EPISODE 52:

A Closer Look at the CPPIB Report: What You Need to Know

[INTRODUCTION]

[0:00:05.3] Benjamin Felix: This is the Rational Reminder Podcast, a weekly reality check on sensible investing and financial decision making for Canadians. We are hosted by me, Benjamin Felix and Cameron Passmore.

We had a good episode today where we talked about the biggest topic I think was the CPPIB and the report that came out saying "Hey look, active management is good" so we talked a lot about that but also we talk about value stocks, talked about when to take CPP so two CPP topics.

[0:00:31.2] Cameron Passmore: A little bit on the MB Management take over by Scotiabank and what they're doing to lower fees and bring more management in house. Four good topics.

[0:00:39.8] BF: This is our 52nd episodes which we – as we noted in the episode, takes us to a year of the podcast.

[0:00:45.2] CP: Happy anniversary and hope you keep listening.

[INTERVIEW]

[0:00:53.9] BF: Welcome to Episode 52 of the Rational Reminder Podcast. That's 52 weeks, that's one year.

[0:00:59.1] CP: The long – actually, it hasn't been a long ride, remarkably short ride but yeah, 52 episodes done.

[0:01:05.2] BF: That's our one year, first anniversary of the podcast.

[0:01:08.2] CP: You can tell, we're very well prepared for the anniversary celebration. With topics today, we got kicked off with good one here. I know it's pretty near and dear to your heart.

[0:01:15.5] BF: You always say that. I think that a lot of people were pretty fired up about this one, the CPP performance analysis that the PBO, the Parliamentary Budget Office put out arguing or demonstrating whatever you want to call it, that the CPPIB, that's the CPP, Canada Pension Plan Investment Board, this report is showing that their active management strategy, which started in 2006, has added value.

It's done better than CPPIB would have done if they've just continued indexing which is what they were doing before 2006.

[0:01:47.1] CP: They've been the punching bag, they manage your coin and lots of articles over the last couple of years in the national post, just hammering away at them because they used to be very low cost, largely passive index strategy before then. Hardly any cost whatsoever over the past 12 years have really ramped up cost and exposure to different asset classes.

[0:02:08.6] BF: Yeah, their expenses have gone up, orders of magnitude, and they've gotten into more exotic asset classes like investing directly in private businesses, directly investing in real estate in addition to public equities. Anyway, these report came out, apparently there was, Cameron said parliamentary interest or something. People were interested.

[0:02:27.9] CP: That's what I was wondering, is this a regular report or is this a one off?

[0:02:31.4] BF: No, it's said in the report that it was due to some sort of political interest that I guess, someone had asked for it to be done. Anyway, we read the report and found some issues.

[0:02:43.2] CP: A lot of our friends online found issues, I know Preet Banerjee was quite vocal online about it.

[0:02:48.2] BF: Yeah, what they did, it's a little bit hard to work backwards and figure out exactly how they did the calculations because it included all the contributions which I don't have that data. I can't go on rerun exactly the analysis that they completed, but the way that they explained it was, this is how much in dollar terms, the CPP fund is worth.

This is how much it would have been worth if they'd used passive management instead. That's how they ran the comparison. One of the things they did that was kind of a red flag in my mind was to compare to do the comparison, they assumed the same operational expenses, for the index strategy and for the active strategy.

[0:03:32.2] CP: What do you mean by that?

[0:03:33.7] BF: The CPPIB's fee, whatever you want to call it, their costs or 84 basis points, I think it's 84. From the wording in the report, it looks like they used 84 basis points also for the index strategy.

[0:03:46.5] CP: To make the argument that fees really aren't an issue, we're taking fees of the table by making the same and both but in reality, on the index side, it's much cheaper.

[0:03:54.7] BF: Yeah.

[0:03:54.8] CP: 70 basis points, 80 basis points cheaper.

[0:03:58.4] BF: Yeah, exactly. That was something where I kind of raised an eyebrow, that's not even the biggest issue, you're not even close

[0:04:03.6] CP: What's the biggest issue? The asset?

[0:04:07.7] BF: Yeah. They take CPP –

[0:04:08.5] CP: That's that small print that you showed me.

[0:04:09.9] BF: Yeah, well the small print, I don't know if I wrote that down, you have that small print written down?

[0:04:14.0] CP: Well it is a 70/30 comparison portfolio.

[0:04:18.0] BF: Yeah, but the small permit was the wording there was interesting, I should pull that up but while I'm pulling that up, I can still talk about the biggest issue. The biggest issue was, they compared the CPP portfolio which has an asset allocation –

[0:04:33.8] CP: I've got it here. The asset mix on the CPPIB is eight and a half percent infrastructure and 1% credit investments, 10% government bonds, cash and return strategies, 12% in real estate, just over 3% in other real assets. 33% in public equity. Only a third of the portfolio was public equities and just under 24% in private equities.

