2020 Investment Innovation Conference

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Virtual event coverage

Canadian Investment Review

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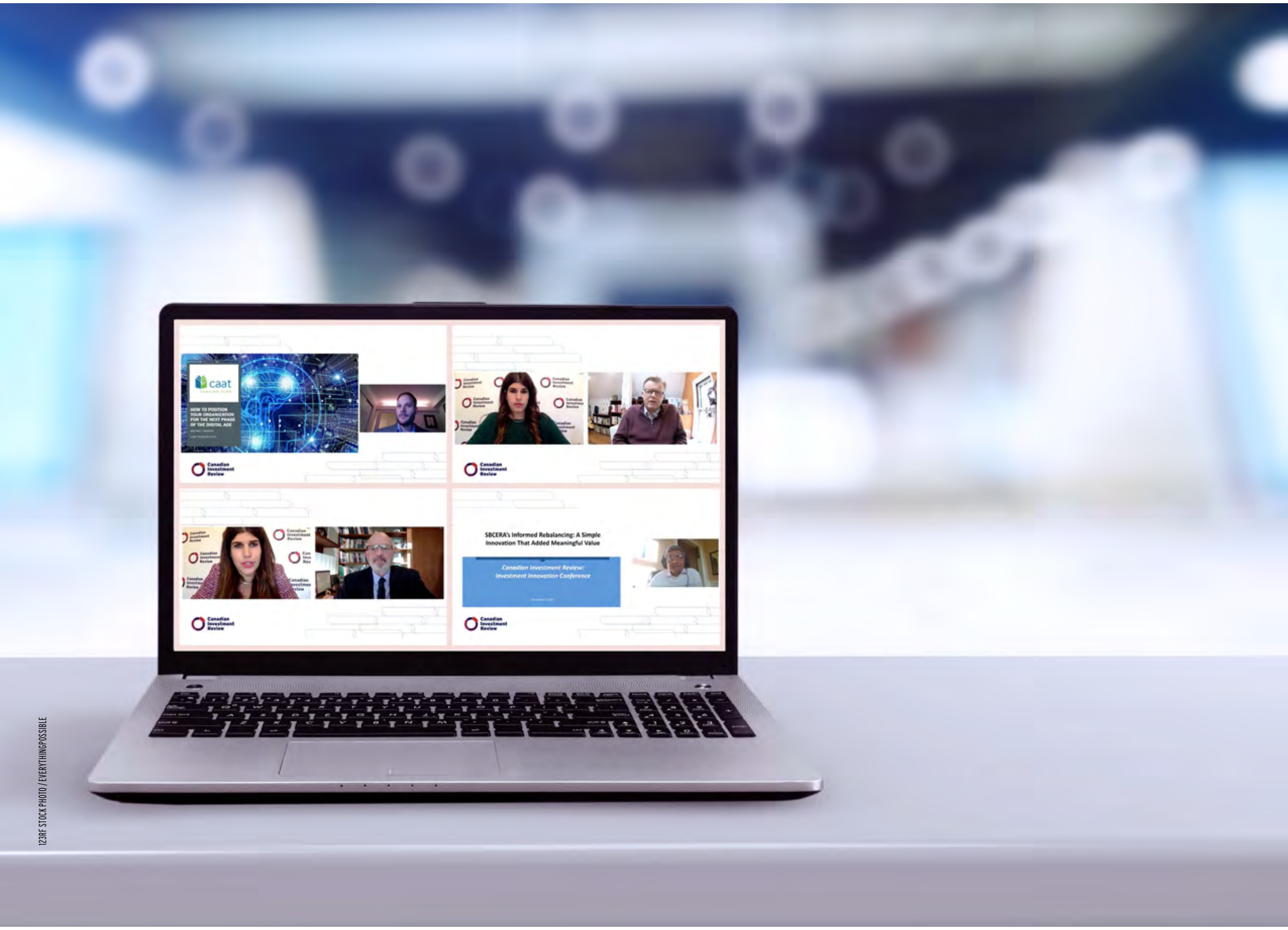
Introduction – Navigating a new era



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By: Yaelle Gang

This year has seen more changes than anyone could have predicted. The novel coronavirus sent shocks through the markets, with monetary and fiscal policy-makers responding in unprecedented ways, potentially shifting the economic landscape for years to come.

