that tax cuts would add a one-time boost of 0.3% to 0.5% to GDP this year.

GDP growth for the second quarter will be released at the end of July; forecasts indicate a strong result. Some estimates project second-quarter growth of over 4.5%, while the consensus view is for 3.4%. Both estimates look too high based on preliminary real personal consumption data, which is running at a 1.2% annualized pace through April and May. Personal consumption accounts for about 70% of GDP and is the foundation for overall GDP growth. Real personal consumption has been running ahead of income, as consumers have dipped into savings and taken on more debt to maintain their standard of living. The savings rate has fallen to only 3%, which makes the current consumption trend unsustainable. It will take a big surge in June's consumption data to come close to consensus expectations.

On a similar note, consumer credit exploded in the fourth quarter of 2017, as consumers borrowed heavily during the Christmas season in anticipation of tax cuts. Consumer credit growth has pulled back since then, slowing year-to-date in 2018. Further, rising mortgage rates have been slowing housing activity, auto sales have been trending lower and total government spending has been slowing. The trade deficit is likely to be a drag on growth, with U.S. dollar strength likely to lead to further weakness. Inventories are starting to build again (a positive for growth) but are not exceptionally high, which would have potentially triggered an inventory-driven economic decline. The strongest sector has been nonresidential investment (capital spending plus structures), which has been benefitting from corporate tax cuts and increased after-tax cash flow.

We continue to expect slow growth and low inflation, with financial risk growing. With the Federal Reserve (the "Fed") tightening its monetary policy and other central banks following suit, interest rates are likely to continue to rise. We believe this is the biggest risk factor for stocks and bonds going forward. Rising interest rates drive bond prices down, to the point where bonds begin to offer stronger competition for stocks and weaken the underlying economy.

> Two of the oldest rules in investing are, "don't fight the Fed" and "don't fight the tape."

How Does a Market Cycle End?

Two of the oldest rules in investing are, "don't fight the Fed" and "don't fight the tape." For the year to date, the stock market "tape" has been mixed and it is still unclear if this is an indication of a major market top or a consolidation that will move markets higher. On the other hand, the Fed has been tightening since 2015. The Fed Funds rate is currently 2.0%, and the Fed plans to raise rates four more times over the next twelve months and continue to shrink the balance sheet.

Credit and economic cycles don't die of old age; they are euthanized by Fed tightening. That is, historically, the Fed has continued to raise rates until something breaks. As the Fed has pulled back, other central banks have picked up the slack by pumping enormous amounts of liquidity into the global economy and financial markets. Now we are seeing the European Central Bank ("ECB") tapering and planning to end its quantitative easing program by the end of the year.

Diversified and Flexible

With both stocks and bonds overvalued, we believe this is a particularly good time to be strategically diversified and to remain flexible on a tactical basis. While no one rings a bell for you at the top of a market, we remain cognizant of the fact that we are in the midst of one of the longest and strongest markets in history, as well as one of the most overvalued.

INTERNATIONAL ECONOMIES

A Shifting Political and Economic Landscape

JAPAN

Japan's GDP fell 0.8% in the first quarter of 2018 (quarter-over-quarter, annualized). This was the first negative quarter in two years. The year-over-year pace of growth at the end of 2017 slowed to 1.1% from 2.0% the previous year. The decline in the first quarter was driven by private sector demand, including personal consumption and capital investment. Japan's economy is likely to return to the positive growth path during the second half of 2018.

Challenges to Growth

Real household spending in Japan slowed to 0.7%, year-over-year, in the first quarter; at the end of May, it was falling at a 3.9% year-over-year pace. Longer term, we continue to expect slow growth in Japan as it fights with both high debt levels and an aging population. In the short term, rising oil prices and a potential trade war are also inhibiting growth. Furthermore, Japan's trade balance once again has turned negative and become a drag on growth. The stronger U.S. dollar/weaker Japanese yen could help Japan's competitiveness going forward, which suggests an improvement in the trade balance. However, yen weakness may be more than offset by trade tariffs.

One temporary positive for growth may come from the October, 2019 increase in the consumption tax, as demand is front loaded to beat the tax. But, if history repeats, demand is likely to slow once the tax is in effect, dampening growth in 2019. In the longer term, positive growth from capital investment is expected as Tokyo prepares for the 2020 Olympic Games. Overall, we expect growth to remain around the current 1.1% year-over-year pace, which would indicate an acceleration as 2018 progresses.

Longer term, we continue to expect slow growth in Japan as it fights with both high debt levels and an aging population.

CHINA

In the first quarter, China's GDP growth slowed to 5.6%, annualized, which brought the year-over-year rate of change to 6.8% and the full-year 2018 estimate to 6.5%. Year-over-year growth has been at, or slightly below, 7.0% since 2014. The drag in the first quarter came from a substantial increase in imports and import prices, which created a narrowing in the trade surplus.

