the 9:05 Bailard's Quarterly Review of Economic and Market Developments* Q4 2019

Looking Back and Moving Forward

This quarter's Chat with the CIO (Eric P. Leve, CFA) features Blaine Townsend, CIMA®, CIMC®, Director of Sustainable, Responsible and Impact Investing. Eric and Blaine kick off a thematic edition of "the 9:05" by looking back at the 2010s and considering what the next decade holds.

Inside this Edition:

1 Chat with the CIO: Looking Back and Moving Forward

4 The Pace and Price of Innovation

6 The Next Decade in Real Estate: Predicting the Unpredictable

9 Expectation vs. Reality in Equity Styles

11 Closing Brief: Bailard's View on the Economy and Market Performance

Eric P. Leve, CFA: Blaine, you and I can often kick around a wide array of topics when a free moment arises. We've both had at least a half-century on this planet, a period in which the earth has seen its share of changes from social and technological to financial and political. But, not to fall victim to the "recency effect," I don't think I've experienced a decade where the interactions of these spheres have triggered more fundamental change. Let's take a look at a small slice of the major events of the decade and, with great risk, try to imagine where they might lead us moving forward.

Blaine Townsend, CIMA®, CIMC®: As financial wonks, it's tempting to start our conversation with the markets. But really, that's just a reflection of how our lives have changed. Prior to 2010, "Hey Siri" or "OK Google" would be met with dead air. Easily read a magazine or watch a show in bed? Think paper or a TV set, since iPads didn't exist. The change in video content has transformed water cooler talk dramatically. When TV networks dominated, top shows captured a majority of watchers and drove fervent conversations the next morning. Now, with everyone binging their own highly-curated selections, that discourse has fallen away. The ability to self-select has far-reaching implications.

Eric: Definitely. "Nightly News" has given way to hyper-personalized newsfeeds. That process has changed the dialogue: we now get the news

*Please see important disclosures on page 15.

> continued on page 2

to fit who we are (or want to be), leading to increased polarity of viewpoints. Worse yet, we are finding that social media is doing the same thing, sending us messages that algorithms calculate to fit and incrementally tilt our perceptions.

Blaine: It may not be too much of a stretch to say that modern media delivery helped fuel some of the division we're seeing more broadly in society. 2010's dawn of the Arab Spring was widely described as the first crowd-sourced protest. The Arab Spring is interesting: it initially brought a wave of weak democracies in place of tyrants, but by the decade's end, there was little to cheer. With the exception of Tunisia—where it all began—most of these countries today are no better off socially, economically, or politically than in 2010. Of equal importance, this foment led to the Syrian Civil War and the exodus of Muslims from the region to Europe.

Eric: And that was undoubtedly the catalyst for much of the populism that grew in Europe over the past decade. The impact has been a much more restrictive environment for immigrants into Europe and faster turnover of the Continent's elected leaders. Populism, along with the ongoing struggles to build the European Union, will presumably continue in the next decade. The UK's exit from the European Union doesn't seem likely to inspire other countries in the near term. If anything, the combination of the upcoming leadership change in Germany and Christine Lagarde's new vision for the International Monetary Fund should pacify the bloc's southern countries and, with luck, build a stronger union over the next decade.

Blaine: I'll take the other side of your argument here as well: although modern media may have led to some myopia, it has also provided a platform for some that otherwise might have failed to find a voice. Generation Z calls itself a "woke" generation, one more sensitive to social justice than any other in at least 50 years. The ubiquity of social media and the intensive use of it by Millennials and Gen Z'ers has propelled many movements. "Occupy" and the "99%" were first used in New York in 2011; the idea of inequitable income distribution became a thread that ran through many other causes during the decade.

But, echoing your thoughts above regarding social media, the idea that our data wasn't solely being used to serve us, but to manipulate us as well became clear

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through the Cambridge Analytica scandal. We accept cookies and perceive them as a small price for access to myriad sites. The underlying truth, only now becoming clear, is that we are trading our privacy for convenience. Relatively speaking, the reactions have been swift: from Europe's GDPR in 2018 to the California Consumer Privacy Act that just went into effect on January 1st. Here I feel a bit optimistic. The response time between the recognition of issues and the implementation of legal and/or technological fixes seems to be shrinking. And, it serves as a signal of another broader shift in the last ten years: consumers and investors alike are demanding greater transparency and accountability.

Eric: Alright Blaine, you brought up investors, so let's talk turkey. What has the market told us over the past decade?

Blaine: A lot. Just looking at the composition of the S&P 500 Index shows how the world is changing.

This first one's not a shocker: technology is booming. At the end of 1990, the sector made up less than 6% of the S&P and now, at the beginning of the 2020s, it has grown explosively to almost 20%. In the past few years, it grew so large that S&P moved some of its largest index member companies to other sectors; if you include those, technology would have comprised 28% of the S&P at year-end.

On the flip side, in the early 1980s the energy sector was the largest in the S&P, reaching as much as 28% of the index. By the beginning of 2010s, its share had fallen to 11.5% and, as of year-end 2019, it was just 4.3%. But this doesn't mean that U.S. energy production is suffering; it is actually quite the opposite. In 1970, U.S. crude oil production hit ten million barrels a day before declining to as low as five million per day a decade ago. According to the Energy Information Administration, the U.S. should produce more than thirteen million barrels per day in 2020. The reality,

though, is that modern drilling in the U.S. is productive but not profitable. And even that productivity is diminishing as oil wells deplete faster than anticipated. In a future where it takes less energy to produce a dollar of GDP, this trend will likely continue.

