

Episode 6: Is AI Revolutionizing Stock Analysis?

John

[00.00.01]

Hello and welcome everyone. This is episode number six of Buy the Way, Guardian Capital LP's podcast series that is focused on investment conversations with portfolio managers, thought leaders and industry experts. I'm your host, John Pagliacci, VP of Investment Programs and National Accounts here at Guardian and excited to be joined today by James Francis, our Client Portfolio Manager, supporting Guardian Capital LP's i³ Investments team. James, great to have you on. How are things going?

James

[00.00.28]

Great, great. Thanks for having me on, John.

John

[00.00.31]

Appreciate it. Yeah. Just got through Thanksgiving. So hopefully that was a nice stretch there. But again appreciate it. And this is the first time you've joined us on the pod. Hopefully not the last. But you've been supporting Guardian Capital both in the US and Canada now for what, a little over a year or so? But you've been in the industry quite a while. So before we get into our discussion, we certainly have a lot that we want to touch on with regards to AI in this episode. But wanted to sort of pick your brain a little bit and get your background in investment management before we get into our broader discussion.

James

[00.01.02]

Yeah, great. As you just mentioned, I've been supporting the i³ team for over a year now. So it's been I guess it was September of 2024 is when I joined the firm. Prior to that, I spent most of my career with an institutional growth equity shop in Atlanta, Georgia as a Client Portfolio Manager, portfolio specialist, and I was a member of the firm's global asset allocation investment committee. You know, I met Sri Iyer, who is the lead manager for the i³ team, as you know, and the architect of the i³ platform. I met him a little bit, you know, probably June of 2024. And I was just really, really, enthralled with what he had built. And I came to believe, that what he has done, he and the i³ team was really the future of active management, and I really wanted to be a part of that.

John

[00.02.06]

Love it. Yeah. No, totally. It's really exciting stuff that we're going to cover off today. Before that though, again, you joined Guardian what, in 2024, early 2024 I believe it was to really... Yeah it was September, okay. And you really you mentioned Client Portfolio Manager. So you're really out and about on the road quite a bit, talking to advisors across predominantly the US. Is that correct about the team?

James

[00.02.30]

Yeah.

John

[00.02.31]

About the team's sort of strategies and their capabilities, uh, including the use of AI within their proprietary analytics model. So, I'd be curious to get, you know, your take. But I would think it's fair to say that a lot of doors have probably been opened to you as you start talking to people about the AI story, and really how it can potentially improve processes and maybe even outcomes within investment management. So I really just wanted to thank you again for your time. I can't think of a better team or person to get into this area of AI with. So, let's dive right in. Certainly, you know, of late there's been no shortage of AI discussions in the media. In terms of it being this, I think, still nascent but really transformative potential technology and perhaps even more talk in the media about the valuations of these companies operating in and around the tech space. But when we talk about the i³ investments team, I think it's, you know, just to level set expectations at the outset. We're not necessarily talking about a team that is focused on investing in AI so much as we're talking about the team using AI as part of their security analysis process, which I think is somewhat revolutionary and sort of at the forefront of what asset managers are doing in, you know, in portfolios. So why don't we start there keeping it fairly high level? How and where in the process does Guardian's i³ team use AI to help them find attractive investment opportunities?

James

[00.03.56]

Yeah. Yeah, it's a great, great question. And you're right, it's a very hot topic. Everybody's interested in AI and and it's really exploded since ChatGPT came on the scene in November of 2022. Importantly, we use AI as a tool in the investment process to generate ideas for the portfolio managers who are ultimately responsible for portfolio construction. We call our AI model GEMX. GEMX stands for Global Equity Model for the Next Generation. And it's the team's digital analyst. So it functions as our research team. GEMX is even represented in the teams org chart. It was built internally by our team of software engineers, data scientists and portfolio managers, and we've been using it in production since 2018, and it's been obviously continuously enhanced since then. So that's what, eight plus years now. And that includes many different market environments. And I think that's a really important distinction. Because there's been very few managers that have the track record that we do, even fewer over a market cycle. A full market cycle. But very few that have a track record of using AI to support the investment decision making process. And it's a significant distinction and a real competitive advantage for us. And as you mentioned, a lot of people are really interested in learning more about that. But because of our experience, as unique as it is, I really do think Sri Iyer and the entire i³ team are seen and have been seen and deserve to be seen as pioneers in this industry.