[0:04:58.0] BF: That's a pretty exotic asset allocation and in this report in this PBO report, the compared it to a 70/30. 70 global equities, public equities. 30% Canadian nominal bonds. They actually did three different comparisons, they said, here's how it would have looked if the index portfolio was 55% equity, here's what it looked at 70% and here's what it would have looked at, at 85%.

Now, they used 70% as like the main comparison in the report but they did show some sort of tolerances around what if it was a little bit more aggressive for the index fund, what if it's a little bit more.

[0:05:35.5] CP: Okay, you read this and flags are going out. Tell us what sort of decision you decided to go make your analysis on?

[0:05:43.5] BF: Well, I went into Morningstar Direct and tried to dig up indexes for each of the asset classes. Because if you're benchmarking, you can't bench mark one portfolio that consist of a bunch of different asset classes to a portfolio that consist of more different asset classes.

The overlap in terms of asset classes is pretty small between a 70/30 stock bond portfolio and the CPP portfolio.

[0:06:08.3] CP: Okay, you built up what you would say is a more risk appropriate type benchmark? To compare it to?

[0:06:12.7] BF: Yeah, I went and dug up, I found 10% footsie global core infrastructure because there's infrastructure in the CPPIB portfolio. 10% Bloomberg, Barkley's aggregate credit. 10%

footsie Canada, all government bond, 13% SMP development reap, 33% SMP global large mid which is the same equity, public equity index that they use in that report. 24% LPX composite total return, LPX is an index provider for private equity.

They're doing listed private equity companies, the LPX index, but the index has been designed to be a representation of the private equity.

[0:06:51.0] CP: This be better diversified than the CPP portfolio, do you think? Any sense of a numbers?

[0:06:56.2] BF: Who knows. That's secondary, right? It's like we just need to know okay, CPP is investing actively in this various asset classes. How would they have done if they had just held the indexes. I can't even look at that because I don't have enough data on the CPPs performance to say, how my index portfolio did, how did they do, but what I did do is just took their 70/30 reference portfolio that I use in this report to compare it to CPPs performance, ran the performance numbers on that from June 2006 through March 2019 which is the report span. And then I compared that to my risk appropriate index portfolio.

[0:07:35.8] CP: And do tell, what did you find?

[0:07:39.1] BF: Well, the risk appropriate portfolio that I created, it had very similar performance to the 70/30 portfolio, like nearly identical, it was of by 18 basis points I think. But, this is the big but and this is the whole basis of the issue of how they did this benchmarking. The standard deviation, the volatility for my risk appropriate portfolio was much higher.

You got similar returns from the risk appropriate fancy index portfolio, relative to the plain vanilla 70/30 portfolio, similar returns but the fancier index portfolio had much higher standard deviation.

[0:08:16.8] CP: At the surface, it looks like CPP? It's good. Similar returns, lower volatility, that's a good thing.

[0:08:22.4] BF: But it's not lower volatility. That's what I was saying, it's higher volatility. For my index portfolio. I don't have volatility data for CPP.

[0:08:29.7] CP: I get you now. I thought you were saying that it had lower.

[0:08:33.5] BF: Assuming that CPP's, well okay, assuming that volatility is a good measure for risk and assuming that CPP's volatility, CPPIB's volatility is similar to my index portfolio then if those things are true, then this is a riskier portfolio. Which you'd expect. When you look at what CPP's holding, they've got the infrastructure, they've got the private equity, they've got the direct real estate, those are all relatively volatile and illiquid asset classes.

[0:08:59.1] CP: Right.

[0:08:59.6] BF: They have more risk. Now, that's the core of the issue. CPP is comparing a relatively liquid and safe 70/30 traditional stock bond portfolio to a much riskier in different ways, portfolio that has all these exotic asset classes in it.

So, what I did then was said okay, well what if – here, actually, I wrote down the performance numbers, I didn't think I had them. For my risk appropriate benchmark, that's the one where I used all these fancy indexes. The annualized return over the report period was 6.86%, the 70/30 benchmark, 6.68%. So it trailed.

Adding all these exotic asset classes –

[0:09:37.0] CP: There's your 18 basis points, yup.

[0:09:39.4] BF: Right. Now, CPP and their – or the PBO and their report showed that the CPP portfolio outperformed by 1.2% per year on average. Even based on this, it looks like they beat their risk appropriate benchmark.

[0:09:54.6] CP: These are before or after fees?

[0:09:56.6] BF: My index thing is before, there are no fees taken off. CPP's performance was reported net of fees. Like I said before, we have this similar performance for the fancier benchmark and the regular benchmark, somewhat in line with the numbers in the report, but

then we look at the standard deviation, standard deviation for my risk appropriate benchmark is 11% whereas the 70/30 portfolio is 8.08%.