For further proof, just ten years ago at the turn of the last decade, the largest U.S. corporation by market capitalization was an oil company. That company fell to only the twelfth largest in the intervening ten years. And now, the five largest companies are technology-related.

These trends are likely to continue in the next decade and what we narrowly call "technology" has become the foundation of most every commercial enterprise. From "smart" utilities and industrial robots to the Internet of Things, it is hard to imagine what aspects of our lives will be truly "analog" by 2030.

Eric: What do you think about the "graying" of America, namely the demographic shift as Baby Boomers retire in ever-greater numbers and America has fewer working-age people to replace them?

Blaine: Absolutely right. In 2020, the global population will have more people over age 30 than under for the first time. This will be a decade where those Baby Boomers will demand more from technology and healthcare to keep them vital and connected to their families and communities. At the other end of the age spectrum, it is a daunting time. It is probably less clear than at any point in our lifetimes which job skills will be most needed in an increasingly post-industrial economy. With population growth slowing generally and little perceptible increases in productivity, economic growth may not be the tailwind it has been for much of the post-WWII period.

Eric: OK, we're both running out of time and caffeine. Let's each throw out a final thought for the next decade.

I'll start with my not-quite-unabashed love for the "sharing economy." One example is car sharing. It may be a bad business model but for elderly, mobility-impaired, blind, inebriated, or non-car-owning people, it is a brilliant solution. The next decade will tell us whether these seemingly beneficial services can be profitably and responsibly delivered. Up to this point, they are neither money-making nor adequately-regulated.

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Blaine: Good one. I'll go with plastics, a topic on few peoples' minds in 2009. The recent realization that much of recycling has been a hoax—that we have simply shipped our waste to developing countries who are now less willing to accept it—is a significant turning point in the conversation about plastic. Individuals can continue to debate the sources of Co_2 and O_3 levels, but the mounds of plastic are undebatable and everyone can play a daily role to mitigate it. The convergence of social media, climate change, technology, and demographics will only gain strength ahead.

Eric: Thanks Blaine, I look forward to continuing this conversation over the next ten years. It will no doubt be an interesting decade with innumerable reasons for chatting at the (potentially virtual) water cooler.

The Pace and Price of Innovation

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It's hard to remember our lives without modern technology.

Recall that the first internet message was transmitted only 50 years ago. Using an experimental computer network known as ARPANET, the message originated with grad students at UCLA and was received by computers at the Stanford Research Institute that sits just down the road from us in Silicon Valley. The message sent was just one word ("login"), but the program ran out of memory and crashed after the first two letters. With that, the history books recorded the internet's first message as "lo." It took another two years to send the first email in 1971.

Fast forward and consider that the world sent nearly 300 billion emails per day in 2019. Taking a moment to look at the dates of technological breakthroughs can be jarring given how many of them are so recent. The Human Genome Project was "essentially completed" in 2003.[1] The original iPhone was released in 2007. The license for autonomous vehicles was granted in 2012 and the first gene therapy approved for use by the FDA occurred in 2017.[2] The last decade in particular was a whirlwind of innovation, and reflecting upon it is a humbling exercise. These developments not only changed our daily lives but fundamentally altered the structure of our society and the world economy.

Progress in tech over the last ten years has forced investors to rethink how enterprise companies consume technology. There are many examples of this, but we're specifically thinking of the impact of virtualization and Infrastructure-as-a-Service offerings like Amazon Web Services and Microsoft Azure. These services—which have grown into behemoths themselves—allow enterprises to purchase virtualized storage and resources over the internet on a highly-scalable, incremental, as-needed basis. This has proven incredibly attractive to large enterprises, as they can effectively outsource data center management. More broadly, virtualization and cloud services have dramatically lowered the cost of starting and scaling a new company.

Not so long ago, a new startup would need to make a very significant, fixed upfront investment in servers and hardware to roll out a new product. That's no longer the case. That same cost is paid for on an as-needed basis and scaled up to meet demand as the customer base grows. Let's not underestimate the impacts of lower barriers to entry for the innovation ecosystem; perhaps some of the IPOs we see today would simply not exist if their start-up costs had remained elevated.

Analogous to this shift, a number of companies today are redefining how developers think about non-core application functions. Not too long ago, if you needed functionality to allow your app to email a user, this required upfront investment in coding hours as well as an email server and licensing. Today, that same process can be done in a matter of seconds with a few short lines of code utilizing a third-party API. We've already seen new companies develop similar services offering solutions for real time translation, voice to text, security authentication, fintech, and payments. Similar to the industrial revolution, we view these developments as tools building better tools; the progress, proliferation, and democratization of these building blocks is exceptionally exciting as we enter the new decade.

In many ways, biotechnology companies have mirrored the adoption and commercialization curve of information technology companies with respect to these building blocks. Biotechnology even has its own form of Moore's Law (which predicted the doubling of transistors in computer chips every 18 months), related to the cost reduction of sequencing a human genome over time. The early genetic testing/sequencing technologies—such as Southern blot analysis and Sanger sequencing methods—were deployed in the 1970s and 1980s and allowed for screening of heritable diseases such as cystic fibrosis, phenylketonuria, and Duchenne's muscular dystrophy. At the time, these were cutting-edge technologies; yet today, seventeen years after the completion of the Human Genome Project, we not only use new rapid sequencing

technologies that can be completed practically at the bedside but we also have medicines targeted at the underlying genetic mutations for treatment.