But in the context of, you know, finding attractive investment opportunities, I should just note that in our long only strategies, GEMX is really guided by our GPS investment philosophy. And that investment philosophy aims to capture what we believe are the three key pillars of total return. So that's Growth, Payout and Sustainability of cash flow. So that's the GPS framework. And just real quickly: Growth - we're looking for companies with predictable revenue and earnings growth. Payout could be in the form of a dividend. And when combined with those growth characteristics you get a sustainability and growth of that dividend. For our growth strategies, payout could come through capital appreciation and then sustainability of cash flows because without sustainable cash flows growth or payout is impossible. So that's just kind of the context for the implementations of AI. And one of our implementations is to use AI for predictions. So for each company in our equity universe, we're predicting earnings growth one year out and the probability of an earnings decline. We're also predicting dividend growth one year out and the probability of a dividend cut. We also predict short term volatility and risk adjusted returns. We're also using AI for intrinsic value. Here we're predicting cash flows ten years out and discounting them back to today to present with a company specific discount rate. This gives us a price target for the stocks in our equity universe. And then finally we use AI for classification or relative analysis. So here GEMX is comparing and ranking global stocks by sector on a range of factors including growth, efficiency, quality, credit risk, momentum, sentiment, and traditional valuation metrics. So based on these rankings, GEMX will generate a buy, hold or sell rating signal. But as I mentioned earlier, the PMs are ultimately responsible for all the portfolio decisions, and they do this by evaluating or validating, the high or low ranked stocks based on the model's signal or conviction. They also assess a stock's risk adjusted contribution and, of course, portfolio fit. So this is the human intelligence component of the i³ framework. And the i³ framework is really just AI fused with human intelligence through innovation. So to sum it all up, AI takes care of all of the preliminary analysis, allowing the portfolio managers to focus on the best ideas and avoid the worst. We believe that combining AI for idea generation with the portfolio managers contextual judgment, insights, and of course experience, that we can we can generate deeper insights than either approach, whether it be quantitative or qualitative could achieve alone.

John

[00.09.00]

Okay. Well lots there. I think that was a great summary and certainly different ways that you're using it. But yeah, I mean simplistically I like how you put it there. It's sort of that fusion of that amalgamation of yes, there's AI, but it's the human intelligence that really sort of ultimately comes through at the end of the day to make the final decision. So maybe to go a layer deeper here. One of the things that that I continually am fascinated about when I hear you guys speak, is the ability within your AI model to look beyond, let's call them traditional financial metrics and tap into what are what are called unstructured data points at scale to really help you inform your decisions. I'm relatively new to the space. I'm sure a lot of our listeners don't have the same understanding or nuanced understanding of AI as you and the team do. So when we talk about unstructured data, what are we talking about here, and how do you factor that into the model?

James

[00.09.48]

Yeah. It's probably best to start with what unstructured data isn't. So, for example, structured data is data that fits, you know, neatly into a spreadsheet or a database table. So it has a clear predefined format with rows and columns where every piece of information fits into a specific labeled field. So unstructured data is essentially everything that doesn't fit neatly into a spreadsheet. So it has no predefined format, has no rigid organization. What makes this data unique is that it is rich in information, but it's really messy and really hard to work with. So it requires special tools and techniques to really unlock its value. Some examples of unstructured data would be like images, audio files, social media posts, emails, even satellite imagery or website traffic would be examples of unstructured data sets. But the real value with unstructured data lies in the ability to convert it into a structured signal. In other words, a feature that's usable and in our case, usable to make predictions. Some of the ways we use unstructured data, I mean, we can get real time analysis on news articles, press releases, earnings call transcripts. We can even generate a lot of insights from ESG analytics. But I'll give you, you know, maybe one of our most recent innovations that has to do with regulatory filings. So over the years, the length, the complexity, even the number of corporate filings like 10-Ks and 10-Qs has been increasing. And this has been particularly true in the risk factor and the management discussion and analysis sections. Now, this may or may not be an attempt to neutralize or obscure any negative information, but in any event, corporate managers have been making it more difficult for both humans and machines to extract any insights from these filings. In other words, it's harder to separate the signal from the noise. So to solve this, we trained a proprietary large language model. And for context, ChatGPT is a large language model. In this instance, though, this is our own proprietary... It's our own large language model, and we trained it with the objective to predict an earnings beat or an earnings miss one quarter out. So we've curated and cleaned the text data from these 10-Ks and 10-Qs so that this large language model could read. I put that in quotes, read those filings in order to make an earnings surprise prediction. And the results have been extremely good. It's so good that we're now incorporating those signals directly into our GEMX composite score rankings. So now, an otherwise obscured data set has become a usable and useful feature with real value in our AI model predictions.

