DECEMBER 2021

Disruptions redefine risk and opportunity in 2022

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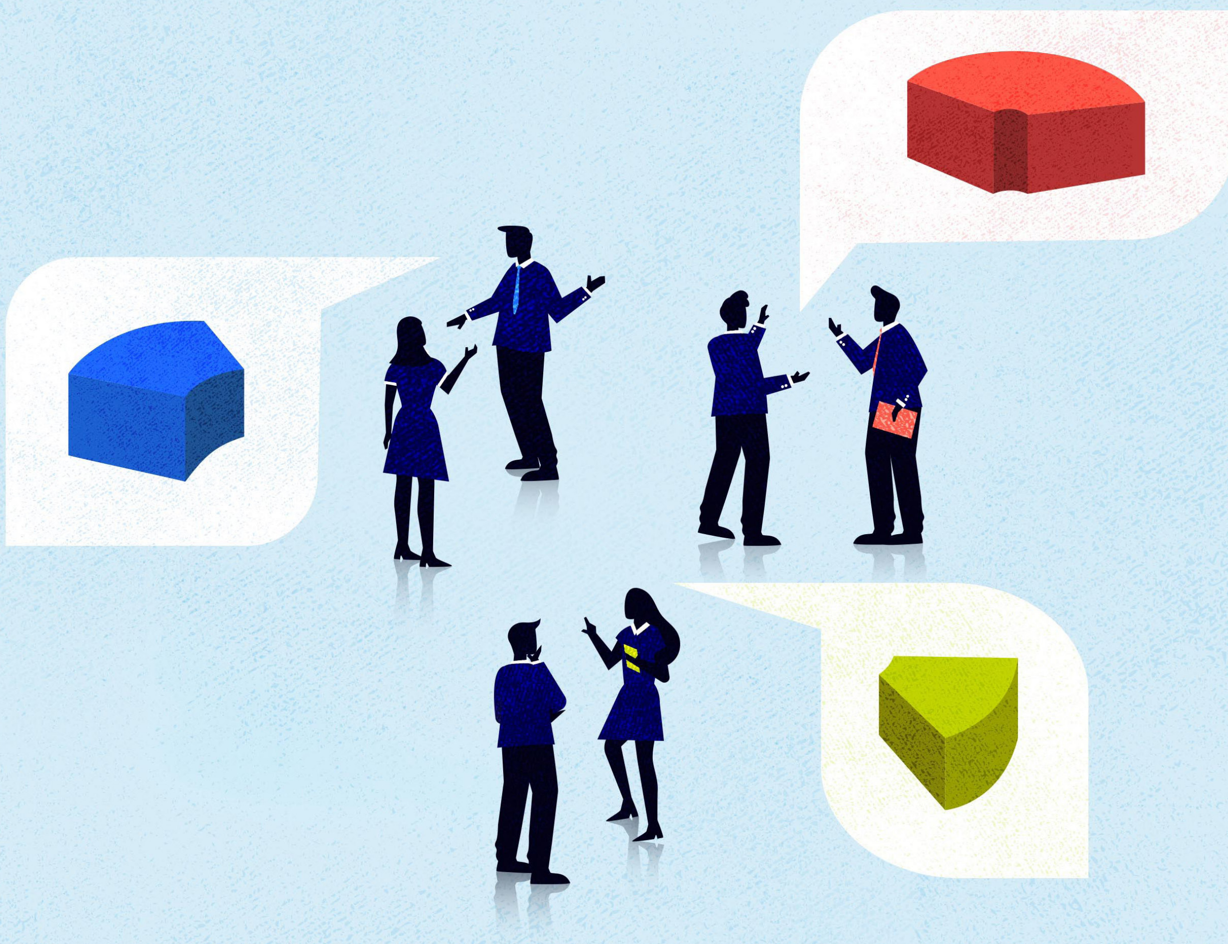
GLOBAL INVESTMENT OUTLOOK



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Introduction

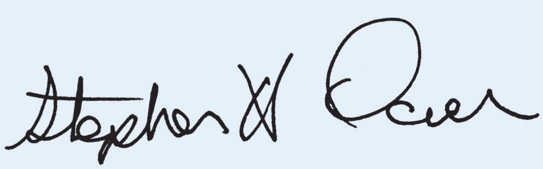
Stephen Dover, CFA
Chief Market Strategist
Franklin Templeton
Investment Institute

When news of COVID-19 first spread, few of us could have imagined how disruptive the pandemic would be, how it would impact nearly every aspect of our daily lives—and that we would still be dealing with it two years later.

The ramifications of the pandemic will continue to influence capital markets in 2022. I gathered eight of our investment managers to discuss investment themes and risks they are focused on. Here are highlights from our conversations:

- Electric vehicles (EVs) exemplify the roles innovation and technology are playing in equity markets. These "smartphones on wheels" are disrupting the auto industry as EV pioneers capture the interest of growth managers. Our value managers are also finding opportunities in this dynamic market by focusing on how established players are transitioning to keep up with the changes in the industry.
- The United States and China exemplify the starkly different supply and demand fundamentals across global real estate—while the United States navigates housing shortages and rising prices, China is dealing with the meltdown of one of its largest developers along with housing oversupply.
- In the search for yield, investors are exploring an expanding universe of fixed income opportunities:
  - Corporate credit has seen balance sheet improvement and a positive ratings trajectory during the pandemic. We still see opportunity for improvement in 2022, with real relative value opportunities in investment-grade credit.
  - The US municipal bond space has seen stronger-than-expected tax revenues, which have trickled down into local governments and various municipal sectors. This bodes well for the asset class, particularly in an environment of strong demand and constrained supply.
  - Emerging market fundamentals are generally in good shape. Fiscal balances have improved as revenues rebounded, and we have seen rebuilding of liquidity buffers. Local emerging market currencies look vulnerable, which we believe favors hard currency.

We hope you find these views thought-provoking as you chart your investment course in 2022. On behalf of Franklin Templeton and the Investment Institute: Happy New Year!



Key investment themes for 2022

Looking into 2022, I find myself reflecting on the past two years, marked by disruption and opportunities. COVID-19 upended not only financial markets, but also our daily lives and how we interact with the world. The pandemic has been a catalyst for transformative change in a short period of time. Individuals, communities and institutions proved to be far more adaptable than we could have ever imagined. This pandemic has shown that disruption brings new opportunities as well as new risks.