Consider a therapy comprised of two small molecules approved for use in cystic fibrosis patients identified with two copies of a particular gene mutation. The drug was approved by the FDA in 2015 and works by improving the conformation (or shape) of the mutated protein as well as promoting the production and function of the CFTR protein cells found in organs such as the lungs.[3]

Another incredible example of taking our genetic knowledge even further was the 2017 FDA approval of a one-time gene therapy for the treatment of patients with vision loss due to mutations in both copies of a specific gene. This was the first time a gene therapy was approved outside of oncology indications and was also the first gene therapy approved that was directly injected into the tissue being corrected. We are just beginning to see the massive potential human impact from this foundational building block. Today, just two years after that FDA approval, there are already over 1,000 studies listed on ClinicalTrials.gov that are recruiting patients for gene therapy trials.[4]

While these tremendous stories in technology and healthcare are inspiring, we believe it's equally important to remember that these innovations are tools and are not by themselves inherently good or evil. Society—and media in particular—can fall into the trap of broadly painting new technologies as miraculous gifts that will solve the world's problems.

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This past decade was a reminder that, in the hands of the wrong people, technology can have devastating consequences. While many social media platforms launched in the 2000s, their power was fully realized in the 2010s. The largest and most influential social media platform in the world, Facebook, conducted its IPO in 2012 and earned $538 million in operating profits that year. In 2019, that total is expected to exceed $25 billion. The ability for individuals to connect with families and friends has reshaped our relationships, and users across the world share and socialize with groups passionately dedicated to movements. Yet, a major theme of the last decade was the havoc that decentralized information platforms can wreak on societies when bad actors create systems to take advantage of unknowing users.

The term "fake news" became part of our everyday lexicon partially as a result of the preponderance of misleading and outright falsified rumors frequently circulated to millions across the globe. We saw nefarious groups use powerful marketing techniques to micro-target U.S. citizens during the 2016 election cycle, which prompted multiple government investigations. Social media was also used as a key platform in disseminating hate speech, false rumors, inflammatory messages, and propaganda to fuel the heinous ethnic cleansing of the Rohingya people in Myanmar.

Stories of bad actors utilizing new technology were seen in the world of biotech, as well. Chinese scientist He Jiankui implanted two women with genetically-altered embryos resulting in three "designer" babies in an attempt to confer resistance to HIV with edits made to the embryo. Jiankui was recently sentenced to three years in jail as a result of his actions.

The last decade will be remembered as one in which these tools gained widespread adoption. But, the next decade may well be remembered for how our society reacts to them, both behaviorally and legally. Despite these drawbacks, we remain exhilarated by the impact of technology and the pace of innovation. Looking ahead, we see the convergence between the worlds of technology and healthcare gaining traction over the next decade. There is a clear theme in the venture capital world of blending this line: using artificial intelligence to help predict cellular pathways or utilizing modern tech services to evolve the delivery of healthcare services, for example.

We can't wait to see what's next.

1 *https://www.genome.gov/human-genome-project/Completion-FAQ*
2 *https://www.fda.gov/news-events/press-announcements/fda-approval-brings-first-gene-therapy-united-states*
3 *https://www.orkambihcp.com/mechanism-of-action*
4 *https://clinicaltrials.gov/ct2/results?term=gene+therapy&Search=Apply&recrs=a&age_v=&gndr=&type=&rslt=*

The Next Decade in Real Estate: Predicting the Unpredictable

Ronald W. Kaiser, CRE, is Bailard's Director of Real Estate Research

Ten years ago, the outlook for the real estate market was grim: After being clobbered by the Great Recession in 2008-09, property values were down about 40% on average.[1] Once the economy struggled back to its feet, one would have expected real estate operations to gradually improve. But for the NFI-ODCE Index to post an 11.4% compound annual return for an entire decade?[2] Unlikely. And yet, contrary to many people's expectations, the last ten years have been a near-perfect decade for real estate.

At one of the recent "pipeline review" meetings held weekly by the Bailard real estate team, one colleague marveled at several things from the past decade:

- The resilience and durability of the economic expansion;
- How high rents have climbed coupled with historically and persistently low vacancy rates;
- How far interest rates have fallen... and how long they've stayed there;
- How low real estate investment capitalization rates[3] have gotten... and, again, how they've been able to stay there.

It's been a steady, mostly unbroken string of outstanding performance as pricing for many properties in most markets hit unprecedented levels four to five years ago... and have continued to climb even since!

Given how unexpected these conditions were ten years ago, one looks ahead to the next decade with a growing sense that anything is possible. If the 2010s taught us anything, it's that everything is rational in retrospect, hence, looking forward, anything is possible. With that in mind, the Bailard team offers the following scenarios that could potentially impact the real estate sector in the 2020s. But perhaps the most prudent suggestion to offer to investors is this: expect the unexpected.

Interest rates continue to decline (or alternatively, skyrocket)

No one anticipated where interest rates and cap rates would go (and stay) over the past decade. Could cap rate compression continue from here? After all, cap rates for core properties are still a comfortable 240 basis points[4] above the 10-year U.S. Treasury yield, which is a normal relationship. It should be noted that the annualized return of the NFI-ODCE Index over last decade would have been 6.7% without the help of cap rate compression; that is, the change in cap rates alone contributed meaningfully to the strong real estate returns over the past ten years. With the relatively-lower cap rates as we head into the 2020s (compared to the start of the 2010s), real estate returns would be expected to be even less over the next ten years and certainly nothing to write home about. And, on the downside view, there is some risk that interest rates and cap rates could work their way higher.