I said okay, how far can I push my equity exposure so that the standard deviation matches that of my risk appropriate benchmark for CPPIB.

[0:10:31.8] CP: Fascinating.

[0:10:33.0] BF: I could go all the way to 100% equity of stocks which is like 100% equity index. 7.36% then becomes the annualized return with the standard deviation of 11.18% compared to 11.01 for the CPP benchmark that I created.

[0:10:48.5] CP: Wow.

[0:10:49.3] BF: To get the same level of – now again, we're assuming that volatility is a good measure for risk and we're assuming that the indexes that I've used for private equity in real estate and those things are properly capturing the volatility of those asset classes but if that stuff is true, then in terms of volatility, we could have had just a much more aggressive equity portfolio with a similar amount of risk as measured by standard deviation which resulted in over this time period a substantially higher return.

[0:11:19.7] CP: Arguably, more liquidity.

[0:11:21.3] BF: More liquidity.

[0:11:22.1] CP: More mark to market and for a portfolio like the CPPIB that really has a lifetime horizon, infinite time horizon.

[0:11:31.1] BF: That's part of their argument, part of CPPIB's argument is that they have this extremely long or infinite time horizon which is why they're investing in these illiquid asset classes and sure, maybe there is a liquidity premium but –

[0:11:43.6] CP: It cost dearly to get it.

[0:11:44.8] BF: Yeah, it's not cheap. Anyway, based on this brief analysis and I'm no expert in benchmarking or performance attribution or anything like that. That's a whole science on its own but based on these numbers – if we're measuring risk as volatility which like liquidity probably isn't captured in there. I guess it depends on how the assets are valued.

That's interesting about the NPX index that I used, or the LPX index that I used, it's tracking listed and private equity companies. If you think that it would capture the risk is volatility fairly well because they're publicly listed private equity firms.

The volatility liquidity aside and evaluation aside, the market should be capturing the risk of those securities.

[0:12:27.4] CP: Do you think it's a little disingenuous to compare the portfolio to a simple 70/30 index portfolio?

[0:12:32.2] BF: I don't know if it's disingenuous or if it's misguided but I think the big issue that I have with it is that I had a couple of questions from people this week saying, you know, are you sure that indexing is still the right way to go because it looks like CPP is beating the market.

[0:12:46.3] CP: Because that was the headline that was picked up by the outlets.

[0:12:49.1] BF: Yeah. That's no good, going and telling people look, active management does work, meanwhile, the benchmarking is in my opinion way off. When you correct for the asset class exposures, at least based on this time period, you would have been better off just with a more aggressive portfolio of equities.

Yeah, disingenuous I would say, that's a good way to describe and the other thing, Andrew Coyne pointed this out in his article. The other thing is that even if assume there was alpha of this time period and CPPIB really did outperform a risk appropriate benchmark? Even if that's true, the data on active manager's ability to continue to outperform once they've outperformed is horrendous.

[0:13:38.5] CP: Perhaps even more so it was such a huge portfolio like this. They must get harder and harder to find investments that can have a meaningful impact on that portfolio.

[0:13:47.1] BF: Maybe that's why they're going into private markets. I mean, I would assume that the people running CPPIB are smarter than us. I would assume, they're managing pretty big portfolio but you can't argue with the data. The other thing, just to cap off this discussion, the other thing that's always interesting to look at is the NACUBO report which we've talked about a while ago in the podcast.

You look at the 10-year performance of all US, NACUBO is – I can't remember

[0:14:14.2] CP: National Association of College and University Business Officers.

[0:14:17.8] BF: There you go, it's endowments for colleges and universities in the states and they report their performance in NACUBO presents that in a report. Their 10-year performance on average was 5.8% and then you go and look at the largest institutions so that's assets over one billion, they've got 58% in alternatives, that's private equity, venture capital, direct real estate, fancy stuff, like CPP has.

[0:14:43.5] CP: I think it's simple 60/40 index beat the vast majority of them, right?

[0:14:46.8] BF: It was so, yes. 60/40 portfolio did beat them but then the interesting thing that I pulled out of the NACUBO report is that if you look at the smallest endowments with less than 25 million, they've got only 11% in alternatives and their average return was only a couple of basis points lower. Even within the – I agree, over this time period as ending 2018, a 60/40 portfolio, I didn't run the numbers on it but I believe it's 60/40 portfolio did as good as, if not a little bit better than those numbers, but the thing I found interesting was, those larger endowments that are all loaded up with all the private fancy stuff.

Barely did any better than the smaller endowments with less of that. Anyway, I think that that report was irresponsible, I think was irresponsible to put that out there because it now makes Canadians think that active management is –

[0:15:38.7] CP: That's the main takeaway, I mean, you got to question articles like that headlines like that and dig into the details.

[0:15:44.5] BF: CPP to its credit or CPPIB is extremely well capitalized and it is globally regarded as one of the largest and best run pension funds in the world so maybe what do we know, you know?