Our 2022 investment outlook explores the nature of disruption across equity, fixed income and real estate investments. We gathered investment managers from across Franklin Templeton to look at three major themes:

1. The growing role innovation and technology are playing in equity markets and how to value them. We examine this through the automobile industry's evolution into electric and autonomous vehicles.
2. The duality of the US and China real estate markets and how changing ways in which people work, shop and invest drive transformation. This dynamic is impacting investors directly in real estate, as well as those investing in structured real estate-related credit.
3. The global search for yield within fixed income in an era of persistently low interest rates and how this is leading to an expanding universe of opportunities. Here, we look specifically at the changing role of emerging market debt, municipal bonds and corporate credit in investor portfolios.

Each of these themes played a large role in markets in 2021, and we believe they will continue to drive markets in 2022. Below are some of my key takeaways from the conversations.

The electric vehicle transformation

Technology is playing an outsized role in driving changes in our economy and in equity markets. The rapid emergence of electric vehicles (EVs) is the poster child, with new entrants into the market and their soaring valuations disrupting the industry and impacting equity markets. On the heels of COP26, which highlighted the pressing need for global cooperation between industry and governments to cut greenhouse gas emissions, the global automobile industry is expected to invest another US$330 billion into EVs before 2025.[1]

To understand how this seismic shift is impacting legacy automakers and EV pioneers, I spoke with three of our investment teams who look at the same companies, but through different value and growth valuation lenses. Our conversation spanned the role EVs are playing in supply-chain disruption, from raw materials to make EV batteries to the semiconductors used in their processors, as well as the global infrastructure investments in charging stations and modernized grids necessary to power electric fleets of cars, trucks and buses.

Jonathan Curtis from Franklin Equity Group views leading EVs as brilliant smartphones on wheels. By selling high-margin software subscriptions for things like autonomous driving and broadband access, there may be the potential to generate attractive gross margins and market share. This point of view places such companies in a league (or orbit) of their own. On the other hand, for a deep value manager like Tim Rankin from Franklin Mutual Series, he sees opportunity in focusing on incumbent automobile manufacturers—some of which have moved aggressively into battery technology, with scalable modular systems that can work in a wide variety of vehicle models. There's no denying there's huge opportunity across the EV and autonomous space. But, from a value manager's perspective, the challenge is to stay true to one's investment philosophy while still finding ways to access battery and autonomy innovation. And, as ClearBridge Investments'

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Rob Buesing explained, while the future of the internal combustion engine (ICE) has never been darker, the profitability for gasoline-powered vehicles has never been higher.

I think one of the trickiest tasks for analysts is gauging the pace of future innovations and how inherently disruptive they may be. Will traditional automobile manufactures be able to compete in the new EV environment, or are they hopelessly tethered to their past, and will the new, innovative companies without the baggage surpass them? If someone claims to know exactly how EV upstarts and incumbents will hash things out in 10 or 15 years, I wouldn't bet on it.

Shifting where we live and work

The great migration

The United States and China exemplify the starkly different supply and demand fundamentals across global real estate. According to Tim Wang of Clarion Partners, the United States has a deficit of 5.5 million single-family homes and rentals. With demand vastly outstripping supply, housing prices have soared. Meanwhile, China has an oversupply of housing built by highly leveraged property developers.

For Clarion Partners, pinpointing opportunities in private real estate starts with understanding US migration trends. Given work-from-home flexibility, more households are leaving expensive coastal metros for affordable suburbs and US sunbelt cities like Austin, Texas. Just over the horizon, as more millennials get married and start families, Clarion sees a 10-year cycle of demand for multifamily rentals in cities like Charlotte, North Carolina.

While the United States has a glaring housing deficit, it has an excess of brick-and-mortar retail real estate. With e-commerce accelerating, shopping malls face particularly negative headwinds. Clarion sees positive momentum for industrial e-commerce warehouses and life science facilities at the forefront of gene therapy and vaccine innovations. In terms of inflation, higher costs for construction materials and labor could remain elevated given fresh demand from US President Joe Biden's infrastructure bill. But there's a silver lining: if costs constrain new projects, landlords of existing buildings will have more latitude to increase rents, benefiting real estate owners.

China's Evergrande saga

Turning to China's housing market, Brandywine Global's Tracy Chen explained how China's policymakers intend to avoid Japan's fate in the 1990s of an imploding real estate market. Back then, in Japan, high debt and falling land prices led to decades of stagnation. To escape this scenario, China has methodically redirected capital away from its highly leveraged property developers, such as Evergrande, into more productive sectors like high-tech manufacturing. It's a delicate balancing act, especially when you consider the size of China's property sector.

According to Tracy, real estate makes up 15%–18% of gross domestic product (GDP) in the United States and Europe, while property markets comprise 29% of China's GDP. What's more, the average Chinese household has 70%–80% of its assets tied up in real estate. In the United States, that figure is roughly 25%.[2] In expensive Chinese tier 1 cities, it's common for parents *and* grandparents to help kids afford down payments on apartments (homeownership is typically a prerequisite for marriage). A precipitous drop in housing prices would hurt three generations in one household. Tracy thinks China's policymakers have the right toolbox to transition its red-hot property market into a more stable, government-driven housing sector going forward.

The search for yield

A new frontier for yield investors

With sovereign debt in developed economies offering low or negative real yields, bond investors continue to reassess allocations to emerging market debt (EMD) and frontier markets for better yields and overall value. One high-profile risk coming into 2022 is a global slowdown, punctuated by China shifting its economy away from its debt-driven property sector.

While the United States has a glaring housing deficit, it has an excess of brick-and-mortar retail real estate. With e-commerce accelerating, shopping malls face particularly negative headwinds. Clarion sees positive momentum for industrial e-commerce warehouses and life science facilities at the forefront of gene therapy and vaccine innovations.

Stephanie Ouwendijk with Franklin Templeton's emerging market debt team predicts this slowdown will likely have a bigger impact on China's neighbors in Asia, where trade ties with China remain strongest. Even before China's slowdown, the team's overall exposure to Asia was the lowest out of all regions and remains so. In their view, strong regional demand has pushed down Asian yields far enough that risks are no longer adequately compensated. Outside of Asia, growth from the United States and Europe points to better risk-adjusted opportunities (higher yields, better spreads) in select frontier economies with strong fundamentals, including strong current account balances. Today's commodity price inflation should benefit export-oriented emerging countries and corporates, some of which stand to benefit from accelerating global infrastructure investments.