But, could interest rates go (and stay) even lower? Absolutely. And if they trade down to below 1% and cap rates follow and end the next decade at roughly 2.7%, this would boost capital appreciation by another 4.7% per annum. This would be truly eye-popping in the context of U.S. history, though not crazy when one ponders the reality that many stable sectors in the Eurozone currently boast similar metrics.

Is this what Bailard anticipates? No. The Bailard real estate team anticipates a "return to normalcy" over the next ten years. This would mean that interest rates regress to mid-single-digit levels (i.e., 4% to 6%) and cap rates would rise to historically normal levels in the range of 6.5% to 7.5%.

Retail and industrial real estate converge

A massive transformation is already underway in the retail category, as independent stores and big box

chains alike fold under pressure from online retailers. Amazon, with a 38% share of the U.S. ecommerce market, has led the transformation.[5] To compete, traditional brick-and-mortar retailers like Walmart and Target are becoming more nimble and focusing on "omni-channel" distribution, i.e., offering customers the option to purchase items online and pick them up in the store—effectively treating many of their retail locations as warehouse space for online shoppers.

Meanwhile, online retailers that ship goods directly to customers need ever-increasing amounts of warehouse space in order to optimize the "last mile" in their distribution chains: the closer a warehouse is to its customers, the faster they will receive their shipments. The same holds true for the food delivery sector, which is booming: Recently, *The Wall Street Journal* reported that in 2019, restaurants were expected to do $46 billion in delivery sales, and that two-thirds of U.S. restaurants now offer delivery service via companies like DoorDash, Uber Eats, and GrubHub.

As the trend toward online ordering and home delivery increases, the demand for warehouse space vs. traditional retail space will continue to shift—and the line separating the retail and industrial real estate categories will continue to blur.

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Suburbia gets a makeover to suit changing lifestyle trends

The stereotypical 20th-century suburb is evolving. Now that Millennials are having children, suburban houses located in desirable school districts are looking increasingly attractive to this cohort. However, young people who move out of dense urban cores don't want to give up all of the city's perks.

Over the next ten years, the desire for a dynamic, quasi-urban lifestyle will draw these families toward suburban communities that offer vibrant town centers and "walkability" between residential and commercial areas (a concept the 2020 *Emerging Trends in Real Estate* report describes as "Hipsturbia"[6]). At the same time, some affluent Baby Boomers whose kids are grown and gone are also looking for a more urban environment in which to enjoy their retirement years. And while many older Americans are choosing to "age in place" and not leave their family homes, those who can afford it are often opting to trade the suburbs for the big city.

The battle over affordability heats up

During the 2010s, median home prices dramatically outpaced median household incomes in the U.S. (driven substantially by the low cost of home mortgages). With affordable housing growing increasingly scarce in the most expensive urban areas, rent control and other mechanisms to increase affordability for low- and middle-income Americans will affect investment returns on multifamily properties. Rent control laws cap potential investment returns, which reduces the profitability of new construction. These government imposed restrictions distort the market and provide incentives for tenants to stay in their existing units rather than move to new apartments or buy homes. As a result, market mechanisms are perverted, which will discourage investment in multifamily properties—particularly high-end assets—making them less attractive to investors.

Moreover, factors like increased tax burdens on the wealthy and growing problems of homelessness and crime related to the affordability crisis may prompt affluent Americans to flee major metropolises like New York, Los Angeles, Seattle, Washington, D.C., Chicago, and San Francisco in favor of smaller cities where these problems are less pronounced, such as Indianapolis, Boise, Reno, Salt Lake City, Charlotte, Raleigh/Durham, and Phoenix.

Technology transforms the way we work (and where we do it)

Demand for office space is slowing and will continue to do so into the next decade. Colliers reports that in the third quarter of 2019, U.S. office absorption fell to 10.4 million square feet, down from 17.9 million square feet in the prior quarter. (Absorption is a measure of

tenant space newly occupied vs. vacated over a given time period.) Assuming the economy remains strong, the commercial real estate development association NAIOP forecasts average quarterly absorption of 13.2 million square feet in 2020 and 12.7 million square feet in 2021.

Advances in technology increasingly empower people to work anytime and anywhere, and businesses of all shapes and sizes are reimagining the traditional office to meet their evolving workspace needs. For many organizations, that means leasing desks in a coworking space that offers flexibility to respond to ups and downs in their businesses. According to the *2020 Emerging Trends in Real Estate* report, one in seven employees working for companies of 100 people or more use third-party coworking space.

As more workers elect to do their jobs remotely all or part of the time, existing office space will be repurposed. Exactly how remains to be seen, but one possibility is a reversal of the trend of parking structures and other industrial properties being converted into office space. Businesses may not need as many cubicles or conference rooms, but all those remote workers still need places to park their cars.

A black swan event

This one is a bit of a catch 22: the very definition of a black swan event is that it's an unpredictable occurrence. That said, the possibility of a severe economic reaction to a geopolitical crisis, an unstable excess of corporate debt, or another unforeseen trigger cannot be ignored.

Of course, these humble predictions represent only a fraction of the possible scenarios that could affect the real estate market over the next ten years. Putting aside these and other global—perhaps intimidating—considerations, it feels prudent to play it cautious: buying good quality real estate that is flexible and functional. Investors may have to live with the trend of returns that the broader market allows, but there is no requirement to settle for average. There is always an opportunity to find avenues for a creative, hard-working, and experienced real estate investor to add value.