A Global Force

Going forward, an escalation in the trade war could weigh against Chinese growth. China could also avert a trade war by voluntarily cutting its trade surplus with the U.S. by $150 to $200 billion. The other path to remaining competitive—despite tariff increases—is to weaken the currency. A weaker Chinese yuan lowers the cost of Chinese goods as tariffs increase them. This is the path China appears to have selected.

While China is striving to become more domestic-driven, they also have big plans for broader Asia with their Belt and Road Initiative ("BRI"). Also called the Silk Road Economic Belt, the BRI is a comprehensive development strategy proposed by the Chinese goverment in an effort to enhance regional connectivity and "embrace a brighter future." It is estimated that the initiative is one of history's largest infrastructure and investment efforts, involving more than 68 countries and representing 65% of the world's population.

While China's growth prospects have dimmed, they remain positive and well above global norms. To generate this growth, China has accumulated massive amounts of debt and we are continuing to see defaults. However, many of these loans are held by the Chinese government, which is better able to absorb losses since the central bank can print money.

Until a full-blown financial crisis is triggered, China should likely continue to grow at a 6% rate or greater.

EUROPE

The Eurozone economy expanded at a 1.6% annualized rate in the first quarter, which was weaker than expected and down from 2.8% at the end of 2017. Excluding Germany's 3.2% annualized growth rate, there would have been even less growth. German GDP growth data appears to be an outlier; its Federal Statistical Office attributed the enhanced growth to the weather and inventory expansion. Either way, this is not the escape velocity Europe needs to outrun its debt problem.

Of the twelve European Union member countries forecast to grow above a 3.0% rate this year, nine are former communist countries.

Ending Quantitative Easing in Europe

Europe and its central bank have, until recently, had an open monetary spigot: adding more and more debt and getting little growth. Now, the ECB has begun to taper its quantitative easing program (which was running at €60 billion per month) to €30 billion currently, and plans to eliminate the program by year end. With the monetary flow cut off, interest rates should rise. If Europe has only been able to grow marginally with negative interest rates and a flood of liquidity, what is going to happen with rising rates and the spigot cut off? Any tightening could be short-lived.

Rising interest rates could also create a problem for debt-heavy countries, led by Italy, which is trying to form a government after recent elections showed a strong anti-euro sentiment. Italy has considered asking for €250 billion in debt forgiveness from the ECB. This is what happens when you start a precedent of debt forgiveness—for example, with Greece—and now the problems are even bigger.

Eastern and Central EU Growth

We are seeing healthy growth in the Eastern and Central European Union ("EU") member countries. Although these regions are frequently butting heads with Brussels over the refugee crisis and democratic standards, they have become the star performers in Europe. Romania was the fastest growing economy in the EU last year, at a 6.4% pace. Poland, the Czech Republic and Hungary also grew faster than the core EU nations. According to the European Commission, of the twelve EU members forecast to grow above a 3.0% rate this year, nine are former communist countries.

FIXED INCOME

Central Banks Ending Quantitative Easing

Short Treasury rates continued to rise as the Fed increased the Federal Funds rate for the sixth time in 2½ years. The gap between yields on short- and longer-term Treasuries narrowed to nearly an eleven-year low. This narrow gap reflected investors' expectations that the economy will grow slowly and inflation will remain moderate as the Fed keeps raising the Funds rate. Two-Year U.S. Treasury rates rose 0.26% to 2.53% by the end of the quarter, while Ten-Year U.S. Treasury rates rose only 0.12%. Mid-quarter fears of stronger growth and inflation pushed the Ten-Year rate to 3.11%, but then trade tensions and slower global growth sparked demand for the safety of bonds; yields fell back to end the second quarter at 2.86%.

The Barclay's U.S. Aggregate Bond index (a broadly diversified index that includes Treasuries, agencies, corporates and mortgage-backed securities) lost 0.16% over the second quarter and 1.61% for the year. The BofA Merrill Lynch 1-10 Year U.S. Corporate index returned 0.15% and 1.61% for the same periods. The Barclay's 1-15 Year Municipal Blend index rose 0.85% but, for the year, remained slightly negative, down 0.07%.

Federal Reserve Monetary Policy

The Fed raised the Federal Funds rate 0.25% for the second time this year after its June Federal Open Market Committee ("FOMC") meeting. It announced plans for two more hikes, which would result in a total of four increases in 2018. Bond investors are skeptical that the economy will grow fast enough to justify this fourth, extra hike. Many are expecting just one more increase in 2018 and then three more in 2019. There is concern that higher U.S. rates, which are boosting the value of the dollar, may hurt emerging-market currencies and hinder growth.