[0:15:57.1] CP: It's worth it to bring up the debate and inform people.

[0:15:59.7] BF: Yeah, I would love it if they follow up with another version of this report that does some risk appropriate benchmarking or some more –

[0:16:06.1] CP: I'd love to have someone from there as a guest.

[0:16:07.4] BF: More detailed performance attribution or something like that.

[0:16:10.5] CP: On to current topic number two. This one I'd called it, it was only a matter of time. Last October, MD Financial announced that it was being taken over by Scotiabank so it was a huge transaction, they paid over two billion dollars for almost 50 billion dollars of assets over at MD Financial. MD is an organization that provides financial services to doctors and their families, we have a number of doctors that have experience that MD Financial.

This headline I caught this morning in one of the feeds that we get. On June 13th, MD announced, I quote, "A realignment of portfolio management responsibilities for a number of the MD funds and pools." Basically, they are again, I'm quoting, "leveraging their relationship with Scotiabank to reduce annual investment fees by approximately six million dollars". Just a great headline.

I'm not saying that this is necessarily a bad thing but what they have done is they've shifted some of the asset managers away from the managers that were there before over to managers that are owned by of course, Scotiabank.

One of them that was added in was Jarislowsky Fraser which is a firm, it was in the big headline just over a year ago, so Scotiabank acquired Jarislowsky Fraser in May of last year and then they rebranded their own Scotia asset management a number of years ago to what's called 1832 Asset Management. That was the year that Scotiabank was founded.

Again, it may not be a big deal, maybe in the client's best interest but it's not surprising to see a bank kind of go vertically integrated to a greater scale on their products that are used in the MD pools.

[0:17:46.9] BF: Like you said, it's no surprise. I mean, Scotia didn't pay that kind of multiple for MD's assets without expecting some sort of synergies with their existing business. That's why these acquisitions happen in the space.

[0:17:58.8] CP: I think that's why a lot of the doctors that we know are less than pleased with how the whole thing went down because they kind of thought it was in the doctor's best interest having this organization but maybe this transaction ended up not being – maybe, I don't know.

[0:18:10.8] BF: Well, I think if nothing else, the transaction highlighted for a lot of physicians that hey, wait a sec, these guys weren't actually sort of for doctors by doctors. This is business and I think more and more doctors over time have realized that MD is a financial institution like any other. Selling financial products to make money.

[0:18:31.8] CP: Did you notice on the chart, the amount that the expense ratio is failed by?

[0:18:35.8] BF: I didn't look.

[0:18:37.0] CP: Most of them, the vast majority of the ones failed by one basis point.

[0:18:40.6] BF: Big savings.

[0:18:41.5] CP: A few fell between two and five basis points and one fell by 10 basis points. But one thing, I went on the website this morning to see, because I always wondered why has MD not really embraced evidence based investing indexing. I mean, doctors, their decisions are based on evidence so it would be a natural fit for them to go indexing which they haven't done in a big way. However, there is a big button on their website right now and they offer the MD precision index portfolios.

I hadn't seen this before and it's offered through MD XO or EXO direct which I assume is the robo offering.

[0:19:13.2] BF: It is, yeah.

[0:19:14.1] CP: Looks pretty slick, it's a good looking platform and good looking portfolios but it's certainly not the dominant pitch on their web page.

[0:19:21.3] BF: Yeah, well they rolled out last year, they did partnership with Qtrade I believe where they rolled out discount brokered platforms through MD and they also rolled out the XO service through MD. They rolled out a bunch of different services last year and they kind of segmented their clients differently starting last year. But the XO was there, part of that. They pushed younger doctors toward that robo platform.

[0:19:45.0] CP: Portfolio topic. "Does value still make sense?" Its' a question that's come up quite a bit certainly in our circles, a few clients have asked about it I think.

[0:19:55.6] BF: Well, you look at the performance of value relative to growth over the last decade. It's been pretty bad, in the US, 10-year value premium has been annualized so per year, minus 3.29%. That growth stocks have beaten value stocks by 3.29% per year on average for the last decade.

[0:20:15.3] CP: Yeah, it's not compared to the market, it's comparing growth to value.

[0:20:18.4] BF: Right.

[0:20:20.0] CP: It's a two ends of barbells of the market.

[0:20:22.2] BF: Then you look at the last three years and that performance difference. The amount that growth has beaten value in the US. Per year. 7.24%. Those are big numbers. Annualized 7.24% over three years, that starts to be serious money. Then the EUFE, the Europe Asia Far East Index has had a minus 2.75% premium for the value for the last decade. That's a value trailing growth by 2.75% per year on average for the last decade in international developed markets.

Canada value has actually been pretty good over the last decade, it's been positive, 3.19% value over growth. In Canada, we've been a little bit insulated from the death of the value premium and I say that in just the value premium and it's not actually dead, we're going to talk more about that in a sec.