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

1 The National Council of Real Estate Investment Fiduciaries (NCREIF) Property Index, consisting of all unleveraged or deleveraged properties reported by NCREIF's data reporting members.

2 The NCREIF Fund Index – Open-End Diversified Core Equity (NFI-ODCE) is a fund-level index reporting the returns of various open-end commingled funds pursuing a core private real estate investment strategy and qualifying for inclusion based on certain pre-defined index policy inclusion characteristics.

3 A property's capitalization rate, or cap rate, is a measure of its net operating income relative to its market value.

4 A basis point (bp) is 0.01%.

5 https://www.bloomberg.com/news/articles/2019-06-13/emarketer-cuts-estimate-of-amazon-s-u-s-online-market-share

6 https://www.pwc.com/us/en/asset-management/real-estate/assets/pwc-emerging-trends-in-real-estate-2020.pdf

Expectation vs. Reality in Equity Styles

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Diversification is the only free lunch in finance. And it's no state secret that a diversified portfolio generally includes exposure across the domestic equity styles of large and small capitalization companies as well as those in growth and value lifecycle stages. In the context of diversification and long-term performance, let's take a moment to walk through one of the historically-unexpected outcomes of the 2010s.

For the first ten years of the 21st century, small cap value stocks trounced the other domestic equity styles, as shown in Exhibit 1. Now, here on the cusp of the 2020s, it has been a different story. Instead of winning, small cap value came near the bottom of the four style types for the decade ending in 2019.

Was this just a case of what goes around, comes around? Because small cap value had performed so much better for a decade perhaps it only made sense that the other equity styles did better more recently? A look at a longer performance history in Exhibit 2 suggests that the most recent decade was not typical. Over the past 90-plus years of available data, small cap value was the clear winner. Moreover, evaluating rolling 10-year periods for the same time frame, small cap value has outperformed the most recent decade's winner (large cap growth) 80% of the time.

Something happened over the past decade that at least temporarily flipped the historically-natural performance order of things, and most readers can guess what that something is. The past ten years could easily be called the "Tech Decade," as technology and its applications caused major disruption across the economic spectrum. E-commerce profoundly altered retail shopping behavior, streaming crushed broadcast and cable TV, ridesharing decimated the traditional taxicabs business, smartphones largely replaced both landline calls and letters, and social media seriously wounded actual in-person socializing. Investors took notice and drove technology stocks ever higher, up over 400% for the decade as shown in Exhibit 3.

Exhibit 1: A Difference in Two Decades
Annualized Market Total Returns

	Large Growth	Large Value	Small Growth	Small Value
2000-2009	-1.2%	2.2%	-1.4%	11.3%
2010-2019	15.7%	11.3%	13.1%	11.5%

Exhibit 2: A Long-term Look
Annualized Market Total Returns, 1928-2019

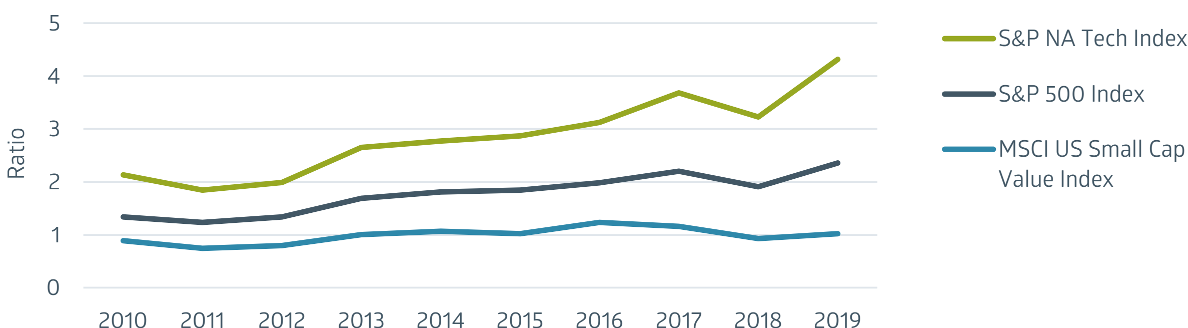
	VALUE	GROWTH
LARGE	11.7%	9.5%
SMALL	14.4%	8.7%

Exhibit 3: The "Tech Decade"
Market Total Returns, 2010-2019

	Cumulative	Annualized
S&P 500 NA Tech Index	403.8%	17.6%
S&P 500 Index	256.4%	13.6%
Small Cap Value	197.4%	11.5%

Exhibits 1, 2, and 3:
"S&P 500 NA Tech Index" is the S&P North American Technology Sector Index. Sources: Bloomberg for S&P NA Tech and S&P 500 index statistics. Large Growth, Large Value, Small Growth, and Small Value statistics based on 1928-2018 data from Kenneth R. French - Data Library. Since 2019 calendar year data was not available at the time of publication, MSCI data was used instead.
Past performance is no guarantee of future results. All investments have the risk of loss.