John

[00.12.59]

Awesome. Okay. Well, yeah. Again, very interesting. And I think something else that really stands out to me in the process. And I don't think I'm going to be able to do it justice with sort of the right nomenclature here. But it really is the idea of, of your approach of letting the AI model of GEMX tell you guys what sorts of data points are really the most prevalent among strong stock performers. So maybe to say that, in other words, you don't tell GEMX necessarily to look for stocks that have, you know, X, Y, or Z characteristics. But rather you let GEMX scour loads and loads of both structured and unstructured data and then have it come back to you saying these are the characteristics of companies, or which data points are most likely to be the strongest indicators of strong future stock returns. Is that a decent enough articulation?

James

[00.13.53]

No, no. Yeah. Very good. I would just maybe reframe it, you know, from predictor - because we don't predict stock returns but we predict the features that move stock prices over time. So I would say, you know, what you're referring to are variables of importance or feature importance. And this refers to how much each input variable influences the model's prediction. Because that's what we're doing is we're predicting earnings growth and dividend growth. Believing that over time those features drive stock returns higher. But we don't predict stock returns per se. So in other words, you know, when we are predicting earnings or dividend growth, which features matter most to that prediction? As you can imagine, a lot of this work is very proprietary. I can give you a sense, though, of some of these feature importance within our dividend and earnings model. In terms of the importance of dividend growth predictions, dividends tend to trend. So, features like the indicated dividend rate, the historical dividend growth, the expected yield, all of these will be very good predictors of dividend growth over time. Now you mentioned unstructured data. This is really interesting because we've got earnings growth predictions and we have dividend growth predictions. One of the features we use to make dividend growth predictions is from our earnings model or our earnings prediction model. And in this case, the probability of an earnings drop turns out to be a very influential feature in predicting dividend growth. So we're using an unstructured data set into a feature into a structured format to make, you know, these these predictions. So it's AI going into AI. It's called model chaining. And it has materially improved our dividend growth predictions. And then feature importance for earnings, again historical earnings growth expected earnings growth, these are all very influential. Obviously profitability, net profit margins are very important. But some of the other alternative data sets we use are macroeconomic sensitivities. You know, sensitivities to the business cycle. And that might be, you know, ISMs, PMI composite index. It could be the yield curve, oil prices, inflation. But how does the business cycle influence these companies ability to generate the earnings growth that we expect? And what influence on that earnings growth do these macroeconomic sensitivities have. And, you know, I think you said it well, in the beginning, you know, this feature importance really is a process that's been refined. So, you know, the AI and our data scientists are iterating, they're measuring, they're pruning, rebuilding. And this is a process that develops until the only variables that are left are the ones that are materially influencing the model's prediction. So it gets better and better over time.

John

[00.17.15]

Great. Okay. I want to pivot a little bit here to talk about the current state of the markets globally. One of the things that we have discussed in terms of the i³ team and its proprietary AI model, and, you know, you just mentioned there this continuous improvement over the last several, several years, which gives them a read, gives you guys really a read on or estimated projections of certain metrics that, you know, like you said, predictions one year out. If we could spend a bit of time dissecting both the US and Canadian markets in terms of what some of these AI signals are telling you, I think that would be particularly informative.

James

[00.17.55]

Sure, sure. You know, with the caveat that things can change quickly. But yes, I mean, you know, right now, in terms of the US market, US growth remains strong. It has moderated a bit, from higher levels. But it's moderated and really stabilized. Technology continues to lead in the US from a sector perspective. Financials are strong as well. And we have seen recently some improvement in the Health Care sector, Energy and Consumer Staples are the softest in the US. Canada, on the other hand, is the strongest region in our work. That's led really by the Materials sector. Very, very strong earnings growth predictions out of Materials. Obviously, the commodity markets have been very strong. Gold, copper, natural resources, energy is also very strong in Canada. Financials look very good. The Industrials are softening a bit, but nothing alarming there. The lowest predicted growth sector is telecom. So Canada, looks really strong on our work today.