But I mean, that type of underperformance for three years, that's ugly.

[0:21:15.4] CP: Especially compared to a broad index for example, that will be heavily growth weighted.

[0:21:19.2] BF: Right. You look at our portfolios are value tilted and a lot of investors in general were following the evidence anyway will tilt the portfolios toward value. That's really hurt and that's part of the story of value, it's part of the risk.

[0:21:35.0] CP: Well it's heard. I mean returns has still been good.

[0:21:37.1] BF: Relatively speaking though not so good and especially when you have all the hype around the fame companies.

[0:21:42.1] CP: Well I agree a 100% but it is not like the returns have been negative. It's just the delta has been negative.

[0:21:45.9] BF: Right but you eat the delta. It's economic cost. Anyway, so when we look at the US stock market which is where we have the most data, so it is the richest place to look going back to 1929, which is when most of the easy to access data starts, there have been 10 historical tenure periods. So since 1929 until now they're –

[0:22:12.9] CP: So rolling.

[0:22:14.1] BF: Well I think I have wrote down the – did I write down the periods? No, I didn't.

[0:22:18.7] CP: So 10 historical decades going back to 1929 were value trailed growth.

[0:22:23.5] BF: It was rolling periods but I looked at the decades. They weren't overlapping. So that it 10 independent decades where value trailed growth. So I mean where we are now this 10 years of underperformance that can happen and it has happened on multiple occasions, not that often.

[0:22:42.4] CP: And we tell people all the time that this likely will happen.

[0:22:46.2] BF: Oh it absolutely will happen. If there was no expectation that periods like this would happen then there would be no premium.

[0:22:51.7] CP: Correct, so the big question is no one really disputes that there is a value premium is what it's causing this and will it persist.

[0:22:58.6] BF: Well that is a big question. So like you said, there's no question that there has been a value premium like I listed the last. I should have done the data for all the way back but when you go back as far as the data for any geographic region, the premium for value has been positive, meaningfully positive. I wish I pulled those numbers but like as negative as it has been now, it's been that positive in the rest of the data set just as one decade that we are in the value has not been so attractive.

So there is no dispute, there is no disagreement. No one is saying that the value premium doesn't exist but the big question is, does it exist because value stocks are riskier or does it exist because people miss price growth stocks or miss price stocks in general and the reason that matters is that if the value premium is a risk premium, it should persist. If it is a risk that's priced into stocks, then it should persist. There should be a premium in excess in the market going forward. However, if it is a behavioral phenomenon it is not so obvious that it is going to persist.

[0:24:00.5] CP: Did people get smarter in how they trade, therefore it might just go away.

[0:24:03.7] BF: If it is a behavioral error and people get smarter and realize that it is an error then it can go away. It can be arbitraged away but if it is a risk premium you can't arbitrage away risk premium so we would expect it to persist and especially in time periods where we are

in now where there has been this extended period of underperformance of value, that questions becomes really important. Is it a risk based premium or is it behavioral premium?

We dug up not all the research, I would be over reaching if I said it was all the research, because this has been researched extensively, but I dug up a pretty broad selection of the core research on this topic. Is it behavioral or is it risk based?

[0:24:37.2] CP: So we'll go through one by one and then take away the key points of each?

[0:24:40.2] BF: Yeah, I figure that we put a little short notes for each of them, so I think we can just go through so the behavioral explanation in general terms is that investors overreact to the growth potential of growth stocks and also overreact to the lack of growth of value stocks. So if investors are overreacting to the expected growth of growth stocks, then we would expect the prices to mean revert to come down.

[0:25:02.9] CP: So they over love and over hate and realize that the love isn't justified they dump it, right?

[0:25:06.5] BF: Correct.

[0:25:07.4] CP: And the ones they hate they really don't like it at all. They drive it down far too low.

[0:25:10.5] BF: Right and so there you would expect if that is true, there are going to be some mean reversion and that was as far as I know, one of the first research papers that was done on this was done by Warner Dubant who I have never heard off, sorry Warner and Richard Thaler who – I mean maybe that is why I said that because it is contrasting with Richard Thaler who I have heard of and most people have heard probably have.

[0:25:31.1] CP: Nobel Prize Winner.

[0:25:32.2] BF: And he is one of the fathers of behavioral economics. So anyway, they did this paper in 1985 where they were looking at this exact question. They looked at whether or not there's mean reversion in value and growth over the long term, which they were suggesting

would support the existence of this overreaction. So they form portfolios based on past stock returns, used that as a proxy for the hype factor and what they found was stocks with low pass returns did tend to have higher future returns.

So they in their paper proved that there is this overreaction. Now don't worry there is more to come that disagrees with that but that is 1985 and then in 1994, Lakonishok Shleifer and Vishny, this is another very highly regarded paper in the space, their hypothesis was that past earnings and sales growth are extrapolated too far into the future by investors resulting in stocks with high sales growth being overvalued and stocks with low sales growth being undervalued.