Exhibit 4: Price to Sales Ratio



Sources: Bloomberg, MSCI. "S&P 500 NA Tech Index" is the S&P North American Technology Sector Index. ***Past performance is no guarantee of future results. All investments have the risk of loss.***

Lost in the shuffle were small cap value stocks. While unable to match the S&P tech sector's sales gains, small cap value still handily beat the overall S&P 500 Index's revenue growth for the period. Yet somehow, this superior revenue growth did not translate into better relative returns. Valuation discrepancies that were wide to begin the period got much wider as the decade unfolded, as evidenced by the price-to-sales ratio. Exhibit 4 shows that the S&P tech sector began the decade trading at a ratio just over 2x sales, and finished trading at well over 4x. The S&P 500 Index overall started the 2010s trading below 1.5x sales, and rose to almost 2.5x. In stark contrast, small cap value stocks (as measured by the MSCI US Small Cap Value Index) began the decade trading at below a 1x ratio and ended in almost an identical position ten years later.

The reason for this discrepancy is relative expectations. The S&P 500 exceeded expectations, with large technology companies leading the way. Yet, tech stocks are comparatively scarce in the world of small cap value and, by definition, large and mega cap tech stocks are missing entirely.

If the largest technology stocks can continue to produce relative revenue gains far into the future, their current substantial valuation premiums may be justified. Historically, investor expectations have tended to rise faster than underlying fundamentals often warrant. Whether that is the case now—or will be in the future—remains to be seen, but it is something for stock market participants to consider.

This past decade saw low and generally falling interest rates, easy monetary policy, low inflation, and historically-low stock market volatility. All of these conditions typically have tended to lengthen investor time horizons and therefore have favored growth stocks. Will most or even many of these favorable tailwinds for growth stocks prevail for another decade? Time will tell.

While smaller companies certainly come with their own risks, some of their historical performance benefits may come from advantages inherent in their size. Small cap companies usually exhibit higher insider ownership percentages that reduce principal/agent problems. Moreover, there tends to be a greater focus on doing fewer things well in addition to a nimbleness and flexibility driven by better communication and less hierarchy, bureaucracy, and red tape.

A company's return on equity (ROE, a measure of profitability) tends to revert toward average over time. Highly-profitable companies usually attract competition, which generally reduces profitability. Conversely, barely profitable and unprofitable companies tend to lose competition over time, and those that can stay afloat tend to become more profitable as a result.

Think about investors in either high profitability (growth) or low profitability (value) companies over time. Which group is more likely to have their expectations exceeded or is more likely to be disappointed?

No one knows what the future holds, or which asset class or equity style will perform the best over the next decade. There are too many unknowns, and too many possibilities. However, when facing an uncertain future and needing to invest, why not play the odds? According to the wisdom of Damon Runyon: "*The race is not always to the swift, nor the battle to the strong, but that's the way to bet.*"

In addition to style risk and the normal risks of equity investments, small cap value stocks are usually more volatile, less liquid, and more vulnerable to adverse business and economic developments than those of larger companies. ***Past performance is no guarantee of future results. All investments have the risk of loss.***

Closing Brief: Bailard's View on the Economy and Market Performance

Art Micheletti, CFA, Economic Consultant and former Bailard Chief Economist

U.S. Economy

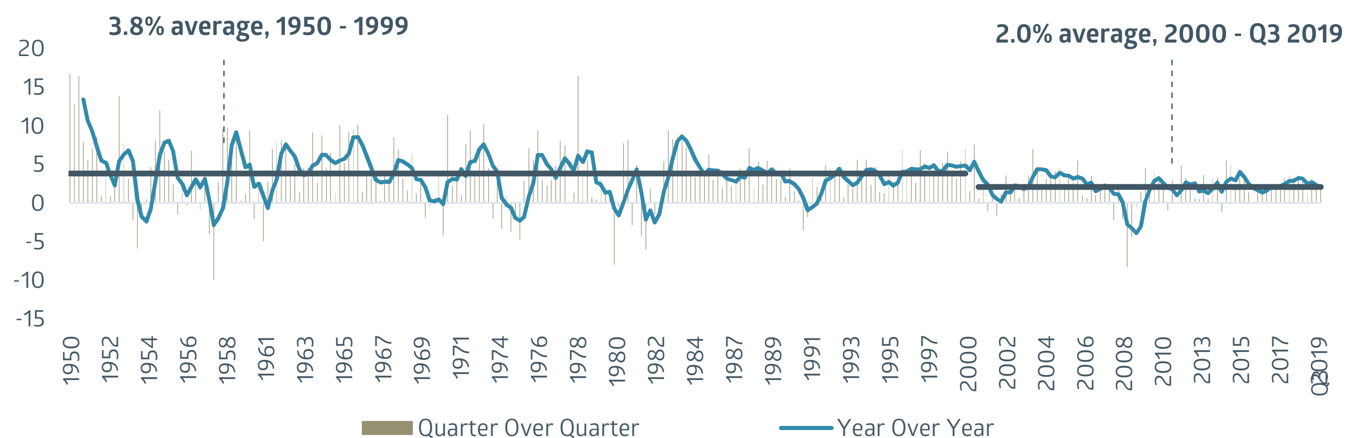
The U.S. economy continued to grow at a 2.1% annualized growth rate based on the most recent reading for the third quarter. While this was slightly higher than the 2.0% trend observed from the turn of the century, it was well below the 3.8% average growth rate from 1950 to 2000. Since the 2016 presidential election, the economy has grown at a slightly better 2.5% growth rate thanks to tax cuts that provided a one-time boost to gross domestic product (GDP) and supported by an expansion in the Federal government deficit (which has grown back to $1 trillion). Unfortunately, the impact of those recent tax cuts has faded and growth is again back to the post-2000 average. The "new normal" growth rate remains at a historically-low level.