The 2020 Investment Innovation Conference, which took place in a virtual format from Nov. 3-4, explored how investors weathered the storm. What worked? What didn't? And what opportunities exist in the current investment context?

Presentations covered a range of topics from volatility investing, to blockchain, to the energy transition, to pension portfolio rebalancing.

Further, the conference timing coincided with the U.S. election. Conference delegates were able to unpack the electoral results, and implications for financial markets, in real time.

With 2020 fraught with great uncertainty, the conference explored how plan sponsors can find opportunities during times of disruption. The expert speakers provided key insights into what pension plan sponsors should consider as they embark on a post-coronavirus world.

What will a Biden presidency mean for the economy going forward?

Charles Myers
Founder and chairman
Signum Global Advisors

By: Kelsey Rolfe

The prospect of a Joe Biden presidency with a Republican-held senate is an ideal outcome for markets, said Charles Myers, founder and chairman of Signum Global Advisors.

Speaking the morning after the election, Myers said Republicans' expected continued control of the senate would have "very profound implications" for policy-making in the next four years.

Biden's more transformational legislative goals, such as raising corporate and personal taxes, pushing through a public health-care option and launching a carbon tax or a financial transaction tax, will be hamstrung by the senate, said Myers. "There is a sense that with gridlock next year in Congress, Biden's going to have to not only appoint a very centrist cabinet . . . but also govern in the centre."

That prospect was likely behind the market's Nov. 4 rally, he said. However, while a divided government has been historically positive for markets, this one presents negatives that the market will need to price in getting closer to January.

A Republican-led senate will challenge Biden's plans for a US$2–3 trillion stimulus package, as the senate majority leader Mitch McConnell has expressed interest in a more modest package of US$500 billion to US$1 trillion. Republicans are also expected to oppose Biden's US$2.5 trillion infrastructure package in the first half of 2021, which would have contained the largest allocation to renewable energies to date. "Now, most of those initiatives around green energy [will be more challenged], frankly," Myers said.

However, he noted Biden can do plenty through executive order to re-implement environmental protections and fossil fuel regulations, end fossil fuel subsidies and re-enter the Paris Agreement. "Fossil fuels will be much more tightly regulated."

Myers also said he expects managed-care companies to perform well without significant government competition. Pharmaceutical companies, too, will perform better, as Biden won't be able to give Medicare the ability to negotiate directly on drug prices. However, the anti-trust movement against technology companies is expected to accelerate with a Biden-controlled Department of Justice. Further, housing could do well as Biden forges ahead with a plan to increase home ownership for low-income Americans, using both agencies and government spending and taking advantage of the low-interest-rate environment.

The upcoming debt ceiling negotiations in July 2021 could prompt a rehash of 2011, Myers added, when McConnell squared off against a Democratic president and "refused to lift the debt ceiling on . . . fiscally conservative grounds. The U.S. was peering over the fiscal cliff and we were downgraded by S&P."

Throughout that standoff, markets experienced substantial volatility, he noted. "I don't know if it gets that bad, but the politics around the debt ceiling in July and leading up to July are going to be very challenging."

On the foreign policy front, the U.S.'s relationship with China will remain rocky, Myers added, noting that while Biden will likely implement tariff relief in his first 100 days in office, he won't let up on Chinese tech giant Huawei Technologies Co., Ltd. and will be much more critical of China on issues of human rights and democracy. Biden could also restrict Chinese companies' access to U.S. capital markets, an issue that Myers said Democrats feel strongly about.

The case for eventual inflation

Erik Weisman
Portfolio manager and chief economist
MFS Investment Management

By: Yaelle Gang

While inflation never materialized after the last financial crisis and the subsequent economic expansion, this time will be different, said Erik Weisman, portfolio manager and chief economist at MFS Investment Management.