So that was that original suggestion that I talked about where you get that overreaction. So they did a paper and showed with their research that that was in fact the case.

[0:26:45.3] CP: That investors do overreact, on both ends.

[0:26:48.6] BF: Correct and so now we have this two metrics. So in the first 1985 paper from Thaler, we have the past stock returns as one sort of proxy for the overreaction and under reaction and then in the Lakonishok paper, they presented past sales growth. So companies with high sales growth that would be a proxy for the overreaction. So now we have these two behavioral factors that we can look at. So then in Fama and French in 1996, they looked at both of those past papers.

And a bunch of other papers and they found as you would expect Fama and French to find that in any differences in future returns that could be explained by sales or its growth, which is what Lakonishok looked at, or long term reversal of returns, which is what Thaler looked at, they found that those things were equally explained by the size and value factors in the three factor model.

[0:27:39.6] CP: Because they did this paper what four years after their seminal paper in '92 right?

[0:27:44.6] BF: Correct, so in Fama and French's paper they said, "Okay, we see that you have done this research and that is fine and we see the data but the behavioral factors that you

proposed they are not actually adding any explanatory power to the model. So you use a free factor model, your behavioral factors are not actually adding any value.

[0:28:02.3] CP: So market size and value explained it.

[0:28:04.2] BF: Correct. Now, the reason it gets really tricky and it is tricky is that both of those types of factors, the behavioral and the risk based, so the Fama and the Thaler and the Lakonishok, all of those different factors actually produce a similar value premium. So then the question and this is a listener question that I had not too long ago by email, someone asked, "How do you know what the right explanation is?" like they both produce similar premiums.

So they're kind of interchangeable in terms of definition of value, so how could you – I could say that a behavioral factors are a bad proxy for the risk based factor but you could equally say that the risk based factors are a bad proxy for the behavioral factors. So what is the truth? So I found a paper, a 2014 paper by David Blitz, Bart van der and Matthias Hanauer.

[0:28:57.9] CP: You're on a first name basis with Bart.

[0:29:00.4] BF: I am not trying to be rude, I swear that is somewhat challenging name to pronounce. So they looked at global data, which most of these papers have looked at US data but they looked at global data and then they were setting out to test the overreaction hypothesis. Well they found what I just described. They found that both of these proxies, behavioral and risk based produced similar results. So what they did that was really interesting and unique is that they ran cross sectional regressions on these global stock returns that they'd been looking at.

So they went and reproduced, okay value as defined by book to market, which is the risk based factor versus sales growth versus past stock returns, these all give you similar results in terms of in terms of a premium. So then they ran a cross sectional regression and they add a couple other factors like market beta and size, cross sectional regression the simplest way that I can describe it based on reading the paper is that they are controlling for each of the factors for each month of this regression to see where the premium is actually coming from.

So in other words, if we control for book to market, are the behavioral factors adding any value? If we control for the behavioral factors is book to market adding any value? And what they found

and to me this is pretty profound and meaningful, they found that if you control for book to market, the other factors including the behavioral factors add zero explanatory power.

[0:30:26.1] CP: Wow.

[0:30:26.7] BF: They add nothing, they are not driving returns and then you go the other way, if you control a behavioral factor, book to market is still the one that is explained in return.

[0:30:36.2] CP: It is the one that's driving returns, which is the risk based story.

[0:30:39.4] BF: The biggest drivers were momentum and book to market in their cross section regression. So that I mean, nothing is conclusive I guess. These are all models and they're all hypotheses and estimates and whatever you want to call them, but this analysis to me was profound like I said because they really showed using these cross section regression that book to market, which is the risk based factor that is the one that is driving returns. It's not the other ones, the other ones just happen to be proxies for the risk based factor.

[0:31:08.9] CP: Yeah and the quote that you have here is quite powerful. Based on these findings, we conclude that the empirical support for the overreaction hypothesis is quite weak.

[0:31:17.8] BF: Yeah and I think the first part of that quote is pretty cool too. They do a better job describing your analysis and I just tried to but they said if we disentangle the contribution to return of various factors, evaluation is significant while the overreaction indicators are not indicating the evaluation ratios are really driving differences in future stock returns and then the quote finishes like you just described it. I haven't seen this paper before but I don't know how you argue with that.

[0:31:45.2] CP: So to take it full circle, it gives credence to the fact that there is a risk based story, therefore you would expect it to persist and we have just gone through with a decade and it should go back to having a positive expect of return.

[0:31:55.6] BF: Yep and you always have to go, I think in one of these papers it was talking about the basion thinking, which I know we have talked about in the podcast before but it is just

that idea that humans tend to overreact to recent information. So we've had this recent decade of value in underperforming. So people start thinking, "Well maybe value is not so good."