As for the disruptive power of technology, the tech sector offers red flags for Western Asset. Looking ahead 10 years—which isn't a long time for bond analysts—its credit team doesn't see enough spread in tech companies' bonds to compensate for the risks of technological obsolescence.

New audiences for munis

With yields in much of Europe and Japan close to zero or negative, some institutional investors outside the United States are turning to the taxable US municipal (muni) bond market. In my discussion with Ben Barber, head of Franklin Templeton Municipal Bond team, infrastructure assets appear to be a natural fit for European investors. They understand the space and prefer munis that are backed by high-quality state and local governments. Navigating a space like transportation infrastructure, however, requires deep domain expertise. The economics of toll roads, for example, are quite distinct from airports, which are different from trains, and so forth. Looking into 2022 and beyond, Franklin Templeton's muni team thinks the new US$1.2 trillion infrastructure package may boost taxable muni bond supply. What's still unclear is how this US federal money will be financed. One scenario is that federal money may come in the form of grants that local governments and entities can use to service their infrastructure-oriented bond obligations. That would offer the best of both worlds—increased supply of taxable munis and an increase in higher-rated paper backed by the federal government.

Corporate credit

My conversation with Kurt Halvorson of Western Asset was a fascinating bookend to earlier discussions on China's property sector and the technological wizardry driving automaker valuations. Across certain sectors, US companies navigated the pandemic by reinforcing capital discipline, improving their balance sheets and protecting bondholders. Take the energy sector. Even after crude oil prices jumped north of US$80 per barrel, US oil rig counts didn't bounce back as expected. Instead, many energy companies plowed half of their free cash flow into paying down debt and making payouts to shareholders. As for the disruptive power of technology, the tech sector offers red flags for Western Asset. Looking ahead 10 years—which isn't a long time for bond analysts—its credit team doesn't see enough spread in tech companies' bonds to compensate for the risks of technological obsolescence. The dynamism of the tech sector—while thrilling to many equity analysts—can be a deterrence for bond analysts who need to forecast dependable cash flows five or 10 years down the road.

More twists and turns

Finally, as we've seen during the last two years, things can change quickly. I am writing this just days after a dramatic "risk-off" move out of stocks, quickly followed by markets snapping back to "risk-on." Besides the worrying Omicron variant, two shocks sparked this volatility. The first is the US Federal Reserve's (Fed's) shift to be more hawkish and the retirement of the word "transitory" when discussing inflation. The second is China's pro-growth policy pivot. Following a new liquidity injection, the Politburo announced its top priority is stabilizing China's economy in 2022. Shares of China's beleaguered property developers jumped on the news.

There's a good chance that more market gyrations are on the horizon or are already happening when you read this. The tug of war we've seen between value and growth disciplines will likely continue, driven by shifting risk-off and risk-on appetites. To navigate these choppy waters, I think it helps to have a north star. For me, that star is fundamental research brought to life through wide-ranging discussions with analysts and senior managers.

Equity—The EV transformation

Innovation and technology are playing growing roles in equity markets and valuations. The automobile industry's evolution into electric and autonomous vehicles exemplifies this trend and will drive markets in 2022, in our view. We asked three of our equity teams to share their thoughts on the transition to EVs.

Jonathan Curtis
Portfolio Manager
Franklin Equity Group

Rob Buesing
Senior Analyst for Consumer Staples/Durables
ClearBridge Investments

Timothy Rankin, CFA
Portfolio Manager
Franklin Mutual Series

Stephen: In preparing for our talk, we weren't sure if we needed to talk with automobile analysts as much as technology analysts. Jonathan, you look at technology opportunities. Certainly, over the long term, you wouldn't normally put automobiles in that category. How are you looking at the industry from the mindset of someone who invests in technology and innovation?

Jonathan: I view what the EV companies are doing as building smartphones with wheels. Not only are they heavily battery-centric, but they are also loaded with computing technology. They are collecting data about the preferences and interests of their users. And then, they are building the internet of things around these hardware pieces. Subscription services can be layered on top, like broadband subscriptions in the vehicles and subscriptions to capabilities around autonomous driving.

I view this market as starting to look like the consumer smartphone market, where just a couple of companies have become highly profitable and dominated the market in ways the prior generation of mobile phone makers were never able to do.

Stephen: That's an interesting point. When you're looking at the industry broadly, you have new companies that rolled right into EVs, and then you have the old-line companies. How do you look at the difference in these two types of companies in terms of finding opportunities?

Jonathan: I'll preface this by saying I'm not an auto analyst. But I think one of the clear advantages that the new entrants have is they aren't burdened with the legacy cost structures from the prior technology or legacy brands from the prior generation, so they can start fresh and establish new, innovative brands. Yes, you put wheels on these and call them vehicles, but you can build the vehicle the same way you would build a smartphone or a personal computer. That ultimately changes the way you think about the user experience.

Stephen: Rob, you are an auto analyst. When you look at today's automobile industry, how much does technology influence your point of view?

Rob: In the past, auto analysts were generally focused on the auto cycle. That's really what drove the stocks. With the transition to EVs, software has become a much bigger part of the opportunity set, especially autonomy technologies and active driver safety. So, now we not only look at revenue and margins on the manufacturing side, but we're also considering ancillary software opportunities. Will consumers pay for these services upfront, or on a recurring subscription basis? Either way, what's key here is that software revenue streams can have a much higher impact on multiples for EV manufacturers than traditional cyclical auto manufacturers. It's really a gamechanger.

Stephen: Rob, how do you evaluate legacy automakers transitioning out of internal combustion engine (ICE) versus electric vehicle (EV) specialists?

Rob: It's an especially interesting time for legacy automakers. The future of the ICE has never been darker, yet the profitability of gasoline-powered vehicles has never been higher. So, the incumbents have to make a choice. Either spend immense amounts of capital on research and development to catch up on EV technologies, try to partner and license somebody else's technology, or run out their existing ICE business as long as possible.