The Atlanta Fed GDP Model has projected an annualized growth rate of 2.4% for the first quarter of 2020, whereas the New York Fed NowCast Model projected 1.5% growth. The Organisation for Economic Co-operation and Development (OECD) Leading Economic Indicator has continued to trend lower, suggesting continued slow and deteriorating growth. Over the last three months, the New York Fed Recession Probability Model decreased from a 38% probability to a 24% probability of recession in the next year. The lower probability is still at a level consistent with recession but the directional change is encouraging.

Looking at GDP composition, the consumer has continued to be the strongest sector: payrolls grew 1.5%, average hourly earnings increased 3.1% year-over-year, and the change in weekly hours held steady (all periods ending November 30, 2019). These data points are consistent with 4.5% nominal income growth and—adjusted for inflation of 2%—real income growth is running at a 2.5% rate.

Retail sales growth has slowed to a 3.3% year-over-year growth rate as of November and, after removing the impact of inflation, real growth has slowed to 1.3%. Brick-and-mortar retailers remain under downward pressure but online sales have continued to garner market share. The U.S. Department of Commerce reported that e-commerce sales accounted for 11.2% of total sales as of Q3, 2019, up from just over 4% at the beginning of 2010. Auto sales continued to trend lower overall, decreasing 1.3% in 2019, and inventories have

Real Economic Growth (RGDP, %), 1950 - Q3 2019



Source: Bloomberg.

remained higher than average. Consumer spending should remain the foundation of the economy but at a relatively slow pace.

The manufacturing sector has continued to slow. The Institute for Supply Management's (ISM) manufacturing index came in at 47.2 for December, 2019, below the neutral threshold of 50.0 that signals a contraction. The service sector index (ISM Non-Manufacturing Index) increased 1.1 percentage points in December to 55.0. Together, the composite index of manufacturing and services remained slightly above 50.0, again reflecting a level consistent with slow growth.

The slow growth trend is evidenced by weakness in new and durable goods orders, led by civilian aircraft (Boeing). Decreases in orders tend to lead to softness in industrial production, which is down 0.75% year-over-year, as of November, 2019. Lower production has reduced inventory accumulation but inventories remained relatively high compared to sales. As of November, 2019, the U.S. Census Bureau's Inventories to Sales Ratio showed a cyclical high of 1.4 month's supply compared to sales, a figure that suggests continued pressure on production.

Finally, corporate capital spending has continued to deteriorate even as cash flows have increased and debt accumulation continued to rise. Corporate debt remains at a historic high: corporations have continued to use their balance sheets and cash flows to buy back stock and increase dividends. While this provides liquidity in the short term, it reflects that companies are choosing not to invest in future growth.

The housing sector has improved as mortgage rates continued to decline, with the 30-year fixed rate mortgage averaging 3.99% in December. Housing starts increased 3.2% month-over-month to an annualized 1.365 million units in November of 2019, which should contribute to GDP.

Impacts of Trade Tensions

The economy continues to be hurt by weakness in world trade, which has been relatively flat since the middle of 2018 when the trade war with China escalated. Despite the removal of some tariffs as part of the recently-negotiated phase-one trade deal, tariffs remain on $300 billion of Chinese goods. Moving forward, the next round of talks is expected to tackle the large, more difficult issues of protecting intellectual property rights and removing restrictions on capital flows. Even with overall weakness, the U.S. trade deficit has been marginally improving and should contribute to GDP growth. The improvement is unfortunately due to the balance of trade as imports are declining faster than exports. The decline in exports and imports suggests both weak domestic demand (imports) and weak international demand (exports).

We believe debt accumulation continues to be the biggest problem lurking in the economic background.

We believe debt accumulation continues to be the biggest problem lurking in the economic background; without it, there would have been little real economic growth. Debt accumulation effectively pulls demand forward and borrows from future demand and leads to slower structural growth. Typically, higher debt accumulation should lead to higher interest rates, but central banks have suppressed interest rates by buying up debt, expanding their balance sheets, and printing money out of thin air. Excess liquidity has been great for financial assets and helped push interest rates to historic lows… but has done little to build a stronger foundation for long-term growth. The Congressional Budget Office has projected that the U.S. federal deficit will grow to $1.4 trillion by 2029. Relative to the size of the economy, this would average 4.3% of GDP over the next ten years, as compared to an average of 2.9% over the past 50 years.

It would appear that the setup for a near-term correction is in place given investors' apparent complacency: market bears are few and far between, speculators are net long, short selling has plunged, stocks are overbought, and volatility remains unusually low. These metrics are completely opposite of one year ago at the end of 2018, which then fueled 2019's powerful rally. A setback in financial markets would likely be greeted with more monetary accommodation and, as long as investors believe, a correction could be a buying opportunity.

International Economies

China

China's GDP slowed to 6% growth year-over-year in 2019. This continued the steady slowdown since 2010 when growth exceeded 10% on the back of infrastructure spending; China's fixed investment exceeded 30% growth in 2010 but has since declined to 5%. Similarly, retail sales growth has decelerated to 8% year-over-year from its high of 17.5% growth in December, 2009. Industrial production over the same time period fell from 12.5% to 6.2%.

The Official NBS Manufacturing PMI in China was unchanged at 50.2 in December, 2019. The Services PMI (the Official NBS Non-Manufacturing PMI) fell back to 53.5 in December, after rebounding from October lows. The move from bad to less bad, if sustained, should be positive for financial markets.