[0:32:11.1] CP: So you say it is going to be behavioral or reaction to something that is risk based?

[0:32:14.7] BF: No, I am saying that –

[0:32:16.0] CP: I am joking. The investors are going to be overreacting to the fact that value of under deliver to premium.

[0:32:20.1] BF: Yes.

[0:32:20.8] CP: I was trying to be funny and nerdy kind of way I guess.

[0:32:24.2] BF: Your facial expression was so blank, I didn't know that you were trying to be funny. There you go, anyway so one of the things that we can't definitively say although I think this paper got somewhat close, we can never definitively say that it is a risk based explanation or a behavioral explanation. We can't assume investors are perfectly rational, there is no way to do that but this paper, the way they did a cross sectional regression to show what was driving returns, to me that is just compelling as it gets.

[0:32:49.3] CP: All I know is we had a similar period back in the late 90s and a lot of people lost their faith in value and things turned around. I think we had data a couple of weeks ago showing how fast this can turn around and you have to keep the faith.

[0:33:00.2] BF: Well there was the data that you were talking about that is March 2000 I think versus March 2001 where if you looked on those dates maybe imprecise but if you look at the value premium for every time period, one, five, 10, 20 year period ending March 2000 I believe, the value is negative every single period and you shift forward one year to March 2001. Not one year where the value premium was negative.

[0:33:27.3] CP: So under the planning topic we're good to go. So the question we get a lot is when should I take my CPP, my Canada Pension Plan, so it comes up very often and it is

something that we are going to be doing a lot more work on but today, we kind of go over the basics and give some rules of thumb and some are thoughts around this. So the basics on CPP, so it is a Canada Pension Plan like we described in item number one today.

So the contribution rate for people now is 10.2% so half matched, half by you half by your employer. If you are self-employed you pay the whole 10.2%, but when to take it because you can take it as early as age 60, the normal age is 65 or you can take it as late as age 70. There is no benefit to deferring it past age 70.

[0:34:11.0] BF: Can you defer that? I guess I never make you take or do that. You have to apply for it.

[0:34:15.8] CP: They don't take it but then it doesn't increase. So normally just 65 if you take it earlier is reduced by 0.6% per month. So 7.2% per year. So if you take it out of age 60, it is 36% reduction. So the maximum benefit if you are taking it at age 60 is 738 a month.

[0:34:34.6] BF: $738.00

[0:34:36.0] CP: A month, if you qualify for the maximum.

[0:34:38.2] BF: We should just real quick while I let you continue this thought but the contribution rates, you mentioned that they have gone up a little bit and they are actually going up every year for the next few years until 2023. So there is an increase this year, there is an increase next year and each year up until 2023 and then after that, they are actually additional enhancement above the yearly maximum pensionable earnings. So right now, who do you know at the YMP's this year, 57,000 or something like that?

[0:35:05.2] CP: It is in that range.

[0:35:06.5] BF: So if you pay in the CPP and your employer matches on your first roughly $57,000 of income whatever the yearly maximum pensionable earnings is in that year and as of now in excess of that, you don't continue contributing. So if you are making a $114,000 a year, you will notice that half way through the year, your paychecks go up and that is because you have maxed out CPP and what they are doing after 2023.

So they are increasing the contributions on that base amount on the yearly maximum pensionable earnings and then post 2023, they are also doing an additional enhancement. So there will be more contributions above the yearly maximum pensionable earnings.

[0:35:41.4] CP: So it becomes a bigger deal on retirement planning. It will be bigger numbers, bigger contributions and it is complicated. It is really complicated. So if you take it later than 65, the benefit goes up by 0.7% per month. So 8.4% per year. So to maximum of 42% increase at age 70. So the maximum you can get at age 70 is 1,638 a month. So obvious question is, do I take it early at 738 or take it later at 1,638 per month?

[0:36:09.4] BF: Keeping in mind that if you are taking it at 60 there is 10 years where you are not getting any benefit.

[0:36:15.0] CP: Right.

[0:36:15.7] BF: Sorry, if you're taking it at 70 you are foregoing the 10 years of benefit that you could have had by taking it at age 60.

[0:36:20.6] CP: Yeah, although it is less than half, you are getting it 10 years earlier. Here are some interesting data. I pick this up today. So at 312,000 people who started CPP in 2016, 126,000 did so at age 60. 93,000 started at the normal age 65 and only 4,800 out of the 300,000 people waited to age 70. So clearly people are taking it when they can by and large.

[0:36:44.0] BF: That is interesting because statistically only not only optimal in every case, which we are going to talk more about but the statistically optimal thing to do generally would be to wait until 70.