John

[00.19.32]

That's great to hear. I mean, certainly it's had quite a run, Canada, in terms of overall stock market returns. Let's pivot back to US though for a second here and talk about, you know what you mentioned there with US tech. Obviously you guys sound still constructive on the space. Even despite all of the, you know, increasing quote unquote bubble talk in and around the tech space from the media. But based on what you guys are seeing in terms of signals or projections from GEMX, from the AI model, what would you say to people that believe that these big tech valuations have just got too overly inflated?

James

[00.20.27]

Yeah, yeah. Well, I mean, technically the technology valuations are certainly rich relative to history. I mean, I think that's demonstrable. The question really is whether or not that's justified. You know, as we discussed, technology still shows substantial earnings growth potential, earnings growth. Even with that recent moderation, our earnings growth predictions for technology stocks suggest very strong relative earnings profile. I would also add that, you know, we include traditional valuation metrics like price to earnings, price to book, price to cash flow incorporated into GEMX's composite score. So that does influence our rankings and signals. We also monitor valuations through our intrinsic value work. So we can see where companies are trading versus what their intrinsic value is, what their fair value is at any given moment. And you know we also, it's very similar to a P/E same concept. But we map our earnings growth predictions with the sector price returns. So we can get a correlation or movement between are prices and earnings moving together. Does it appear tight. And I can tell you just from our work, of all the sectors, Technology seems to have the best relationship between price returns and expected earnings growth. So, all of that being said, that's not to say there's not pockets of speculation that there's not, you know, highly valued, story driven names with little to no earnings. But generally, that has not been true for the companies that are driving indexes higher. You know, today's big tech leaders are very high quality. They're established companies delivering real revenue, substantial free cash flow and strong earnings. And so those valuations,

while they are lofty, they are anchored to a strong secular growth profile. And not just absolute earnings growth but relative earnings growth. And this is something that we've consistently seen in our predictions. But you know we have a weight of the evidence approach. Everything looks good right now. Again that's not to say things don't change or can't change, but you've got to weigh that risk also with the risk that, I guess you can call it, timing risk or trading risk. The risk of getting too bearish too soon or getting too skeptical without any rational basis. And that's what GEMX really can do, is keep us rational for a lot longer and avoid some of these timing risk errors. But certainly high, high multiples, you know, bring more fragility to the equity markets...a lower margin of safety means, you know, skepticism or disappointments could lead to rapid profit taking. We saw some of that in November, but right now there's really no immediate cause for concern. I would add, you know, we do have a meaningful allocation to technology stocks. But we're also very well represented in kind of that high quality defensive area, whether it's health care, defensive industrials, stocks that have, great downside capture potential and, international stocks that help with diversification. So between this all weather portfolio of secular technology stocks, defensive growth and international stocks we've done very, very well in periods or elevated bouts of market volatility.

John

[00.24.37]

Okay. Well that's great to hear. I mean, certainly amongst a lot of these headlines is, is all the CapEx, the capital expenditures that these tech names are putting into, you know, their AI build outs and are the earnings going to follow suit? And you know, as you said, this was a point in time. But from your standpoint, it looks like AI is telling you, yeah, earnings growth is pretty robust.

James

[00.24.56]

Yeah yeah, I mean again you know that could change. But the visibility is there on our work, for now.

John

[00.25.04]

Excellent. Okay. Let's pivot to really your flagship mandate, Guardian's flagship mandate, managed by the i³ investments team, obviously has a focus on global dividend growers. How do dividend paying stocks look relative to their higher growth non-dividend paying counterparts today? And how do you go about positioning dividend exposure to clients in what feels like sort of this hypergrowth environment?