After the global financial crisis, quantitative easing didn't generate inflation because the money never made its way into the system. "All the [Federal Reserve] was doing was offsetting bank deleveraging, household deleveraging, and starting in 2010 and 2011 — government deleveraging, where governments began to implement austerity on the fiscal side," Weisman said. "The multiplier for the Fed was actually very low. You print a bunch of money, very little gets out. The multiplier from the banking system was very significant. You take a dollar out of the system and you really wind up taking two, three [or] four dollars out of circulation as a result of leverage. So that's one reason we didn't get inflation last time around."

With the current coronavirus crisis, the Federal Reserve's focus is different and it's generating money directly for households and corporations. "That money should be able to get into the system a lot more easily this time around, unless we see bank deleveraging."

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That said, the coronavirus crisis has created negative supply and demand shocks. "But we believe that, in our current state, demand has been hit a lot more than supply," Weisman noted.

Prices of more goods and services have declined than have risen. Overall, the current forces have led to disinflation and created a large negative output gap. "An output gap, when it is negative, is characterized by high levels of unemployment, so idle labour, and low levels of capacity utilization in the production of things."

Historically, when a large negative output gap has opened, the inflation rate has declined, Weisman noted.

Post-coronavirus crisis, fiscal policymakers will likely implement measures similar to modern monetary theory, Weisman said. "We may raise taxes in the U.S. in the aftermath of this election, but we're going to raise spending a lot more and it looks like we will be very patient, trying to make sure that we close that negative output gap."

The economy is at a fork in the road, Weisman noted, citing headwinds to inflation including demographics, large levels of debt and digitalization. "But now [these secularly disinflationary trends] may be meeting a more powerful force: the combination of quantitative easing with [eventual] modern monetary theory, long-lasting debt monetization, higher velocity of money, higher money multipliers, perhaps loosening that inflationary anchor to some degree, and maybe de-globalization."

Overall, Weisman expects to see inflation of 2.5 to three per cent in about three to five years in the next business cycle. "It's not going to happen in the next few years because the output gap is negative."

How to solve for lack of trust inherent in financial transactions

Michael Casey
Author, The Truth Machine: The Blockchain and the Future of Everything

By: Kelsey Rolfe

As far back as the beginning of civilization, centralized ledgers have been the answer to solving trust issues, said Michael Casey, chief content officer at CoinDesk.

The first form of writing ever recorded was a ledger on a Sumerian tablet dating back 5,000 years, he said. Then, in the late 1300s, Giovanni di Bicci de' Medici, the founder of the Medici Bank, realized double-entry bookkeeping could be incorporated into banking to keep track of customers' debits and credits.

While that system has been a central part of finance for hundreds of years, it wasn't without its challenges, said Casey, pointing to Lehman Brothers as an example. "In the midst of the 2008 crisis the fact that they were the ones that we had to trust to keep records of where all of our exchanges lay, where all those positions on credit default swaps lay, where the valuation of the assets that they had in the balance sheet lay, all of that required us to trust them to keep that record," he said. "A lack of transparency around that system . . . was a huge problem as the world tried to rapidly unwind all those positions."

There was a cost to that trust, Casey said, pointing to the millions of lost jobs and trillions of dollars of destroyed wealth. Further, beyond that event, the everyday cost of having centralized records – in quarterly audits and annual reporting – creates friction. However, blockchain's decentralized ledger systems potentially could eliminate that friction while solving for the central issue of trust, he noted.

"Rather than having one centralized ledger, how about if we had multiple versions of the same ledger and created a system in which all of the parties with an interest in that ledger had a way to update it and trust each other that they could do so in real time – and therefore we're all working on the same thing," he said. "That core friction . . . ultimately should go away or at least could be diminished significantly."

So-called immutable ledgers drive trust among participants, but also create a new concept of digital scarcity, or the idea that something cannot be replicated. This could be relevant for institutional investors because it would allow resource allocation to occur in a digital setting.

"In the digital world, until Bitcoin came along, it was quite possible for me to simply take a replicated version of one thing and tell you that it's the same thing," he said, noting it is now possible to identify something as distinct, scarce and valuable.

Blockchain can also allow money to become "programmable" like software with the ability to turn a device or a settlement on or off, he said. The technology enables smart contracts, which he defined as the execution of rights agreed to in a contract "in a way that neither of those parties can control."