The Fed is continuing its program to "re-normalize," or decrease, its massive $4.3 trillion balance sheet of Treasury and mortgage-backed debt. Under the current schedule, the Fed will reduce the balance sheet by $600 billion in 2019 alone. Reducing the amount of bonds the Fed is reinvesting may cause intermediate- and long-term interest rates to move higher. However, the bulk of the impact will probably be felt in the area of the yield curve that the Fed has been most aggressively purchasing: the five- and seven-year maturities.

Bond Market Recap

In Europe, Mario Draghi announced the ECB will halt bond purchases by year end. He tried to temper the announcement's impact by also stating plans to keep short-term interest rates unchanged—and at record lows—at least through the summer of 2019. The ECB's reduction in bond purchases could cause further upward drift in interest rates. Policy makers are expecting the Euro-area economy to be strong enough to withstand the phase-out of bond purchases amidst the risk of U.S. trade tariffs and concern about Italy's populist government.

The passage of the Tax Cuts and Jobs Act (TCJA) of 2017 led to an infusion of cash for many U.S. companies. This triggered a first-quarter increase in capital expenditures—spending on factories, equipment and capital goods—at the fastest pace in seven years. The tax cut should boost economic growth for a few years, but then it will probably have a limited impact on growth.

Similarly, the tax cuts have impacted the supply of municipal and corporate bonds this year. Corporations, with their heavy cash balances, have had less need for new corporate debt and municipal issuance declined as many issuers had rushed to market last December to beat the 2018 tax cut, which would change the tax-exempt status of some bonds. Municipal supply then fell at the start of 2018 after the surge of early issuance. Investor demand for tax-exempt bonds has been strong since the TCJA and state and local tax (SALT) limits curtailed so many tax-deductible or tax-advantaged items for high-income individuals in areas with high state taxes. Since the TCJA and SALT deduction caps, several states have passed "workaround" legislation intended to reduce the impact of the limited deductibility of SALT. Four states (CT, NJ, NY and OR) created charitable funds where all contributions count as a credit against state tax liabilities. However, the IRS is expected to issue official guidance on this matter soon, and it will most likely eliminate these workaround programs.

Bond Market Outlook

Despite higher-than-expected U.S. economic growth stemming from the TCJA, we believe low, but positive, global growth and inflation should keep a lid on the absolute level of intermediate- to longer-term interest rates. With many foreign sovereign bonds trading at negative yield levels, demand for U.S. bonds should remain high. However, as more central banks around the world move to more normal monetary policy (from current simulative policies), rates may come under some pressure to rise moderately from the current and historically-low levels.

DOMESTIC EQUITIES

Will 2018 Catch Up with Historical Returns?

In the first quarter of 2018, U.S. technology stocks were one of the market's few bright spots, while the S&P 500 index and small cap stocks were down slightly. Through the second quarter, the tech sector's continued success appears to have been contagious, as stocks from large cap all the way down to micro cap—and across the style spectrum from growth to value—all rose for the period.

Technology stocks (as represented by the S&P NA Tech index) continued to benefit from strong sales and earnings growth, rising 7.75%. Another of the quarter's big winners, with a 5.26% return, were small cap stocks (CRSP Small Cap index), as a combination of relatively-attractive valuations and less international exposure during a period of escalating trade rhetoric found favor with investors. The S&P 500 itself produced a very respectable 3.43% gain for the second quarter.

The tech sector's continued success appears to have been contagious, as stocks from large cap all the way down to micro cap—and across the style spectrum from growth to value—all rose for the period.

Of note, just ten stocks out of the S&P 500 accounted for more than 100% of the index's 2.65% return for the first half of 2018. A single stock, Amazon.com, produced 36% of the entire S&P 500's return for the period due to its high index weight and very strong year-to-date return of 45%. Needless to say, a bull market is on firmer footing when its success is propelled more broadly, and not just due to a handful of high-flying stocks.

Historically, the average return for domestic stocks is around 10% per year. At 2018's half-way mark, the S&P 500 is up less than 3%. Should investors expect something approaching the average return for the remainder of the year? Beyond potential surprises, that can by definition not be predicted, there are several factors influencing stock returns currently.

Upside and Downside Considerations

On the upside, earnings continue to grow, with a near-20% growth pace expected for S&P 500 companies in the second quarter. Interest rates and inflation remain low, both of which help to maintain higher valuation levels. While the U.S. is attempting to rein in excess liquidity, the world has remained awash in easy money thanks to central bankers in Europe and Asia. Excess liquidity often finds its way into the financial markets, bolstering stock returns.

On the downside, the yield curve continues to flatten. Historically, flat yield curves often invert and an inverted yield curve is typically a precursor to an economic recession. Valuations are rich, even with current low interest rates and inflation. The recovery is also long in the tooth—at nine-plus years of consecutive growth—and larger equity returns tend to be associated more with the beginning years of an economic expansion than with the waning years.