James

[00.25.31]

Yeah. Well, you know certainly dividends you know, relative to the growthier, areas of the market. Dividends is a factor have really struggled this year. High beta, momentum have been two of the best performing factors this year. And the dividend factor has been amongst the worst. That's really because equity markets have been driven by risk. And that began with, you

know, improved expectations for economic growth after Liberation Day. And it was followed by much better than expected earnings in the second and this quarter. And now we've got, you know, an easing cycle from the US Federal Reserve. Today actually ends quantitative tightening. So that adds more liquidity. All of this is biasing capital towards higher growth speculation and non-dividend paying stocks. So but you know we really don't position dividends any different today than than we always do. I mean dividends are a high quality and low risk. We believe our strategy is a core equity holding. It's going to deliver, it's designed to deliver...we attempt to deliver a higher probability of growth and income over a market cycle. And, you know, to those people that are concerned about, you know, risk on, dividends are a great diversifier to risk. I mean, they're demonstrably high quality. Dividend growth signals the secular viability of a business. But very specifically, in terms of earnings quality and financial strength, very high quality characteristics, which translate typically into lower risk in terms of standard deviation and beta and, as we mentioned, better downside protection. And over the long run, dividends are a significant contributor of market returns. Ned Davis has, you know, his famous returns by dividend policy for the S&P 500. And since 1980, dividend growers have annualized 10.9% return, dividend payers annualized 9.89%, non-dividend stocks - half that return 4.7% annualized since 1980. And companies that cut their dividend lost 0.4% since 1980. And by the way, dividend growers and dividend payers, you know, twice the returns of non-dividend paying stocks, but they've done it with lower risk. So this is what we're trying to expose our clients to. This is the outcome. I guess I would say that we're managing to deliver a high probability of earnings growth that we believe will lead to a high probability of sustained and growing dividends. And over the long term, this is really how you build wealth. It's, you know, each individual year dividends are going to contribute more or less. You know, some years investors are going to want, you know, multiple expansion, you know, for their payout other years investors, when they're more rational around risk, will want, you know, dividends for payouts. But over time, dividends win.

John

[00.28.52]

Okay. Well, we're getting close to time here. We try to stick to about half an hour of content here. So, why don't we get to... I want to give you an opportunity, though, to speak, for, I don't know, let's say 30s to to give you the lightning round of maybe a name or two that is held within the i³ portfolios that you feel you and the team got a lot of conviction towards right now, something that's really screening very, very positively.

James

[00.29.16]

Yeah. Well, you know, just real briefly, you know, some of our larger positions, you know, probably represent, high conviction, Broadcom, Apple, Microsoft. You know, together, these three, you know, represent the really vertically driven or, I'm sorry, vertically integrated AI-driven growth. Broadcom enabling the infrastructure boom, Microsoft monetizing AI at the platform and application layer. And then Apple AI benefits directly to consumers. Alphabet's another name that has worked really well lately. Really emerging as maybe the AI leader. It's an integrated AI platform in and of itself, covering infrastructure, chips, Google cloud, consumer distribution, search, and now even Gemini, and as you know, Gemini three has emerged as the

advanced model. It's made tremendous gains in reasoning and multimodal performance. But the other big story is they trained this model on their own proprietary chips, TPUs, tensor processing units. So just to be really quick, you know, this could be a potential competitor to Nvidia who has a stranglehold on the supply chain. And there's of course, rumors that Meta is interested in purchasing these chips. I would also add that these tensor, these TPUs, tensor processing units were developed in collaboration with Broadcom, and now they're one of our holdings. And then again, you know, healthcare has been improving. We love our AstraZeneca, Johnson and Johnson and AbbVie all have very strong pipelines, diversified product portfolios, business models that can weather market volatility outside the US. Financials are really strong. Allianz and AXA and then in Canada, RBC another great name. And then on the discretionary side we've been underweight discretionary, but we really like TJX. It's a consistent performer in either risk on or risk off markets and has both defensive and growth characteristics in retail. So again, what I try to represent is kind of an all weather strategy, secular growth, defensive growth. And a little bit of cyclical in there.