The Chinese economy continues to be weighed down by the trade war with the U.S. Both exports and imports were largely unchanged year-over-year and the trade surplus narrowed modestly, which would be expected to further pull down economic growth. Monetary policy has become more accommodative with China's Credit Impulse gauge (i.e., the change in the growth rate of aggregate credit to GDP) increasing to 2% year-over-year in November, after being negative for the entirety of 2019.

Japan

Japan's GDP growth expanded 1.7% year-over-year in the third quarter of 2019. However, consumer real income and spending growth have again slipped below zero and suggest little or no growth ahead. Industrial production also indicates weakness and was down 8.1% year-over-year as of November, 2019. Despite weaker production, inventories have continued to rise as sales have fallen.

The consensus outlook for little to no growth is reinforced by Japan's Manufacturing PMI, which fell again in December ending the year at 48.4, well below a neutral reading of 50.0. The same message is being sent by the Tankan survey of manufacturing that fell to zero in December. Japan's trade balance is off its previous lows, but still in deficit territory. Like the U.S., the improvement is because imports fell faster than exports (-15.7% compared to -7.9%, respectively). The negative export growth reflects weak international growth and the negative import growth reflects domestic weakness. Both trends would likely be aided by a favorable resolution to the trade war.

Europe

Quarterly GDP growth in the Euro Area slowed to a 0.8% annualized pace in the third quarter of 2019, yielding 1.2% year-over-year. According to Citigroup, economic data is weak but above consensus expectations, and growth could modestly accelerate in the near term.

Eurozone retail sales increased modestly to 2.2% year-over-year in November, compared to the 1.4% low in October. Real industrial production decreased in October, falling to 2.2% year-over-year. The IHS Markit Eurozone Manufacturing PMI reading of 46.3 in December, 2019 posted its eleventh straight month of contraction. With the Services PMI above the 50.0 threshold (at 52.8 in December), the combined reading reflects little strength in the economy.

Although new orders remained in a downtrend, they are off the lows and may provide some hope for growth if the turn can be sustained. The Eurozone trade balance with non-Euro countries remained in surplus and is trending higher. The improvement was due to a surge in exports as imports declined and will be additive to growth.

On balance, we continue to see slow growth but could get a growth surprise with a resolution of the trade war. Monetary conditions also remained positive. M2 is a measure of the money supply that includes cash, checking deposits, and easily-convertible near money. The M2 growth rate has been accelerating after having fallen considerably from late 2016 to late 2018. Negative interest rates have also been keeping the cost of capital down. The International Monetary Fund has called for more fiscal stimulus and more monetary accommodation, which hasn't previously helped to promote long-term growth. Additionally, debt accumulation has had a temporary impact on growth but it undermines long-term growth and creates the potential for another financial crisis. For now, investors are focused on liquidity and it continues to be readily available.

Market Performance
As of December 31, 2019

U.S. Interest Rates	3/31/2019	6/30/2019	9/30/2019	12/31/2019
Cash Equivalents				
90-Day Treasury Bills	2.39%	2.09%	1.81%	1.55%
Federal Funds Target	2.50%	2.50%	2.00%	1.75%
Bank Prime Rate	5.50%	5.50%	5.00%	4.75%
Money Market Funds	2.46%	2.35%	2.00%	1.71%
Bonds				
10-Year U.S. Treasury	2.41%	2.01%	1.66%	1.92%
10-Year AA Municipal	2.18%	1.82%	1.73%	1.85%

Source: Bloomberg, L.P.

U.S. Bond Market Total Returns (US$) through 12/31/2019	QUARTER	SIX MONTHS	YEAR TO DATE	ONE YEAR
U.S. Bonds				
Bloomberg Barclays U.S. Treasury Index	-0.79%	1.59%	6.86%	6.86%
Bloomberg Barclays U.S. Corporate Index	1.18%	4.27%	14.54%	14.54%
Bloomberg Barclays U.S. Aggregate Index	0.18%	2.45%	8.72%	8.72%
Bloomberg Barclays U.S. 1-15 Municipal Blend Index	0.81%	1.95%	6.44%	6.44%

Source: Bloomberg, L.P.

Global Stock Market Total Returns (US$) through 12/31/2019	QUARTER	SIX MONTHS	YEAR TO DATE	ONE YEAR
U.S. Stocks				
S&P 500 Index	9.06%	10.92%	31.48%	31.48%
Morningstar U.S. Small Value Index	8.78%	7.32%	21.96%	21.96%
Morningstar U.S. Small Growth Index	9.11%	4.26%	27.60%	27.60%
Morningstar U.S. Large Growth Index	10.14%	10.04%	33.81%	33.81%
Morningstar U.S. Large Value Index	7.53%	11.45%	27.78%	27.78%
International Stocks				
MSCI EAFE (Europe, Australasia, Far East) Index, net dividends	8.17%	7.01%	22.01%	22.01%
MSCI Emerging Markets, net dividends	11.84%	7.09%	18.42%	18.42%

Sources: Bloomberg, L.P. and Morningstar Direct

Alternatives (US$) through 12/31/2019	QUARTER	SIX MONTHS	YEAR TO DATE	ONE YEAR
NFI-ODCE Index*	1.31%	2.64%	5.14%	5.14%
Gold Spot	3.04%	7.64%	18.31%	18.31%
WTI (West Texas Intermediate) Crude Oil	12.93%	4.43%	34.46%	34.46%

Sources: Bloomberg, the National Council of Real Estate Investment Fiduciaries
**The fourth quarter return assumed to be same as third quarter 2019 return.*

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

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.

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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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