In terms of a framework for how we look at incumbents, you can think of existing ICE manufacturing as a low multiple business that has zero terminal value.[3] We don't know if that's 10 or 15 years from now, but it's pretty clear that gas-driven vehicles will eventually become obsolete. So the question is, what do legacy automakers look like in

10 or 20 years. What market share will they have given their technology and product portfolio? Will pioneers and startups dominate the EV market, the same way others dominate smartphones? It's certainly possible to have a handful of dominant players, but the global auto industry has a long history of being fragmented, with a lot of space for different companies to have meaningful market share. Some legacy automakers went early and deep into EVs, and plan to phase out combustion engine manufacturing completely by the mid-2030s. We think some of these companies offer interesting opportunities.

Stephen: Tim, you have a different perspective as a value investor. How do you look at the difference between the old-line companies and these generally much more expensive pure technology automobile companies?

Tim: For us, it's hard to justify investing in some of the pure EV plays. If you look at some incumbent automakers, they moved aggressively into vertically integrated batteries. We think their batteries are a highly scalable modular technology that should work well in a wide variety of car models. There's no denying there's a lot of value and opportunity in this space. If you can find a way to get that option for something closer to free, rather than paying a sky-high valuation, that's even better.

Stephen: Good points. Revenues from autonomous driving software loom large over the industry. Rob, in what time frame do you think autonomy might happen, and what opportunities might this bring?

Rob: I think of autonomy as a spectrum. You have your basic driver-assist autonomy, like cruise control, where you're sitting at the wheel and it helps you drive a little. Then you have full "level five" autonomy, where the driver can be asleep in the backseat because the car fully drives itself. The driver-assist piece of the story is happening right now with interesting revenue opportunities, particularly on the software side. As you add more features to a vehicle, consumers have shown a willingness to pay for them. You're seeing some auto manufacturers benefiting from this, as well as some of the suppliers who provide software packages, increasingly on a subscription basis. Will we see level five driver out of the car autonomy? That probably isn't going to happen in the next five years. We may eventually still see it, but don't let that discount some of the interesting ideas that are happening right now with driver-assist technologies.

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>
> **Timothy Rankin**

Stephen: Tim, are there other industries you look at that are correlated with or might have some benefit from the growth of EVs?

Tim: Yes, absolutely. What we tend to look more for are hidden value opportunities. Those come from misperceptions in the marketplace. A lot of people have the perception that oil demand is going away because we're shifting to EVs. A great example is Norway.

Two-thirds of the cars sold in Norway are EVs.[4] Yet oil demand has remained flat over the last decade. That's because passenger vehicles make up only a quarter of oil demand, and it takes a long time to turn over a fleet of cars. Norway is selling a lot of new EVs, but EVs represent less than 10% of its actual fleet. The ongoing maintenance and fuel needed for ICE vehicles don't go away nearly as quickly as some people think and that markets often imply. Many industry analysts think by 2030 somewhere around 25%–30% of new vehicle sales will be EVs. That's only a small piece of the total fleet.

Stephen: When each of you step back to look across the entire automotive value chain, what risks and opportunities are top of mind in terms of revenue generation?

Rob: It's no secret that EV battery production needs to be an order of magnitude higher than production today. A global automotive fleet that's 100% electric will require a hundred times more battery manufacturing capacity than we had in 2019.[5] Currently, there are EV battery manufacturers and new startups, along with some automakers (Tesla, for example) who have vertically integrated battery production into their own businesses to help secure adequate supplies. There's also a lot more semiconductor content in EVs compared to ICE vehicles, simply because there is higher voltage flowing through them. So, we see interesting opportunities for certain types of semiconductor companies.

Jonathan: I had a conversation with a supply-chain professional in Silicon Valley, near our headquarters, and he commented on why he thought some of the EV manufacturers are doing a better job of securing components than others. He pointed out the people who work in those supply chains come out of Silicon Valley's consumer hardware businesses and have built direct relationships with semiconductor manufacturers that are critical for building these vehicles. Some of the incumbent automakers took a much leaner view and go through distributors. They have struggled to get the semiconductors they need. So, that's just one example of thinking quite differently about what you're building. Yes, it's a vehicle with wheels, but it really is a computer that needs to be thought about within a new framework.

Tim: We also look at a lot of the value chain areas that Rob mentioned. For example, the chemicals going into EV batteries is one area, and the plastics needed for lightweight vehicles are another. EV batteries make vehicles extraordinarily heavy, so you need to offset that quite a bit to get the mileage and range drivers want to have before they need to recharge.

Rob: Speaking of recharging, there are big opportunities in EV infrastructure, which includes charging stations. In the United States, many consumers have easy access to electricity at home with off-street parking. That's a big cost advantage versus gas cars. You just recharge your car like a smartphone when you're done driving for the day. For longer trips, however, charging stations are needed. There are roughly 160,000 total charging ports in the United States, with most of those concentrated in big coastal states, like California.[6] So we still need to build a big network of charging infrastructure sites, not only in the United States, but also across Europe and China.

Tim: Recharging is a much bigger and different challenge in some other markets. For example, people in the United Kingdom and Germany generally don't have homes with garages. So, you need to rely more on public charging infrastructure. This is another place traditional oil companies may come in. For example, BP is well-positioned with its existing service station networks to provide charging. And most importantly, it has a first-mover advantage in terms of getting grid access. There's also a lot of development of the electric grid that needs to happen to provide the robust power needed to charge cars quickly. When people are on the road, they don't want to wait 30 minutes to charge their car. They want to charge it in five to 10 minutes. But, for whatever the charging time, BP has invested an enormous amount in hiring the right people and building out its convenience stores to make for a great shopping experience while people are charging their vehicles.

EXHIBIT 1: ELECTRIC VEHICLE VALUE CHAIN

For illustrative purposes only.

Real estate—Shifts in where we live and work

The pandemic impacted global real estate markets, driven by where and how people work, shop and invest. We're seeing this play out in the duality of the US and China real estate markets. And this shifting dynamic is impacting investors allocating directly to real estate, as well as those investing in structured real estate-related credit. We asked two of our real estate specialists to discuss how this trend is likely to drive markets in 2022.

Tim Wang, Ph.D.
Head of Investment Research
Clarion Partners

Stephen: Tim, you've indicated there's a growing interest from large institutional investors in private real estate investment. What is your outlook for private investing in real estate?