On balance, stocks appear neither poised for takeoff nor teetering on the brink. The reality is, that's how they appear a majority of the time. A trade war, a central bank miscue, an international incident, an election surprise, unexpected productivity gains, a technological breakthrough, or any number of potentially positive or negative surprises could disrupt the stock market's current equilibrium. Just as easily, none of those events may transpire and stocks could drift gradually higher. An average year for the stock market would just be a guess but, short of a major disruption, it seems a reasonable guess from the current vantage point.

INTERNATIONAL EQUITIES & FOREIGN EXCHANGE*

Uncertainty Affecting Traditional Valuation Metrics

The pressure on foreign equities that we began to see in the first quarter became broader and deeper during the second quarter. The two causes won't come as a shock: central bank activity in the U.S. along with movements of interest rates for U.S. treasuries, and the kindling of trade friction that turned into the conflagration of trade war. The first underscores the critical role the U.S. plays in global finance: much of global debt is denominated in U.S. dollars and, when the dollar strengthens, the frailty of weaker borrowers quickly undermines other positives. The second is a frightening work-in-progress where, in the best case, business decisions are slowed only marginally, impairing economic growth. In reality, the pressures are likely much more profound. Driven by nations' various competitive advantages, stalling of production would likely reduce global trade and, with it, global economic growth. The benefits sought (including greater protections for certain American workers and for technology-related intellectual property) can probably be realized with other, more focused policies.

Quarterly Performance

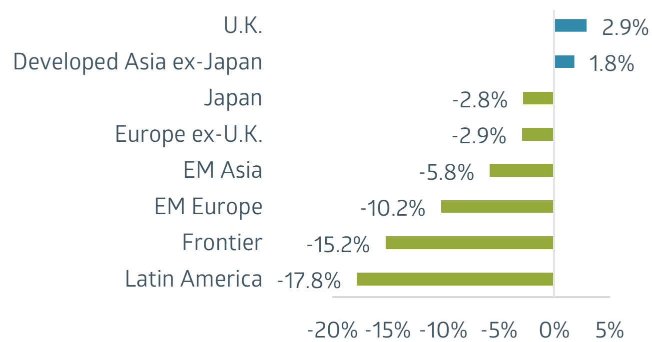
Developed international stock market returns kept pace with the U.S., in local terms. Unfortunately, U.S. dollar strength that began in the first quarter and accelerated in the second, impaired these returns for U.S. investors. For the second quarter, the MSCI EAFE index (a measure of developed markets' performance) declined 1.2% in U.S. dollars, 4.7% less than in local terms. The currency pressure was similar for emerging markets, but their local returns were decidedly negative; in U.S. dollar terms returns for these developing nations were down 8.0% in the second quarter.

In what was likely a safe haven choice, developed markets such as Australia, Canada and the U.K. led returns for the quarter. Asia was the most resilient emerging market region, falling only 5.8% for the quarter. The other emerging regions fared much worse: Eastern Europe declined by 10.2%, led on the downside by Turkey, and Latin America fell 17.8% as Brazil produced the poorest returns in the emerging market space.

Interest Rate Pressures

There is nothing magical about the U.S. Ten-Year Treasury yielding 3%. But, when it breached that level

Total Returns for Selected MSCI International Stock Indices, Second Quarter 2018



Source: Bloomberg. ***Past performance is no indication of future results.*** *All investments have the risk of loss.*

on April 26th, the dynamics of global market took a marked shift. The reaction has been similar to, but more widespread than, the summer of 2013 when investors were introduced to two new international sobriquets: "taper tantrum" and "fragile five." In 2013, then-Chairman Ben Bernanke announced that the Federal Reserve would begin to step back from the monthly purchases of $70 billion of Treasury and mortgage-backed bonds; this led to currency weakness (taper tantrum) in those emerging markets deemed most at risk of higher U.S. yields (fragile five).

Even though the Ten-Year rates have fallen back below 3.0% since April's peak, FOMC actions reignited previous anxieties. During the second quarter, non-U.S. equity markets have continued (and accelerated) the sell-off that began in late January. The selling pressure began in "fragile" emerging markets—those with large current account deficits and under the weight of debt denominated in U.S. dollars—but has spread more broadly than in the 2013 experience. Still, a core group of emerging market countries has experienced the most pain: Argentina declined 42% during the quarter, while Brazil and Turkey were each down 26%.

The pressure from higher U.S. short-term rates isn't limited to emerging markets though. Independent of other factors, higher U.S. interest rates, compared to those in most developed markets overseas, could point to a stronger U.S. dollar generally. With the U.S. economic recovery at a later stage than in many advanced economies, other central banks haven't yet begun to push up short-term yields similarly. As they do, a trigger for dollar weakness will subside but, for now, this element is a critical driver for currencies.