Going forward, Casey said he expects to see securitized token offerings, or the tokenization of regular markets. "Bonds, equities, real estate shares and [real estate investment trusts], really anything . . . can be taken and placed in this environment where it has that programmable quality. You can also fractionalize it."

Tokenization could soon apply to non-financial assets, such as art, with Casey suggesting someday someone could own a piece of the Mona Lisa. "This can be applied to pretty much anything with this concept of digital scarcity, which allows us, through what's called a non-fungible token, to start moving into another world of assets. It's a powerful way for us to imagine how finance can be transformed by this."

What's next for volatility investing?

Seth Weingram
Senior vice-president
and director of client advisory
Acadian Asset Management

By: Yaelle Gang

Despite some negative headlines about volatility investing after the violent market sell-off in March, plan sponsors shouldn't write off volatility investing altogether because it can be a valuable investment tool if used appropriately, said Seth Weingram, senior vice-president and director of client advisory at Acadian Asset Management.

There are three common pitfalls in volatility investing: the mismanagement of explosive payoff strategies, failures of imagination in risk management, and having structural blind spots about the workings of particular strategies or the options market itself, he said.

The increasing popularity of volatility investing comes with the worry that along with ease of access, investors will not realize the importance of domain knowledge. "That will lead to disappointing investment outcomes, overlooked opportunity and frankly more headlines," he said. "And that's in part because the options market really has a distinctive nature that's different from other markets that investors tend to be familiar with. Specifically, it's not a matching engine. It doesn't simply connect end investors who want to buy and sell the same instruments. Instead, it functions as a complex risk redistribution machine."

Particularly, he highlighted the special role of options dealers and the fact that the options market has different types of end investors that use particular types of options. "Some, for example, trade only short-term listed options on individual equities, while others only use long-term index options through investments in structured products. Now what this means is that the number and nature of market participants varies considerably across options' underlyings, across strikes and across maturities. And therefore, so does the balance of supply and demand."

It's key for pension plans to understand the characteristics of the market because it will help them understand the compensation available for return-seeking strategies and the cost of protection, Weingram noted.

With these common pitfalls in mind, Weingram highlighted three elements for well-conceived volatility investing approaches: having a combination of return-seeking and protective elements, adopting to changing market conditions and market structure, and implementing tail-sensitive and forward-looking risk management.

Specifically, combining long and short elements in a strategy more fully leverages variation in supply and demand across the options market to gain return premia when it's attractive, and protection when it's inexpensive, Weingram said, noting it also provides greater flexibility to optimally trade off tail exposure against available premium as market conditions change.

Further, simple smart beta or alternative risk premia approaches tend to embed rigid positioning. "Instead, net positioning in volatility should be responsive to the pricing environment. Seen through a systematic lens, that means evolving signals related to investor risk aversion, liquidity conditions, the cost of carrying positions. As well, the choice of implementation should be informed by longer-term trends and developments in both product development and regulation."

Weingram advocated for volatility and options budgeting and position sizing that is based on their contributions to overall portfolio tail risk. "In doing so, the risk scenarios you consider should be informed by product characteristics and market knowledge and they should not be limited to recent historical experience."

Overall, investors shouldn't come out of 2020 thinking volatility investing is unavoidably dangerous, Weingram said. "But the 2020 headlines do underscore that volatility investing is an especially poor venue for rudimentary and mechanical implementation. Volatility investing and options are domains where market knowledge and nuance are essential."

How rebalancing can provide alpha

Arun Muralidhar
Adjunct professor of finance
George Washington University

By: Kelsey Rolfe

The San Bernardino County Employees' Retirement Association implemented a simple innovation 15 years ago that's added nearly US$1 billion to the fund's total value as of Aug. 31, 2020.

That innovation is "informed rebalancing," said Arun Muralidhar, adjunct professor of finance at George Washington University.

Informed rebalancing is a process of dynamically connecting a pension fund's asset allocation to current market conditions, rather than resorting to infrequent and mechanical rebalancing only after allocations have reached the edge of their portfolio range.

The pension fund, which has more than US$10 billion in assets under management, implemented the strategy after back-testing the program using historical periods against buying and holding, range-based rebalancing, calendar-based rebalancing and volatility-based rebalancing strategies.