Tim: Our 2022 real estate outlook is positive based on the strong demand from the industrial warehouse sector, rental housing and the life sciences. In this inflationary environment, commercial real estate can act as a hedge against inflation since the landlord can increase rent with improving economic conditions. With the inflationary backdrop, institutional investors have shifted from allocating to the traditional 60% equity and 40% fixed income portfolio we see in the United States, to increasing their portfolio real estate allocation to over 11% for 2022.[7] I anticipate many high-net-worth individual investors are also increasing their real estate allocation.

Stephen: Commercial real estate offers investors income and growth in income. How does the income compare to fixed income instruments?

Tim: Commercial real estate can offer an attractive yield, on a relative basis. The real estate yield historically has tended to be higher than that of comparable fixed income instruments. Additionally, commercial real estate may offer portfolio diversification since it tends to have low or even negative correlation with stocks and bonds.

Stephen: COVID-19 disrupted office use around the globe. What's your outlook on the office sector?

Tim: A lot of uncertainty remains in the office sector as the work-from-home theme evolves. We expect some employers to remain flexible in where people work going forward. For example, people may be working in the office two to four days a week, and the remaining time from home. In the near term, work-from-home flexibility is clearly a negative for office demand. We think demand will eventually catch up based on US population growth and the growth in offices used for employment. The office is still the place for collaboration, for innovation, and for socializing with our clients and colleagues, in our view.

Stephen: Another area that's certainly been deeply affected by COVID-19 is the growth of e-commerce. What are the implications for malls and retail office space?

Tim: COVID-19 accelerated e-commerce growth, transforming the retail sector. People are doing more online shopping, and goods are being delivered from a warehouse to their front door instead of a shopper going into the mall to pick up the goods. If you believe e-commerce will continue to boom going forward, it will have a negative impact on high street retail, meaning the main shopping thoroughfare in a locale, and the mall sector.

We do see pockets of interesting opportunities within retail. One example is necessity retail—especially grocery and drug stores—anchoring retail shopping centers in the suburbs. This is driven by a housing boom across the United States in the infill suburban locations. That boom is being driven by the current suburbanization push.

Stephen: Tim, I know private investment likely focuses more on multifamily housing than individual houses. How do you view housing sector growth and where geographically do you see opportunities?

Tim: Based on our calculations, the United States has a 5.5 million housing unit shortage in both single-family homes and in the multifamily sector. Since the global financial crisis, there's been chronic underdevelopment of housing in general over the past 10 to 11 years.

Looking at the aging millennial demographic, we're seeing household migration in the US, from the more expensive New York or California coastal metros to the less-costly metros,

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>
> **Tim Wang**

especially in the sunbelt market. We're talking about Charlotte, North Carolina; Phoenix, Arizona; Las Vegas, Nevada; and areas in Florida and Texas. We see a strong cycle of demand over the next 10 to 15 years. Not only are more households relocating there, but also corporations are following this migration because they can attract and recruit talent.

Stephen: One area hit by inflation is costs for construction materials and labor. Do you think the pace of inflation is likely to slow down there?

Tim: There's no easy solution to resolve the supply-chain glitches we're seeing in major ports in the United States and across the globe. We anticipate it's going to take a while to resolve.

Additionally, US President Biden's $1.2 trillion infrastructure bill will spur large federal spending over the next five to eight years and will compete for materials and construction labor going forward. So, we think these costs will remain elevated going forward.

However, there could be a positive for commercial real estate. Since replacement costs to rebuild a brand-new building will increase, new supply will be more constrained going forward. The landlord of the existing building can increase rent, which leads to higher property value. So overall, we see that as a potential positive for the sector.

Tracy Chen, CFA, CAIA
Portfolio Manager
Brandywine Global

Stephen: The sharp rise in the housing market is a global phenomenon in both developed markets and emerging markets, not just in the United States. What are the major drivers behind this housing boom?

Tracy: We extensively researched the global housing market and found many countries experienced double-digit home price appreciation since COVID-19. I see four primary drivers for home appreciation.

First, the large accumulation of savings partially stemming from central banks' stimulus packages and the reassessment of housing space needs during lockdowns. Housing became not just a shelter, but also an office for many people. Second, central banks loosened monetary policy, leading to historically low borrowing costs and a house purchasing boom.

Third, there is a severe housing supply shortage globally. In the United States, the housing shortage is triggered by shortages of lumber, labor and land. Construction companies are at full capacity and cannot ramp up their construction activity to meet demand. Finally, there is a wall of money from institutional buyers chasing higher-yielding properties. The housing boom we've seen since COVID-19 is triggering political issues because many homebuyers are priced out of the market. And this dynamic will exacerbate the inequality issues in the world.

Stephen: Let's turn to China. The headline news has been the charge that China's largest property developer, Evergrande, ran into serious financial problems. Based on your knowledge of global markets, how do you view the Chinese property market?

Tracy: Evergrande expanded aggressively since the early 2000s to become one of China's largest and most levered property developers. The Evergrande crisis is not a surprise to me, and I see three drivers behind it. First, the Chinese government is trying to delever the property market to avoid Japan's fate in the 1990s. Back then, high debt and falling land prices led to decades of stagnation. The second driver is policymakers' goal of common prosperity. The Chinese government realized the expensive property market has triggered a lot of inequality problems, and it wants to tackle the three big mountains on the shoulders of a Chinese household: housing, health care and education.

The final driver is dual-circulation because China wants to upgrade its value chain by focusing on high-end manufacturing. China has methodically redirected capital away from its highly leveraged property developers, such as Evergrande, into more productive sectors like high-tech manufacturing. President Xi Jinping has emphasized that housing is for living and not for speculating. Going forward, I believe the Chinese property market will be less speculative, and its boom and bust cycle is behind us.

Stephen: Can you compare the opportunities and risks in the Chinese and US real estate markets?