John

[00.31.39]

Sounds like a great mix. Well good stuff. Well, this is, like I said your first time on the podcast. We do like to have a little segment at the end of every session which we call, "by the way", where we touch on some interesting tidbits of information that maybe fly under the radar or don't get as much press; that people might not be aware of. So I've got a few here to kick us off, and then I'll turn it over to see if you've got anything for us. So sticking with the AI related theme of our episode, really, point number one that I came across is that, according to a recent report by the Saint Louis Federal Reserve, generative AI adoption actually hit just under 55% of US adults three years after ChatGPT launched. To put that in context, that was far faster than PC personal computer adoption. It took three years for them to get to 19.7% adoption amongst US adults, whereas with the internet, 30.1% of adults had adopted the internet after three years. So this is almost doubling the internet adoption rate, which is pretty staggering. I think we can all recognize, you know, it went from kind of cool concept to almost ubiquitous in our daily lives for business and or personal uses. So I found that one interesting. The second one is, ChatGPT has now 800 million weekly active users as of September data that I could find. It took Facebook a little over a decade to achieve that same level. So again, pretty staggering growth for the AI usage rates there. 71% of images on social media now are AI generated. And then maybe, you know, this one isn't so great, but I think there's some advances in efficiency going on right now. But the AI ecosystem right now has a bigger environmental footprint than the entire aviation industry. And then the last point, a little fun one here coming out of US Thanksgiving, as I said. I think everybody's aware of this sort of discussion point around the Thanksgiving table that turkey makes you sleepy because it has tryptophan. Yes, it is true that turkey does contain tryptophan, but it is actually a myth that turkey puts you to sleep. I found that in order to actually enter into a quote unquote food coma that people complain about after eating a big turkey meal, you'd actually need to consume 8 pounds of turkey yourself in a single sitting. So, listeners, please don't try that at home. James, though, over to you. What have you got that's interesting this time around?

James

[00.34.10]

Wow, that was interesting. Well, kind of in the same vein. There was a big data industry research report compiled by IBM that suggested that roughly 90% of all the data in existence today was created in the past two years. That's an explosive growth in data. And, you know, as we discussed earlier, a lot of that data is unstructured. And I bring this up because I think it underscores the need to have a tool that can unlock insights and patterns from this data, similar to what we what we spoke about. This data can get easily overlooked or may not be as quickly identified by humans, but that will give managers like ourselves, and we believe we have this advantage, it's an information advantage and the ability to exploit that asymmetry of information is structural. And so, well, you know, as I mentioned earlier, this is just, you know, one of the reasons why I truly believe using AI as a tool in the investment process is really the future of active management because it is going to require very sophisticated tools and techniques to unlock some of this value that the market hasn't yet discounted into prices.

John

[00.35.35]

Well, that was fantastic, James. Really appreciate again your time and all of those those insights that you shared with our listeners. I would love to get you back on if you're willing in you know, a few months time to check back in and see what the AI models are saying as things evolve.

James

[00.35.48]

Yes. Thank you so much for having me John, this is this is really fun, I appreciate it.

John

[00.35.55]

Well, anytime. And for listeners, if you are enjoying the podcast, please, again, as I say all the time, please consider subscribing or following us to get all of our latest episodes. We really do truly want to hear from you as well. If you have any feedback or or questions you want to ask us, you could send those through to insights@guardiancapital.com and we will endeavour to get back to you with whatever you're looking for. Join us again, though, in a couple of weeks where myself and David Onyett-Jeffries will, as we do every month, take a look at macro happenings in and around markets just before the holidays. Thanks again everybody. Take care and we'll see you next time.

Important Disclosures

* This podcast is intended as a general source of information about Guardian Capital's i³ Investments™ Team and their approach to investing. i³ Investments™ Team is a portfolio management team with Guardian Capital LP, a registered portfolio manager. GEMX is the i³ Investments Team's proprietary analytics model, incorporating AI into a multi-factor algorithm programmed and trained by the i³ Investments team. The i³ Investments™ Team combines

quantitative and fundamental analysis in managing investment portfolios. The quantitative component of the team's investment process has evolved as new tools and datasets have become available and, over time, new quantitative models which incorporate aspects of artificial intelligence have been incorporated. The i³ Investments Team provides a modern approach to portfolio construction, combining the advantages of quantitative analysis, big data, and artificial intelligence with the experience, perspective, and decision-making of our investment team. The application of quantitative investment analysis that incorporates artificial intelligence and machine learning in a forecast model is forward-looking and the simulated results are subject to inherent limitations. Investment strategies which rely on predictive artificial intelligence and quantitative models may perform differently than expected, as a result of, among other things, the factors used in the models, the weight placed on each factor, changes from the factors' historical trends and the limitations of technology in the construction and implementation of the models. There is no guarantee that the use of the quantitative model and artificial intelligence will result in effective investment decisions. There are no guarantees that dividend paying stocks will continue to pay dividends. All investments are subject to risk, including loss. There is no assurance that any investment strategy will be successful. James Francis is employed by Alta Capital Management, LLC, a U.S.-based affiliate of Guardian Capital LP, and is engaged in the marketing and promotion of Guardian Capital LP's investment products and services in Canada and the U.S.