"All the additional ideas that they had tested clearly did not add value when they were looking back . . . after they [ran] the program," Muralidhar said. "Whereas the informed rebalancing actually generated, on a back-tested basis, something like one per cent per annum. But it did so not only with positive alpha, but also with lower drawdowns."

When investors allow asset allocations to drift within portfolio ranges, they're essentially "taking bets," Muralidhar said.

Those implicit bets hit investors hard in February 2020. If they hadn't rebalanced after the previous market rally, they were overweight in equities just as prices tumbled in the coronavirus-related market volatility. At the bottom of the cycle those investors were suddenly underweight in equities, but didn't use the buying opportunity and missed the next market rally.

"Rather than letting a portfolio drift arbitrarily within these ranges, a little bit like a drunk driver driving on a highway alongside the guardrail, why not instead dynamically link the asset allocation to current market conditions?" Muralidhar said.

"In other words, adopt the same processes that your managers are using in selecting stocks and bonds, and apply those same techniques to the asset allocation decision, because it has a significant impact on your overall returns. Asset allocation contributes 80 to 90 per cent of a fund's total risk. What's nice about this process is you can make sure that you continue to stay within the board-approved strategic policy ranges, but now you've got a more informed process."

He recommended using four factors as decision-making inputs: short-term fixed price data on all assets, such as comparing the moving average of the stock market's last five days versus the last 50 days; short- to medium-term market sentiment indicators such as volatility, credit spreads and sector rotation; longer-term valuation indicators such as dividend yields and price-to-earnings ratios; and medium-term economic indicators such as interest rates and commodity prices.

"If you combine the short-term indicators . . . with the long-term indicators essentially you can create a diversified process," Muralidhar said. "If you apply it across multiple assets as well, you can diversify the risk of being wrong."

Muralidhar said funds can use futures to move their asset allocation between high-level asset classes and the strategy can be implemented as a futures overlay on top of the entire fund. "That's how it does not disrupt the existing portfolio manager lineup and stays within the broad policy."

The process should show funds which asset classes they should be overweight in and by how much, with the sum of all those allocations adding up to zero — meaning the strategy has rebalanced favourable assets against those expected to underperform.

This will add alpha on the total fund and potentially lower overall risk, Muralidhar said.

What opportunities exist for plan sponsors in thematic investing?

David Docherty
Investment director, thematics
Schroders

By: Yaelle Gang

The most powerful and durable investment themes are those where ingenuity sparks innovation to address imbalances in the world, said David Docherty, investment director for thematics at Schroders.

He pointed to imbalance between population and resources as an example, and themes related to climate change, the energy transition, disruption, health care innovation, changing lifestyles, cities and sustainable growth.

Even within these themes are different sub-themes, he added. "There's a lot of opportunity within individual themes and that would give the investor the ability to navigate their way through themes over the longer term."

Institutional investors can select themes that are durable by looking at the history of the future, Docherty said. "As counterintuitive as it might seem, looking back at the past, understanding the history of the future, we think is absolutely critical to identifying themes going forward."

When looking to the past, the basic need for convenience has always mattered and will continue to matter going forward, he said, noting the same is true for the need for efficiency and productivity. "The Romans invented a smart material. . . . That smart material actually was volcanic ash, which was used to be put into the Pantheon many years ago and that has made the concrete stay dry. Today, Oslo Airport was rebuilt very recently using volcanic ash in the concrete."

Other examples of themes that have mattered in the past are entertainment and survival, he added. "Health care has been a concern ever since humankind arrived. And even things like climate change, which might seem like a modern problem, is driven by that very existential factor of the desire to survive. So we think that by looking back at the history of the future, that can guide us into the coming years."

However, a key difference between history and the present is the rise of technology. Further, innovation and disruption are inextricably linked, he said. "Innovation brings about disruption and then disruption brings about innovation."

From a practical perspective, investors who want to access companies that deliver innovation before others in the market notice can use technology to do so, Docherty said. "By using machine learning techniques, for example, investors can look through . . . patent information and discover where ingenuity is, potentially before others in the stock market have spotted it."