Tracy: I think comparing the housing markets of the two biggest economies is extremely interesting. China's housing market is bigger than that of the United States. Based on data from China's statistical bureau, the property sector accounts for about US$55 trillion—that's four times China's GDP. Comparatively, the US housing value is around US$32 trillion, which is about 160% of the US GDP. So housing is an extremely important sector in China because of its size and importance to the overall economy.[8]

> "In expensive Chinese tier 1 cities, it's common for parents and grandparents to help kids afford down payments on apartments. If there is a US housing downturn, usually only one generation suffers. A precipitous drop in Chinese housing prices would hurt three generations in one household."
>
> **Tracy Chen**

Chinese households are 78% tied to real estate compared to the 35% of US households tethered to real estate.[9] Additionally, China's home ownership outpaces that of the United States at 90% compared to 65%.[10] In my view, Chinese households will definitely suffer if there is a housing downturn that is not controlled well.

Another big difference is the demand and supply dynamics. After the global financial crisis, the United States had a severe shortage of 3 million–4 million houses due to underbuilding and deleveraging of the mortgage market. In contrast, China had a moderate oversupply problem because of the fast-paced building post global financial crisis. US millennial ownership is lower than the general population and sits around 43%.[11] I anticipate millennials will push home ownership higher going forward. Whereas in China, the housing demand peaked in 2017 because of the aging demographics. And we should see less new marriages and housing demand in China.

Stephen: Since homeownership in China is much higher than in the United States, how do you think all this property sector volatility might impact China's citizens?

Tracy: I think the major impact on the household is the affordability issue. In expensive Chinese tier 1 cities, it's common for parents *and* grandparents to help kids afford down payments on apartments (homeownership is typically a prerequisite for marriage). If there is a US housing downturn, usually only one generation suffers. A precipitous drop in Chinese housing prices would hurt three generations in one household. By the way, China's housing is more apartments than single-family houses, and 20% of Chinese households own more than one home or apartment.[12]

That's why policymakers cannot afford to have social instability in housing. Going forward, I believe the contribution of the property sector to economic growth will be less and potentially negative in the future. I imagine the property sector will have a huge, structural change and be like a stable utilities sector. It's likely citizens will no longer direct the majority of savings into houses and will instead diversify their savings into equity or bond investments.

Stephen: What opportunities do you see in Europe?

Tracy: European mortgage-backed securities have been interesting since 2014. The thesis was that the European Central Bank's highly accommodative quantitative easing would make the European housing market recovery similar to the US housing market. It's like using the US playbook for the European housing market.

This time around, the logic is similar because we see similar drivers for European housing prices. European housing prices appreciated around 6% on an aggregate level post-COVID-19, and there's differentiation among the countries. For example, the peripheral countries like Spain and Italy have seen little price appreciation, maybe ranging from 0% to 4%. If you go to northern Europe, the Scandinavian countries, Norway and the Netherlands, they are witnessing double-digit housing price appreciation between 10% to 15%.[13]

The more advanced European countries like the United Kingdom and Germany are seeing about a 10% price appreciation.[14] So, there is some bifurcation. I think these trends will converge and the peripheral countries' housing markets will catch up to the core European countries. We still like the spread opportunities in Spanish residential mortgage-backed securities.

Fixed income—The search for yield

In a prolonged low-interest-rate environment, global investors have been searching for yield in places they might not have before—including emerging market debt, US municipal bonds and high-yield credit—which have all weathered the pandemic perhaps surprisingly well. Three of our investment teams share their outlook for global fixed income, including the sectors where they see the most opportunity as we turn the calendar.

A new frontier for yield investors

Stephanie Ouwendijk, CFA
Portfolio Manager
Franklin Templeton Fixed Income

Stephen: Stephanie, can you give us a general outlook for emerging market debt?

Stephanie: We are bullish on emerging market debt and see valuations as highly attractive following corrections in the asset class during 2021. In an environment where liquidity is still abundant, we would expect investment flows to continue to be directed into the asset class, which would be supportive for spread tightening. Despite the challenges of the COVID-19 pandemic, we've seen noticeable improvements in the fundamentals of many emerging market countries. Fiscal balances have generally improved as revenue has rebounded with increased growth. We are seeing significant reductions in debt-to-GDP levels in emerging markets nearly across the board. And we've seen a rebuilding of liquidity buffers, in part due to the historic Special Drawing Rights allocation by the International Monetary Fund in 2021—these are international reserve assets that supplement member countries' official reserves.

Stephen: What risks do you see ahead in 2022?

Stephanie: A slowdown in global growth appears likely in 2022, which likely will be most noticeable in the developed countries that had the most pandemic-driven stimulus. However, various forecasts see growth in emerging markets in general remaining above trend and likely to continue to outpace developed markets. So growth is less of a concern for us now, but inflation is a continued risk, along with the start of the Fed's tapering of asset purchases. We believe the Fed's tapering is largely priced into markets, and we think that emerging markets are in a much stronger position to weather a change in monetary policy this time around than we've seen in the past.

Inflationary pressures have been trending higher in emerging markets, and inflation has proven less temporary than we initially expected, but we still think inflation will start to fade as a concern. The decisive action we've seen across central banks in emerging markets should help combat inflationary pressure. Furthermore, we anticipate an alleviation of supply-chain bottlenecks, and we think some of the commodity price pressures will likely subside.

Stephen: In light of the aforementioned tapering, what's your view on currencies?

Stephanie: We think local emerging market currencies are vulnerable, and that's why we continue to prefer hard currency over local currency. Hard-currency debt tends to price in tapering ahead of when it actually starts—we would then typically see a rebound once

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>
> **Stephanie Ouwendijk**

it does occur. Local-currency debt, however, has historically seen larger drawdowns once tapering starts. While we do see areas where we think it makes sense to have local-currency exposure for diversification potential, we want to make sure we are being adequately compensated for the risks. If you look at local currency, given inflationary pressures, real yields are still relatively low and therefore aren't terribly attractive to us from a risk/reward standpoint.

Stephen: Can you elaborate on where you are seeing opportunities?

Stephanie: We like to focus on our area of expertise, which is understanding emerging market fundamentals. In terms of opportunities, we currently favor the frontier subset of emerging market debt. We view these countries as more driven by idiosyncratic risks, offering more yield and better spreads, and having had less US Treasury risk. We think keeping duration low makes sense, in light of a potential rise in US Treasury rates. As we look for potential opportunities, we continue to focus on the higher yielders within emerging markets and do see frontier markets as attractive in that regard.

Stephen: How might China's growth slowdown impact emerging markets' overall trajectory?