Trade Policy

All that said, there is a much more critical and unpredictable element in play. In the post-WWII era, the major global economies have relied on increasingly-close relations to sustain the ideal of free trade. More than any time in the past 80 years this policy framework is at risk. U.S. policy in this regard isn't completely misguided; it is, in fact, rational. We have chosen a path to grow the global pie (that is, broader economic well-being) at the relative expense of the U.S. Not every treaty has been an absolute win for the U.S. but, by and large, they have led to increased wealth globally. Our nation has been willing to be the generous partner who needn't win incrementally more of the pie so long as the pie was growing. Current policy accepts that this may have swung too far in favor of other nations. America imports a lot of goods because of three critical factors: we have shared intellectual property widely (making foreign goods relatively cheaper), foreign producers continue to enjoy a wage advantage compared to the U.S., and our population is extraordinarily wealthy. Without that wealth and concordant hunger for goods, our nation wouldn't face our current trade deficits. Only by diminishing America's wealth can we expect a trade balance in the intermediate term. That is not an acceptable solution. But putting up trade barriers is an absolute loss for the global and U.S. economies alike.

The risks of the current round of trade pronouncements can't be dismissed; they are the greatest since WWII and the formation of World Trade Organization (WTO) in 1995 and its predecessor, the General Agreement on Tariffs and Trade (GATT), in 1948. These structures have been a critical backbone to global peace and trade. While foreign stocks have been discounted more than U.S. stocks as investors digest these two critical issues—interest rate pressures and trade policy—, traditional metrics of valuation and the quality of earnings of companies around the world matter little. In the short term, investors cannot rely on the traditional drivers of long-term returns.

Looking Ahead

Entering into this time of uncertainty, the global economy is surprisingly robust. Economic growth around the world is broad-based; more than 90% of the world's economies expanded last year, the greatest breadth we have experienced since the global financial crisis ("GFC").

From a market perspective, in the more than 45 years of the MSCI EAFE index, it has generally lagged U.S. stocks (as measured by the S&P 500 index) during the first third of bull markets, but outperformed it handily for the remaining two thirds. Few observers would doubt that we are in the late stage of this cycle for the S&P 500.

While traditional valuation metrics for companies around the world may be less influential currently, they are still a good starting point to understand how markets will react once there is greater clarity around trade issues. As of June 30th, the MSCI EAFE was trading at a 30% discount to U.S. stocks based on trailing one-year earnings. This was largely due to exceptional earnings in the U.S. during the first quarter that were driven by mega-cap growth names. Non-U.S. earnings continued to be more broadly based and, on a one-year trailing perspective, superior. According to MSCI data, one-year earnings growth through quarter end for the U.S. was 16.0%; Europe enjoyed gains of 27.7%, while earnings in Asia ex-Japan grew 20.5%. Even Japanese earnings exceeded U.S. totals, rising 23.4% for the period.

Policy announcements and echoes of these statements are likely to drive equity markets in the near term. When traditional drivers again gain traction, it is likely to be a constructive environment for international stocks.

FOREIGN EXCHANGE

The longer-term perspective for the U.S. dollar is decidedly negative. Current U.S. policies that emphasize lower taxes and expansionary fiscal policy are leading to expanding deficits. Investors have become accustomed to a world without inflation; U.S. policy is creating a fertile environment for inflation and, with it, a weaker dollar.

The world is also on the brink of a subtle power shift. China's rise is becoming meaningful and it will change the "exorbitant privilege" that the U.S. and its currency have enjoyed in the post-WWII era. About 64% of foreign exchange reserves held globally are U.S. dollars; only about 1% is held in Chinese yuan. But European central banks have announced their intention to begin a move from dollars to yuan. Investors are increasingly comfortable with China's management of its capital account and, as the current U.S. administration has rattled its economic and military sabre, the yuan has gained some traction as a currency in which to trade crude oil. This will produce longer-term pressures on the greenback.

** Unless otherwise indicated, the equity returns cited in this section of the 9:05 are based on their respective MSCI region or country indices. The returns of these indices along with those of the MSCI EAFE and the MSCI Emerging Markets indices are presented in U.S. dollar terms on a total return basis (with net dividends reinvested).*

REAL ESTATE

The Quest for Higher Risk-Adjusted Returns and Downside Protection

Institutional investors have a long history of owning commercial real estate in "Gateway Markets," a term popularized in the late 1990s to describe many of the largest real estate markets in the U.S.: New York, Washington, D.C., Boston, Chicago, Los Angeles, San Francisco and Seattle. These markets have enjoyed extraordinary and disproportionate interest from real estate investors since the GFC… and many would say for good reason.