This commentary is for informational purposes only and does not constitute investment, financial, legal, accounting, tax advice or a recommendation to buy, sell or hold a security. It shall, under no circumstances, be considered an offer or solicitation to deal in any product or security mentioned here in. IT is only intended for the audience to whom it has been distributed, and may not be reproduced or redistributed without the consent of Guardian Capital L.P. this information is not intended for distribution into any jurisdiction, where such distribution is restricted by law or regulation. References to particular companies or securities, if any, are included for informational or illustrative purposes only, and are not an endorsement, recommendation or sponsorship of any security or entity cited. Views expressed regarding a particular company, security, industry or market sector should not be considered an indication of trading intent of any investment funds or current holders of any investment funds. Portfolio holdings discussed are as at a particular point in time, and may not be representative of the fund's current or future investments, or imply that investment in the securities identified were or will be profitable. There is no assurance that these securities will be purchased in the future or are currently held in the fund's portfolio. Please read the prospectus or fund facts before investing as it contains important information, including a summary of the risks about the Guardian Capital mutual funds and exchange traded funds. Commissions, trailing commissions, management fees and expenses all may be associated with investments in mutual funds and ETFs. You will usually pay brokerage fees to your dealer if you purchase or sell units of an ETF on a stock exchange. If the units are purchased or sold on a stock exchange, investors may pay more than the current net asset value when buying units of the ETF, and may receive less than the current net asset value when selling them. The indicated rates of return are the historical annual compounded total returns, including changes in unit value and reinvestment of all distributions, and do not take into account sales redemptions. Distribution or optional charges or income taxes payable by any security holder that would have reduced

returns. Performance is calculated net of fees. Mutual funds and ETFs are not guaranteed. Their values change frequently and past performance may not be repeated. Guardian Capital mutual funds and ETFs are only qualified for sale in certain provinces or territories of Canada. The opinions expressed are as of the date of publication and are subject to change without notice. Assumptions, opinions and estimates are provided for illustrative purposes only and are subject to significant limitations. Reliance upon this information is at the sole discretion of the reader. This commentary may include information concerning financial markets that was developed at a particular point in time. This information is subject to change at any time, without notice and without an update. This commentary may also include forward looking statements concerning anticipated results, circumstances, and expectations regarding future events. Forward looking statements require assumptions to be made and are therefore subject to inherent risks and uncertainties. There is a significant risk that predictions and other forward looking statements will not prove to be accurate. Investing involves risk. Equity markets are volatile and will increase and decrease in response to economic, political, regulatory and other developments. Investments in foreign securities involve certain risks that differ from the risks of investing in domestic securities. Adverse political, economic, social, or other conditions in a foreign country may make the stocks of that country difficult or impossible to sell. It is more difficult to obtain reliable information about some foreign securities. The costs of investing in some foreign markets may be higher than investing in domestic markets. Investments in foreign securities also are subject to currency fluctuations. The risks and potential rewards are usually greater for small companies and companies located in emerging markets. Bond markets and fixed income securities are sensitive to interest rate movements. Inflation, credit and default risks are all associated with fixed income securities. Diversification may not protect against market risk, and loss of principal may result index returns are for information purposes only and do not represent actual strategy or fund performance. Index performance returns do not reflect the impact of management fees, transaction costs or expenses. Certain information contained in this document has been obtained from external parties, which we believe to be reliable, however, we cannot guarantee its accuracy. Guardian capital LP is the manager of the Guardian Capital Funds and ETFs, and also manages portfolios for defined benefit and defined contribution pension plans, insurance companies, foundations, endowments and investment funds. Guardian capital L.P. is a wholly owned subsidiary of Guardian Capital Group limited, a publicly traded firm listed on the Toronto Stock Exchange. For further information on Guardian Capital L.P., please visit capital. All trademarks registered and unregistered are owned by Guardian Capital Group limited and are used under license.