Stephanie: The slowdown we saw in 2021 was mainly policy-induced and definitely more pronounced than we expected—it continues to be a risk for emerging markets. However, emerging markets are less dependent on China than in the past. We also see strong domestic demand coming out of the United States as well as Europe coming out of the depths of the pandemic, which should dampen some of the impact of a slowdown in China. The main risk probably lies in the countries neighboring China—the Asian region where trade ties are the strongest. So we don't favor Asia as a region; yields have not been attractive to us there.

Stephen: Stephanie, you look at opportunities from a bottom-up perspective. What qualities and metrics are used when you're analyzing a government or a corporate liability?

Stephanie: We tend to use seven different criteria as we're doing our country analysis, covering key aspects of ability and willingness to pay for any sovereign debt on an extended long-term horizon. These criteria include things such as liquidity buffers and the ability of a government to generate revenues. We also look at the maturity profile to assess rollover risks, and we look at the reliance on a particular commodity for revenue streams within the fiscal balance. We try and assess contingent liabilities to see unforeseen drains on revenue that might occur in the future.

New audiences for munis

Ben Barber, CFA
Director, Municipal Bonds
Franklin Templeton Fixed Income

Stephen: Ben, what's your outlook for 2022 in terms of municipal bonds?

Ben: When we consider our outlook for the municipal bond market, we always start at the top level. We consider factors like inflation and monetary policy, including how the Fed has communicated to the market and what market expectations are in regard to inflation and interest rates. We focus on the Treasury yield curve and the steepness or flatness thereof and what it implies. And importantly, we think about how the municipal market is situated relative to Treasuries. But overall, our outlook for 2022 is quite positive for the municipal bond market for three reasons. The fundamental environment—the pricing of spreads as you go down the credit spectrum in combination with our view that municipalities, despite challenges, are in generally sound financial position. Second, the technical environment—which is rooted in supply and demand dynamics. And third, valuations—do market prices seen reasonable? We continue to believe they are, despite historically rich valuations.

Stephen: Can you expand on the credit fundamentals across US munis?

Ben: The credit fundamental side looks quite positive to us. Since the beginning of the COVID-19 pandemic to the present, there have been more upgrades than downgrades from the ratings agencies, and that is largely because revenues at the state level have been far, far higher than what were anticipated. We are seeing this coming through in budgets across the country; they have had stronger-than-expected tax revenues, which trickle down into local governments and into various sectors within municipals, whether it's transportation, health care, utilities or education. Really across the board, it's a fairly positive credit fundamental story. There's no question that spreads have tightened over the last year or so, but they are still implying default rates that are much, much higher than what we're experiencing right now or what we anticipate over the next several years. So, the credit fundamental story is quite positive on a tax-revenue basis, as well as the anticipation of more federal money making its way to state and local governments, which of course will have a significant impact on the municipal bond market as well.

Stephen: And what about the technical picture?

Ben: Focusing on the technical relationship in our markets—supply and demand—is important when it comes

> "A persistent need for high-quality fixed income by investors and a want to shelter assets from increased taxation has led to a perfect storm of high demand in tax exempt munis. In 2021, we are approaching US$100 billion of net new flows into open-end municipal bond mutual funds, which is a good proxy for overall demand into the municipal bond market."
>
> **Ben Barber**

to investing in the municipal asset class. For the last 10 years or so, the tax- exempt muni market has been shrinking. There has consistently been around US$350 billion to US$450 billion of primary market supply each year.[15] However, the net supply number is quite different. Every year bonds are maturing and/or being called out of the market. So, the net supply number has actually been slightly negative over the past decade, with 2021 looking neutral or maybe even slightly negative yet again. Meanwhile, demand has been strong. A persistent need for high-quality fixed income by investors and a want to shelter assets from increased taxation has led to a perfect storm of high demand in tax exempt munis. In 2021, we are approaching US$100 billion of net new flows into open-end municipal bond mutual funds, which is a good proxy for overall demand into the municipal bond market.[16]

So if we have a supply picture which is stable or slightly declining, while rising demand is positive, that creates a strong technical environment. We see 2022 as likely to have a similar relationship. In other words, quite positive on the technical side of things.

We are seeing demand not only from US investors—we have seen demand from investors outside the United States, primarily in the taxable portion of the market. The increased issuance of taxable municipals is also a contributing factor to the previous mentioned net negative supply and favorable technical environment. A myriad of factors including favorable refinancing dynamics and increased freedom with proceeds have led many municipal issuers to shift issuance to the taxable municipal market. International investors, starved for high-quality investment alternatives with an infrastructure bent outside of their countries, are increasingly attracted to the yield taxable munis offer, which is Treasuries plus spread.

Stephen: Where does the best value lie, in your view? How does your team look at the difference between high-quality bonds and higher yielding bonds?

Ben: We are a value-oriented team, so when we think about investments in municipals, we have a risk/return type of orientation. We invest across the municipal bond spectrum, from the highest credit rating categories all the way down to the lower investment-grade and the high-yield distressed portion of the municipal bond market. In our view, this ability to seek value and invest in a wide spectrum gives us the best possible visibility. As we look across the market, on a valuation basis, things look pretty fair to us. When we think about the highest credit-quality munis to Treasuries, there has been a lot of volatility between those two asset classes. Credit spreads have tightened pretty significantly over the past year or year and a half, but they are still attractive from our perspective.

Looking at where the value lies, how we choose between high quality and lower quality depends heavily on the spread environment. We feel we're getting paid enough in terms of additional spread to take on the additional credit risk of going down the credit spectrum. Both the blessing and the curse of the municipal market is that it's extremely large; it's fragmented, with lots of small credits making up the market. There are probably 50,000+ different issuers across the municipal market, so there is always room to find opportunities up and down the credit spectrum. Also, the muni market is an inefficient market, in that this large pool of small issuers lends itself well to opportunistic investing. There are dozens of sectors to choose from, and literally tens of thousands of different issuers.

Stephen: A couple sectors that have struggled under COVID-19 are health care and transportation. Can you talk a little bit about those sectors?