They are economically diverse with deep pools of talent that attract a variety of employers. Gateway Markets are also considered to have the "highest barriers to entry" for new supply, either because there is very little available land (in contrast to, say, Las Vegas) and/or because the process for a developer to get the zoning/entitlements to build a project is so difficult, expensive, and/or time consuming that it constrains supply and makes existing space more valuable. Gateways are also viewed as the least risky because they are generally the most liquid and most attractive to the deepest pool of investors. For all of these reasons, the Gateway Markets have gotten extraordinarily expensive the past few years; pricing is at all-time highs and yields are at historic lows, so much so, Bailard believes, that this is an imprudent "entry point" for investors to get into the Gateways.

Bailard believes opportunity exists beyond the popular Gateways. Bailard's research bears out that there are a number of markets that offer the potential for higher risk-adjusted returns than the Gateways AND could provide better downside protection/cushion in the event of an economic downturn.

To begin, Bailard examined average capitalization rates ("cap rates") for Gateway Markets in order to compare them to a selection of markets Bailard calls "Strong Secondary Markets." A cap rate is the projected year-one yield for a real estate investment determined by dividing the prospective year's net operating income of the property by the property's price/market value. Generally, like a bond, a lower yield (i.e., lower cap rate) implies lower risk and a higher price/value. Conversely, a higher cap rate implies higher risk and a lower price/value. Bailard's selection of Strong Secondaries has solid economic fundamentals like Gateway Markets, but perhaps slightly lower barriers-to-entry and less liquidity than the Gateways since they have traditionally attracted less attention from the largest institutional investors.

The table below shows average cap rates as of March 31, 2018 for the seven Gateway Markets as well as seven other metropolitan statistical areas ("MSAs") that Bailard considers Strong Secondary Markets. The average cap rates for properties in Gateways are 100 basis points* lower—a 14.5% difference—than average cap rates for properties in Strong Secondaries.

As of March 31, 2018, funds in the NFI-ODCE Equal Weight index (NCREIF Fund index - Open-end Diversified Core Equity Equal Weight, or "ODCE-EW") had over 57% of their property portfolios invested in Gateway Markets. Bailard believes that, at current pricing/valuation levels, the Gateways are, ironically, riskier than many other markets, including the Strong Secondaries. Hence, Bailard currently recommends substantially underweighting (vis-à-vis the ODCE-EW) the Gateway Markets (by ~30%) and overweighting (by a similar amount) other non-Gateway Markets including the Strong Secondaries listed below.

Capitalization Rates for Selected MSAs (as of March 31, 2018)

Gateway Markets	Capitalization Rate
Boston	5.7%
Chicago	6.9%
Los Angeles	5.4%
New York	5.5%
San Francisco-Oakland	5.7%
Seattle	5.9%
Washington, D.C.	6.4%
Gateway Market Average	**5.9%**

Strong Secondary Markets	Capitalization Rate
Atlanta	6.4%
Columbus	8.0%
Minneapolis-St. Paul	7.2%
Orange County	5.3%
Philadelphia	6.9%
Phoenix	6.5%
St. Louis	7.9%
Strong Secondary Market Average	**6.9%**

** A basis point (bp) is 0.01%.*
Sources: Bailard, Real Capital Analytics, NCREIF

Minneapolis vs. San Francisco

To dive deeper, Bailard compared data for an historically lower barrier-to-entry/higher cap rate Strong Secondary Market (represented by Minneapolis) with an historically higher barrier-to-entry/lower cap rate Gateway Market (represented by San Francisco). Because property types behave differently, the comparison included Multifamily and Office property types in both markets.

Tables 1 and 2 below reflect cap rates, total returns (per the NCREIF Property Index or "NPI"), and measures of risk including the standard deviation of those returns and the Sharpe Ratio. The Sharpe Ratio is the average return in excess of the risk-free rate per unit of volatility; the higher the Sharpe Ratio, the better the risk-adjusted performance.

From 2000 to 2017, San Francisco's average total returns for Multifamily and Office were, respectively, 300 bps and 520 bps higher than in Minneapolis. However, the risk inherent in those higher returns cannot be overlooked. The standard deviation for San Francisco Multifamily (11.6%) and Office (14.2%) were substantially higher than Minneapolis Multifamily (6.8%) and Office (8.0%).

Similarly, it is important to view performance over the 18-year cycle and not just the smoothed average. Table 3 shows Multifamily property returns peaked in 2005 and hit the cycle low in 2009. San Francisco experienced a 43.0% decline from peak to trough; for the same time period, Minneapolis experienced a 24.0% decline. As for Office—where Minneapolis peaked in 2005, San Francisco peaked in 2007 and both hit their lows in 2009—Table 4 indicates returns in San Francisco declined 52.2% from high to low. Again, that vertiginous drop dwarfed the 35.8% decline in Minneapolis Office properties from peak to trough.

Based on this evidence, it is true that investment in Minneapolis Multifamily and Office properties offered less upside potential than investment in San Francisco Multifamily and Office (if the investor timed his/her entry deftly). On the other hand, Minneapolis offered greater "cushion" in the event of a downturn than did San Francisco.