And at times, innovation can come from places where it's least expected. Further, it's imperative to have a long-term view when looking at themes. "They need to be structural rather than cyclical. Persistent, not faddy. And they also need to be global and unconstrainted. If these themes are as important as we believe them to be, they can't be constrained by index weightings for stocks, sectors or even regions."

Investors also require discipline, Docherty added, noting investment universes can't be too narrow because that will take away flexibility that investors need, but they also can't be too broad because it takes away precision. And, valuation rigour is key: "Yes, we want to identify themes. Then we need to identify the companies. But, of course, they need to be valued attractively in order to make positive returns."

Sustainability in a post-coronavirus world

Andrew Parry
Head of sustainable investment
Newton Investment Management

By: Yaelle Gang

People are increasingly viewing the world with a lens that incorporates environmental, social and governance factors, said Andrew Parry, head of sustainable investment at Newton Investment Management.

Climate change is a prominent issue with extreme weather events becoming the normal, he said, noting these events have economic costs. "No longer is climate change an abstract future event," he said. "It's actually a real financial event here and now in our daily lives and in our portfolios, which is a really important consideration when we begin to think about managing risk."

However, environmental challenges can also present significant opportunities, Parry noted. "I think one of the big things that has changed in the last five years is really that civil society cares, that regulators care and increasingly governments are beginning to understand the climate and environmental imperative. It's no longer thinking that climate change is an abstract externality, a problem for the future; it is actually something that is manifesting itself now in the business models of many companies."

Disruption is a part of daily life, Parry noted, but it isn't all negative. "It is about avoiding stranded assets, stranded business models. It's about those disruptive themes that will change the shape of our lives, the shape of our indices. But importantly, it's also about these emerging growth dynamics, which we're seeing through our economy very dramatically already. And here it's about that power of compounding ultimately."

That said, the power of compounding only works when avoiding permanent capital impairment, he added. "I think 2020, if anything it has done, is remind us that business models can be impaired severely, that not all companies can be winners and that the index itself is not the baseline for measuring risk."

In particular, the index is not a representation of the future. "And it is really important in our thinking in this disruptive world to get our minds around not anchoring to the past, but moving to the future."

Institutional investors must be careful about playing to methodology over purpose, Parry said. "I think this is one of the dangers that we have with our current approach to [sustainability] and ESG is that if we think we can measure it, we think we can manage it. But that could end up leading us to false gods in terms of accelerating change that we need to deliver."

Overall, he highlighted how investors are in some ways building models in a degenerative system and must ensure that they're not "shuffling deck chairs on the titanic."

Now that ESG and sustainable investing has been embedded into the thinking of many, Parry outlined how investors can try to create the necessary changes. "We need to create a thriving system. It's about the valuation, not just of financial capital and the reporting of ESG scores, but it's about the valuation of all the other capitals: natural, social and human, alongside financial."

Further, key players must increasingly collaborate toward shared goals. "Very much, sustainability is the mantra of today. It's a core part of us finding our own agency. It's us finding adaptive pathways to the future and managing critical tipping points. But if we want to go to the next level, we're going to have to go beyond ESG to really begin to think about transformational change and how we, as asset owners and asset managers, work with all other actors in the system to create that system that we want for future generations."

How institutional investors can determine material ESG factors

Jenn-Hui Tan
Global head of stewardship and sustainable investing
Fidelity International

By: Yaelle Gang

Environmental, social and governance factors are an important dimension of fundamental analysis, said Jenn-Hui Tan, global head of stewardship and sustainable investing at Fidelity International.

Traditional fundamental analysis captures topics including financial performance, the pricing power of a company, its competitive advantages, the size of the market, its sensitivity to macro factors like interest rates and the effectiveness of its board, he noted.

On the other hand, looking at ESG fundamentals would capture topics including an analysis of a company's impact on its environment, product safety, product responsibility, employee well-being and engagement, supply chain robustness and resilience, and board diversity and independence. "[Putting] these two things together, we feel, captures a fuller range of fundamental factors, which will impact the financial performance, so the revenues and the margins, the cash flows and the balance sheet of the companies, and therefore . . . the long-term value creation that is enjoyed by investors."

The average lifespan of a company is falling, added Tan. "And what that implies is that for the purposes of investment, the most important thing about a company's valuation might not be its profitability today or tomorrow. It might be how long it enjoys that profitability for, or what is the duration of the company's business in effect."