Ben: The beginning of the COVID-19 pandemic and the months subsequent to lockdown until today have been fascinating for municipal credit fundamentals, particularly health care and transportation sectors. Much of the health care sector in our world revolves around acute care nonprofit hospitals. There are also retirement centers, assisted living and skilled nursing centers. From our perspective, acute care nonprofit hospitals have been a particularly interesting investment story, and one where we have found significant value. Elective surgeries that would be expected went way down during the height of the pandemic, which is a big profit center for hospitals in general. In the months following the end of lockdown periods, these surgeries came roaring back.

So, part of our analysis at that point was to consider what factors we thought were permanently impacted from the perspective of health care and what we thought of as more temporary. Of course, federal money flowing into the acute care nonprofit hospital sector was significant at the beginning of COVID-19 and remains so today. That was clearly a big, big help.

Transportation is a similar type of analysis. When we think about the utilization of large transportation systems overall, whether toll roads or bridges, tunnels, subway systems, etc., we had a sharp temporary decrease and then quite a pickup coming out of lockdowns. Of course, toll roads are quite different from bridges, which are different from airports, and different from trains. The analysis must get exceedingly specific. But in general, the transportation sector has fared quite well coming out of the lockdown period, and we feel positive about the sector for the year ahead, barring any unexpected shocks.

Stephen: How will the new infrastructure plan passed in the United States impact state and local governments, and therefore the muni market?

Ben: US infrastructure spending is another reason to be positive about the muni market. Half of US President Biden's US$1.2 trillion infrastructure package contains new money, and half represents money already in existence. So, it's really a US$550 billion new-money package as it relates to infrastructure, but it's still to be determined how that will be financed.

As investors, we hope more infrastructure spending means more supply hitting the municipal market. One possible scenario is that much of the US$550 billion would be financed in the municipal market over the course of about five years or so, which would not be a really big impact in terms of overall supply, but a reasonable one. Another scenario is that the financing gets done in the municipal market, but then the money from the federal government could come in the form of grants to help pay debt service, which would flow to state and local governments. From our perspective, that might be the best of both worlds, a little bit more supply in taxable and tax-exempt munis, which our market desperately needs, as well as help on the debt service side of things.

Corporate bonds navigate the pandemic

Kurt Halvorson, CFA
Portfolio Manager
Western Asset

Stephen: Kurt, you cover investment-grade corporate bonds. Given the economic backdrop, how are corporations managing their debt?

Kurt: Investment-grade credit is holding up well from a fundamental standpoint. The COVID-19 pandemic has created a lot of changes, and challenges, for companies in running their businesses and protecting their balance sheets. Overall, corporate credit has been able to navigate the past two years well, with balance sheet improvement and a positive ratings trajectory. We still see a lot of opportunity for improvement in 2022, as well as some real relative value opportunities in investment-grade credit.

Stephen: Which sectors do you see opportunities in today—and as we look ahead into 2022?

Kurt: As we look for potential opportunities, we are focused on sectors that are improving from a fundamental standpoint and on companies that can manage input costs effectively, while retaining their pricing power. We currently see value in the banking sector, the energy sector, and the telecom and broadband cable sector. All three continue to show resilient performance and have navigated a challenging environment extremely well, in our view, by focusing on capital discipline, balance sheet improvement and protecting bond holders. I'd like to dig more into banks and energy.

First let's look at banks, which generally continue to improve their balance sheets. They are not focused on shareholder return, which may lead to bad acquisitions; and they are not focused on growing their loan book at any cost—making bad loans can deteriorate the quality of their loan book. We are not currently seeing either scenario. As investors, finding bank exposure at a good value relative to the overall corporate bond index represents a good opportunity. Looking forward, we also see ratings upgrades likely for the large US domestic banks, which we think will be a continued tailwind for the space.

In the energy sector, balance sheet protection has been a priority for many companies; they have been extremely disciplined with capital allocation. Just a quick point of illustration with US producers. In the past, for every US$100 allocated, in our analysis we would see companies spend about

US$150 on production. So, they would leverage up further to increase their production. We're not seeing that focus on production now; we're seeing companies take about half of their free cash flow and pour it back into the business—roughly 25% to pay down debt and 25% back to shareholders. They are focused on running a clean business so that they can navigate a full cycle. That's why we like the sector, and still see room for further spread compression.

> "We're impressed at how proactive investment-grade companies have managed supply-chain issues in the latter half of 2021. That's not to say there won't be some challenges going forward; but for the most part, companies have been aggressive in terms of locking down their supply chains for 2022 and making sure their businesses can run effectively."
>
> **Kurt Halvorson**

Stephen: The pandemic highlighted some sectors' weaknesses. Where are you more cautious?

Kurt: We're currently exercising caution in the retail sector, where input costs have been rising dramatically and many companies have not been able to retain their pricing power. The food and beverage sector also looks challenged amid a spike in commodity prices and an inability to retain pricing power—many companies can't raise prices enough to keep up with input costs. We've had some large companies that downgraded out of the investment-grade index down into high yield.

We are also a bit cautious right now about the technology space. We see some solid technology companies, but given how rapidly things change, it's difficult from a credit standpoint to forecast what that sector is going to look like in five or 10 years. For example, 20 years ago, I had a Blackberry phone for work; and back then it seemed like the company would be around forever because of the phones' popularity. But within 10 years, the introduction of the iPhone rendered the Blackberry obsolete. While there are opportunities in the sector, as investors, we need to feel we are being compensated for the potential risks.

Stephen: How are companies managing supply-chain challenges?

Kurt: We're impressed at how proactive investment-grade companies have managed supply-chain issues in the latter half of 2021. That's not to say there won't be some challenges going forward; but for the most part, companies have been aggressive in terms of locking down their supply chains for 2022 and making sure their businesses can run effectively. Within the commodity-based sectors, we have seen many companies hedging a large percentage of their input costs for 2022.

Stephen: Inflation is a hot topic right now. How do you see the corporate bond market navigating potential monetary policy shifts?

Kurt: Considering the macroeconomic environment for the year ahead, we don't think the inflationary environment and the Fed's tapering of asset purchases will be overly disruptive to the corporate bond market. We do think some sectors will be impacted more than others. But overall, we think this is a great time to invest and think investment-grade credit should continue to do well in 2022. We continue to focus on the sectors and companies where we think fundamentals appear to be improving and where ratings are likely to be upgraded, while avoiding those sectors that look to be highly challenged over the next year in regard to the pricing pressures we are seeing in the market.

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Endnotes

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