Did San Francisco's higher returns compensate investors for the higher volatility/risk?

For Multifamily, they have not and for Office, they have.

- Minneapolis Multifamily, with a Sharpe Ratio of 1.13, enjoyed higher risk-adjusted returns than San Francisco Multifamily, with a Sharpe Ratio of 0.94.
- Conversely, investors in San Francisco Office properties enjoyed higher risk-adjusted returns with a Sharpe Ratio of 0.66 versus Minneapolis, with a Sharpe Ratio of 0.53.

In conclusion, for the time period evaluated, an historically lower barrier-to-entry/higher cap rate market such as Minneapolis produced better risk-adjusted returns for Multifamily, while also providing superior downside protection for both Multifamily and Office than an historically higher barrier-to-entry/lower cap rate market like San Francisco.

As the economy and, by extension, the real estate markets get deeper into the current cycle, it would seem that additional cushion and lower downside risk would be ever more important to the prudent investor.

Table 1: NPI Total Returns and Cap Rates, Multifamily

	San Francisco		Minneapolis	
2000-2017	Cap Rate	Total Return	Cap Rate	Total Return
Average	4.9%	12.4%	6.2%	9.4%
Standard Deviation	1.0%	11.6%	0.8%	6.8%
Sharpe Ratio		0.94		1.13

Table 2: NPI Total Returns and Cap Rates, Office

	San Francisco		Minneapolis	
2000-2017	Cap Rate	Total Return	Cap Rate	Total Return
Average	6.3%	10.8%	7.7%	5.6%
Standard Deviation	1.5%	14.2%	1.3%	8.0%
Sharpe Ratio		0.66		0.53

Table 3: NPI Peak and Trough Total Returns, Multifamily

	Year	San Francisco Total Return	Minneapolis Total Return
Cycle Peak	2005	26.0%	13.0%
Cycle Trough	2009	-16.9%	-11.0%
Delta		-43.0%	-24.0%

Table 4: NPI Peak and Trough Total Returns, Office

	Year*	San Francisco Total Return	Minneapolis Total Return
Cycle Peak	2007/05	25.6%	18.8%
Cycle Trough	2009	-26.6%	-17.0%
Delta		-52.2%	-35.8%

** San Francisco's Office properties peaked in 2007, and Minneapolis peaked in 2005.*
Sources: Bailard, Real Capital Analytics, NCREIF. ***Past performance is no indication of future results.*** *All investments have the risk of loss.*

BAILARD

INVESTMENT STRATEGY

An Overview of Our Strategic and Tactical Asset Allocation

U.S. Bonds

For the second quarter, we remained underweight in our bond positions and maintained a lower-than-normal duration. Investors may have grown tired of low yields, as well as concerned about central banks ending their quantitative easing programs and turning to quantitative tightening by year end. With the nominal Ten-Year yield of 2.86% (and assuming a 2% to 3% historical real yield), real yields on bonds remain unattractive and below normal. The fair value on the Ten-Year bond, assuming 2% inflation, should be above 4% with equity-like downside if yields are normalized. At low interest rate levels, the bond risk becomes equity-like. We prefer to take risk in the equity market and to complement our bond holdings with other defensive asset classes.

U.S. Stocks

Stocks were overvalued by most absolute metrics as of June 30, 2018: the price-to-sales ratio was at near-record highs, price-to-operating earnings were slightly above average, enterprise value (debt plus market capitalization) divided by EBITDA (earnings before, interest, taxes, depreciation and amortization) at near-record highs and price-to-cash flow was 25% above normal. If you believe in regression to the mean, market multiples should tumble at some point and further multiple expansion can't be relied upon from such lofty levels.

The outlook for earnings growth remains muted, as top line sales growth has been slow, profit margins are near record highs, and further improvement may be difficult to come by. Earnings have historically tended to grow in line with nominal GDP growth. Since 1980, nominal GDP and corporate profits have both increased at a 6.5% rate. However, earnings are more volatile than nominal GDP, as profit margins change during the cycle. Given a slow growth outlook (4% to 5% nominal GDP growth) and near-record profit margins, earnings growth may be difficult to come by over the next few years.

International Stocks

International stocks—particularly emerging markets—after surging in 2017, gave up roughly half of their 2017 gains as the U.S. dollar strengthened in 2018. We were hopeful that last year's relative outperformance would continue, but dollar strength swamped these hopes. With international stocks selling off again, relative valuations to the U.S. have gone back to cyclical extremes. For example, the price-to-book ratio for the U.S. is at 3.4x, while both emerging and developed international indices are 50% cheaper at a 1.6x ratio. Dividend yields overseas are above 3%, 50% higher than the 2% average yield on U.S. stocks. International stocks have been underperforming for a long time and relative valuations are compelling, However, it is the economic and financial system risks that are of concern, and we have been cautious about adding to international stocks from a strategic perspective.