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Another key change in markets of late is that the intangible value of companies comprises the majority of their market value, he added, noting investors need much more than financial data to analyze companies correctly.

But when looking at incorporating ESG into investment research, not every ESG issue is equal or important to every company. Depending on sectors, subsectors and business models, different ESG factors will have different materiality, he said. Plus, investors can look at key performance indicators to measure key issues and assign weights and rankings to each company relative to its peer group.

Further, pension plan sponsors should consider the range of different ways of considering ESG ratings across various providers and the importance of not just taking a rating and jumping to conclusions. Rather, plan sponsors should think about what information an ESG rating is actually conveying, he said.

At the end of the day, plan sponsors must consider a lot of information when it comes to ESG ratings.

Tan's advice for plan sponsors is to understand the ESG philosophy of their appointed agent and ensure it is aligned to their own beliefs. Then, plan sponsors should look at how the philosophy is implemented and outcomes. "That to me is a better framework for thinking about assessing ESG for asset managers or agents rather than simply taking a third-party score and saying, 'Oh, well this says to me it's a triple-B or C-minus or whatever.'"

Opportunities for institutional investors from the energy transition

Edward Lees
Co-lead and portfolio manager
BNP Paribas Asset Management

By: Yaelle Gang

Along with big risks comes the need for solutions and companies that provide those solutions, said Edward Lees, co-lead and portfolio manager at BNP Paribas Asset Management.

Although in the current environment the coronavirus has been top of mind, climate issues have not gone away, he said. "In fact, they're looming large in the background and we've seen a lot of headlines to that effect this year."

The coronavirus has demonstrated that it's important to act early when faced with an existential threat. "You don't want to let that fester. But when you do, and I think this is the silver lining of the coronavirus experience that we've had this year, the world can really pull together and make dramatic changes in a very quick order in ways that it didn't think [were] possible before. . . . And I think those are very useful lessons to remember as we will get ready to tackle ultimately the much larger challenge of climate change."

The world's population is growing and that means more demand for resources such as energy and water. Further, the growing population will mean increased emissions and use of resources. And studies have shown that the world is using resources at a rate that would require 1.6 earths to support it sustainably, Lees said.

Politicians are taking note of climate issues, he added, sharing examples of various jurisdictions that are putting emissions-reduction targets in place and targeting environmentally friendly initiatives, like green hydrogen, when spending.

Lees noted that the big push toward environmentally friendly policies will create a structural growth story for many companies operating in the space involved in finding environmental solutions.

Companies involved in finding solutions will see inflows and browner incumbent industries will be disrupted, he added. "There's capital flows both ways and these are things that will create opportunities for investors when you're on the right side of those capital flows."

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When looking at various themes for investment, there's an opportunity for alpha through both stock research and picking, but also in understanding the macro-environment, Lees said.

"Increasingly there have been a lot of inflows in this area and a lot of passive money, a lot of [exchange-traded] fund flows. That can stretch the valuation of companies that are lower on the quality scale."

Along with increased excitement about an area, more investors who may be less educated will come in. "I think that increases the importance of making sure that you take an active approach and that you embrace active management. You have people that are really looking at the companies, to make sure that they make sense."

CAAT looks to AI, machine learning

Mike Dawson
Finance director
Colleges of Applied Arts and Technology Pension Plan

By: Kelsey Rolfe

The Colleges of Applied Arts and Technology Pension Plan is betting that artificial intelligence and machine learning will play a role in pension administration going forward.

"I won't pretend that we're Netflix or Tesla in this, but we are [taking] small steps today so we can take advantage of these advances of technology into the future," said Mike Dawson, finance director for the CAAT Pension Plan.

> "I won't pretend that we're Netflix or Tesla in this, but we are [taking] small steps today so we can take advantage of these advances of technology into the future."

On the information technology side, the pension plan is building data infrastructure that will capture, clean and centralize the organization's data. While Dawson noted the project is in its early days, he said that having the infrastructure in place is a "necessary precondition to taking advantage of the data we have available."