[0:36:53.3] CP: Yeah, if you have a normal life expectancy. So right now, a man at age 60 can expect to live another 23 years to age 83 and across over, depending on the rates of return that you assume is somewhere in the mid-70. So if you are going to live beyond age 70, you are better off to wait. So then statistically speaking you are better off to wait.

[0:37:11.1] BF: There are some other interesting stuff in there too like I know something that a few people have written about in the past is that if your expect of returns is really high, then you are better off taking it earlier and investing.

[0:37:21.3] CP: Absolutely.

[0:37:21.8] BF: How many retired people have really high expect of returns? Probably not many but it is an interesting component.

[0:37:29.0] CP: The other thing I read about too, I think it was Rob Ingen talked about this is that if you are going to have a large RRIF balance when you turn 71 and start paying when you are 72 that might cause OAS call back. You might be better to defer your CPP benefit and burn down your RSP earlier therefore having small minimum RRIF payments later on. So yeah it is a very kind of –

[0:37:49.0] BF: Oh it is by case by case.

[0:37:50.0] CP: Case by case because people do often ask us, "When should I take CPP?" as if there is a simple answer but it is extremely case by case and we'll often do one off because it is always one off. It will be often be one off analysis to figure out for this individual situation based on all the other stuff that they have going on and also, what is your objective? Is it to get the most money as possible as you can or is it as Rob pointed out in the article, is it about longevity insurance?

Because if you have 1,638 a month and you happen to live to a 100 years old, you might be very happy to have that built into your plan.

[0:38:20.8] BF: But you cannot guarantee how long you are going to live, there's that.

[0:38:23.2] CP: Well that's just it, you are looking for a long term protection or the most amount of money as possible out. I was just looking into dropout years, which is something we have to do more work on but at age 65, you are able to drop off the eight lowest income years. At age 60 it is roughly seven of the lowest income years fall off in the calculation. So let's say for example, you retire in your late 50s and you have no further income the question becomes,

"Well should I take it at 60 because of the number of years that are going to drop off or wait until 65?"

Well again, that is a personal choice because you have to go back and look at did you have low income years earlier in your career or not, so it is very, very customized.

[0:39:03.1] BF: Yeah, well if you are in your contributory period until you are 65 and you can drop off at your eight lowest income years. So if you retire at 60, say you maxed out so you have to have the 39 and a half years of max contributions to get the max, right?

[0:39:23.3] CP: I believe so, yeah.

[0:39:24.4] BF: And the way they define your eight lowest income years, which is actually by month at your 96 lowest income months, the way that they almost through by years, they stayed up by months though anyway.

[0:39:34.4] CP: I see it was months in the table.

[0:39:35.7] BF: Okay, so the way that they calculate your lowest income periods of time is as a fraction of the early maximum pensionable earnings. It is not an absolute dollar amount. It is what percentage of the yearly maximum pensionable earnings did you make and then they drop off the eight lowest contributory years. So if you've worked 39 and a half years and you're 60, then delaying wouldn't have any effect because you've already got the 39 and a half to get the maximum benefit.

And the five years from 60 until 65, if you know you can drop off your eight lowest years, if you don't contribute for those five years, those are going to be your lowest five years and they are going to drop off but if you are 60 and you have already had eight say no income years.

[0:40:19.7] CP: Lower years so you may want to start your CPP right away.

[0:40:21.7] BF: Then you might want to start your CPP earlier. So there are definitely some tricks and snags that can be pretty tough to understand when it comes to when to take CPP. Another one that I find interesting is if you are taking CPP and you die the survivor benefit to

your spouse assuming that they are over the age of 65 is 60% of the benefit that you are receiving but up to the maximum benefit that they could be receiving.

[0:40:49.3] CP: Correct.

[0:40:49.9] BF: Which is another tricky aspect.

[0:40:52.5] CP: So to look at the health of both spouses then perhaps.

[0:40:55.0] BF: If your spouse is already getting the maximum CPP benefit and you die, they will get nothing in addition to what they were getting before. Like there is no survivor benefit if your spouse is already getting the max that they could be getting.

[0:41:07.1] CP: Exactly.

[0:41:08.2] BF: It is not so easy to understand and it is so case by case like just that last thing we were talking about with the drop off is you got to know for that individual person how many low income years or no income years did they have and that informs when it makes sense to take CPP.

[0:41:20.4] CP: And so many people say, “Well I am at the max. I have been at the maximum forever,” but the average payment is well below the max though. What is the average? I had it, I think it was about half.

[0:41:29.8] BF: 600 something dollars. I haven’t looked at it in a while but it is roughly half.

[0:41:33.5] CP: Anyways, fascinating topic, lots of work to do there. Anything else?

[0:41:36.7] BF: No, I think that’s good. We didn’t have a worst advice but I think that that PBO report on the CPPIB that was pretty bad advice because they are basically their basically saying, “Look, active management works,” which I wouldn’t call that good advice.

[0:41:49.7] CP: All right, see you next week.

[END]