Real Estate*

Real estate has been a star performer since the end of the GFC and has continued to put up solid numbers. Although the market has improved, we are continuing to see undervalued opportunities. Further, with cap rates still in excess of 6% as of quarter end, the relative valuation of real estate remains attractive compared to cash and bond yields. Going forward, rising interest rates could make real estate less attractive. But, in our opinion, real estate's strong relative value should help it maintain its value better than in 2008, and better than stocks and bonds.

Alternative Investment Strategies*

We believe that, for appropriate investors, some types of long/short strategies have the potential to provide important defensive diversification in scenarios where more traditional asset classes experience declines. In our opinion, the economic and financial uncertainty in the current environment underscores the important role such strategies can play.

Tactical Asset Allocation Strategy (TAA)

TAA tends to hold four of thirteen major asset classes and is designed to be both opportunistic and defensive in response to the investment markets on a short-term basis. During the quarter, TAA shifted to an increased allocation to equities than what had previously been in place.

**Real estate and alternative investment strategies have significant risks and are not appropriate for all investors.*

6/30/18

MARKET PERFORMANCE

U.S. Interest Rates	9/30/2017	12/31/2017	3/31/2018	6/30/2018
Cash Equivalents				
90-Day Treasury Bills	1.05%	1.38%	1.71%	1.92%
Federal Funds Target	1.25%	1.50%	1.75%	2.00%
Bank Prime Rate	4.25%	4.50%	4.75%	5.00%
Money Market Funds	1.12%	1.36%	1.68%	2.03%
Bonds				
30-Year U.S. Treasury	2.86%	2.74%	2.97%	2.99%
20-Year AA Municipal	3.09%	3.17%	3.47%	3.42%

Source: Bloomberg, L.P.

Global Bond Market Total Returns (US$) through 6/30/18	QUARTER	SIX MONTHS	YEAR TO DATE	ONE YEAR
U.S. Bonds				
BofA Merrill Lynch U.S. Treasury Index	0.10%	-1.11%	-1.11%	-0.60%
BofA Merrill Lynch Agency Index	-0.03%	-0.56%	-0.56%	-0.05%
BofA Merrill Lynch Corporate Index	-0.95%	-3.13%	-3.13%	-0.71%
BofA Merrill Lynch Municipal Index	0.88%	-0.27%	-0.27%	1.67%
International Bonds				
Citigroup non-US$ World Government Bond Index, fully hedged	0.23%	1.73%	1.73%	3.57%

Sources: Bloomberg, L.P. and Morningstar Direct

Global Stock Market Total Returns (US$) through 6/30/18	QUARTER	SIX MONTHS	YEAR TO DATE	ONE YEAR
U.S. Stocks				
Dow Jones Industrial Average Index	1.26%	-0.73%	-0.73%	16.28%
S&P 500 Index	3.43%	2.65%	2.65%	14.37%
NASDAQ 100 Index	7.27%	10.64%	10.64%	25.99%
Morningstar Small Value Index	6.85%	1.31%	1.31%	10.40%
International Stocks				
MSCI Japan Index, net dividends	-2.84%	-2.03%	-2.03%	10.51%
MSCI Europe Index (includes UK), net dividends	-1.27%	-3.23%	-3.23%	5.28%
MSCI EAFE (Europe, Australasia, Far East) Index, net dividends	-1.24%	-2.75%	-2.75%	6.84%

Sources: Bloomberg, L.P. and Morningstar Direct

Real Estate Total Returns (US$) through 6/30/18 (estimated)	QUARTER	SIX MONTHS	YEAR TO DATE	ONE YEAR
NFI-ODCE Index*	2.20%	4.45%	4.45%	8.60%

Source: The National Council of Real Estate Investment Fiduciaries

**Since the second quarter 2018 NFI-ODCE index return is not yet available, we have estimated it by using the previous quarter's return. This estimate is used for all time periods presented.*

Past performance is no indication of future results. All investments have the risk of loss.

DISCLOSURES

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the 9:05 is published four times a year by Bailard, Inc., 950 Tower Lane, Suite 1900, Foster City, California 94404-2131 (650) 571-5800. www.bailard.com. Publication dates vary depending upon the availability of critical data, but usually fall in the first month of each new quarter.

ABOUT *THE 9:05*

Since 1978, we've held a weekly company wide meeting during which we talk about the prior week's activities and those anticipated in the week to come. We refer to this meeting, which begins just after nine each Monday morning, as "the 9:05." Just as the 9:05 enables us to share our knowledge and insights with each other, this newsletter provides us with a valuable means of communicating with our clients. Hence its title: *the 9:05*.

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