Dawson himself has also led an effort to capture more data on transactional errors, with the goal of eventually using an AI model to predict errors before they're processed. Looking at banking transactions, for example, his team is capturing information on the transaction itself such as the date, amount and vendor, as well as related data such as overtime hours banked within his team.

"Whether this will work or not has yet to be seen, but capturing the data will be required for us to have a chance of it working in the first place," he said, noting that the more data the plan inputs, the better chance it has for business intelligence tools to provide insights it "might not have realized without [that] data."

Further, the organization is partnering with an AI hub at an Ontario college, which will provide expertise and assistance with using AI to address problems and objectives identified by the pension plan. "Partnering with local universities or colleges is a fantastic way to help expedite some of the efforts that the organization may want to embark on."

It's important to have strong support from organizational leadership for innovation and to create a culture of openness at the employee level so they buy in to the new technologies, Dawson said.

The CAAT Pension Plan has also tried to make tools available for employees to tinker with. "I'm a big believer that if you're trying to innovate or if you're trying to do something new, you have to do it in a relatively unstructured way. You can start with objectives and you can work toward those objectives, but if you want innovation that's maybe a bit less directed, you have to make the tools available to people."

However, employees need to know they don't have to fear making an error, he added. "If anything were to happen with these innovations, they're not going to lose their jobs."

The coronavirus has accelerated innovation at the CAAT Pension Plan, Dawson said, by accelerating the digitalization of some of its workflows. "A lot of the tools we're able to bring on and use keep a record of all our exchanges digitally. Those workflows will give us data on how people work, [and] will help us connect into the workflows."

How can past innovators inform portfolio construction today?

Stephen Foerster
Professor of finance
Ivey Business School, Western University

By: Kelsey Rolfe

Trying to define the perfect portfolio is as complicated as asking what it takes to be healthy — with a number of factors at play and no singular answer.

Even modern finance pioneers don't agree on what the perfect portfolio looks like, noted Stephen Foerster, professor of finance at Western University's Ivey Business School. But looking at their works, some broadly applicable takeaways for institutional investors emerge.

At the conference, Foerster previewed his new book, *In Pursuit of the Perfect Portfolio*, co-authored with Andrew Lo, finance professor at the Massachusetts Institute of Technology's Sloan School of Management, which profiles 10 modern finance luminaries who played leading roles in major investment innovations since the 1950s.

One key theme that emerges from the luminaries' stories is that investors should think about their fund's investment philosophy and put it down in writing to guide decision-making, Foerster said.

Further, they need to understand their fund's tolerance for risk, something Foerster noted was strongly emphasized by Martin Leibowitz, whose research on fixed income securities has changed the market's understanding of bonds.

"You want to know what your risk comfort zone is, and that's not easy to do in a pension fund," he said. "This comfort zone for risk should really determine the kind of assets that you will invest [in] or the kind of assets that you will choose not to invest [in]."

Foerster highlighted William F. Sharpe, who received the Nobel Prize in economics for his capital asset pricing model, noting his idea of the "market portfolio" offers diversification lessons for investors. "So many funds have this home bias where we over-invest in Canadian assets, which are only a fraction less than five per cent of equities worldwide. So do what you can to avoid that home bias."

Another luminary, Eugene Fama, whose work centres around portfolio theory, asset pricing and the hypothesis of an efficient market, urges long-term thinking when it comes to manager selection. In particular, the last three to five years of investment manager performance data is just noise, Foerster said, highlighting it's not enough to base hiring and firing decisions on. "You're not doing yourself a good service [if you're doing that] and should be much broader when you think about hiring and firing."

Foerster also discussed Myron Scholes' Black-Scholes model, one of the inputs for what eventually became CBOE volatility index for measuring the market's expectations for volatility. "Scholes' key message is to pay attention to the derivatives market because there's a lot of important information [there]. And I think we have seen that recently, both during the pandemic as well as around the U.S. election."

Overall, the stories of these luminaries demonstrate the necessity of adaptation. "We have to adapt to evolving situations. Fama started out supporting the capital asset pricing model, and then he killed it. [Robert] Shiller's dissertation was actually on rational expectations and then subsequent work turned that around. Jack Bogle started out as an active investor and then turned into a passive investor. We've got to evolve."

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