PENAD'S PENSION / BENEFITS INDUSTRY BRIEF

SIGNATURE

ISSUE 24

Strategies for Sustainable Investment Outcomes
PAGE 3

Investing Pension Assets to Do Good: Is It Legal?
PAGE 6

What is Motivating Your Search for a New System?
PAGE 8

Moving Forward with a Bold Vision

It is my great honour to take over as editor of Signature magazine, following the retirement of Frank and Louise. Signature started out as a small in-house company newsletter over twenty-five years ago but grew over time to become a professionally designed full-colour production with insightful articles by leading professionals in the pensions and benefits industry. Here is to another twenty-five years of new growth in new publishing directions!

Speaking of new directions, now that I have fully taken over the reins from Frank as Penad's president (which is a step up from my first job at Penad back in high school, when it was my responsibility to empty the office trash cans twice a week – a job I undertook with pride and thoroughness!), I would like to share a little about what is happening at Penad and our vision going forward.

Matthew Price and his son Oliver, who is scheduled to take over as Penad president in 2049 if he keeps his grades up.

Canadian Gothic ... Frank and Louise Price, who founded and built Penad over the past three decades, enjoying a beautiful sunset as they tend to their garden on the Conestogo River.

The main development over the past 24 months or so is that we have sold and have implemented (or are in the process of implementing) several entirely new software systems for both pensions and group benefits administration, while also building greatly upon the existing system installations of current clients. Things are busy! And what this means for a software company is that we are growing, adding new staff and office space, and are moving forward on several platform initiatives that have been in the planning stages and are now being rolled out. We plan to share these developments in detail in an upcoming issue of Signature and on the company blog, but suffice to say that our PX3000™ administration platform has never looked better and fully incorporates many of the newest technologies that have been on the wish lists of our engineering staff.

Speaking of growth, we are excited to have signed clients in several new countries in the past year, including Barbados and Trinidad. This puts us in around fourteen countries in total, in addition to operating from coast to coast in Canada. This is an exciting time for us and we are actively looking to expand to new markets as we find that there are still a lot of legacy pension and benefits administration systems out there which need to be moved to a secure, user-friendly platform like PX3000™.

I have had the pleasure and challenge of taking over Penad in a very fast changing world. From politics to economics to technology, it seems like nothing is staying the same and we can hardly predict where the world will be in five to ten years. Of course, this is not our first trip around the carousel. Penad started out exclusively doing third-party administration, but our business model has transformed with the times. Who ever thought when it all started, that we would one day get a major portion of our revenue from offshore clients? And who could have foreseen the importance of our pension software line when we started creating our own in-house administration system back in 1983? (Today, sales of PX3000™ systems account for over three-quarters of our revenue.)

One thing we know, in a world where pensions are becoming increasingly important to ensure the secure retirements and benefits coverages of people around the globe, there will always be an important role for Penad to play. Pensions need to be administered and workers need to make benefit claims, which means there will always be a demand for exceptional administrators and leading-edge administrative systems. With this knowledge, despite the challenging times in which we find ourselves, we move forward with optimism and energy!

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STRATEGIES for Sustainable Investment Outcomes

By Dr Subhransu S. Mohanty

The adverse impact of climate change, nationalism and trade protectionism over globalization, technological disruption, growing inequality and geopolitical strains, are some of the major issues clouding global growth prospects. Uncertainties on all these fronts remain elevated and any extreme movement in these areas could lead to contagion effects. For instance, just a one-half meter increase in ocean levels by 2050 would endanger more than 800 million individuals.[1] Some large emerging market and developing economies (EMDEs) have experienced substantial financial market pressures and disorderly financial market developments could disrupt activity in the affected economies and lead to contagion effects. Trade disputes could escalate or become more widespread, denting activity in the involved economies and leading to negative global spillovers.[2]

Pension assets constitute approximately 57.3 per cent of the global GDP of US$ 87.27 trillion at current prices in 2019 and some of the developed economies have greater than 100 per cent pension assets to GDP ratio, such as the Netherlands(167%), Australia(131%), Switzerland(126%), the US(121%) and the UK(102%)[3]. Hence, they can play a larger role in propelling economic growth in the right direction. This would essentially mean a gradual alienation from investments which can accentuate environmental damage and focusing more on boosting human capital through investment in infrastructure and education, health, food security, and promoting trade integration.

Given the sizeable assets under management, we believe that pension fund managers have a three-dimensional performance responsibility — return protection and return enhancement for pensioners, as well as contributing towards the betterment of society and the environment, i.e. applying the principle of 'doing well while doing good'.

It is both a challenge and an opportunity for pension fund managers to steer financial markets towards sustainable solutions. Pension fund managers have an immense responsibility in managing their investments for providing sustainable returns for pensioners with an increased emphasis on the risk management process — investment risk, funding risk and operational risk. The mainstay of any investment strategy has always been a risk-return tradeoff, with pension fund managers allocating around one-third of their assets to quality fixed income securities for lower but sustainable returns. However, investment in public equities has gradually come down from 60 per cent in 1998 to 40 per cent of their assets in 2018 due to a significant increase in investments in other assets such as real estate, private equity and alternatives from around 7 per cent since 1998 to 26 per cent in 2018. These other assets have been attractive from a return perspective and often serve as a means for providing the long-term funding needed for projects that contribute to a sustainable society such as infrastructure, clean energy, education, social housing, food security and start-up accelerators for small and medium businesses.

> Pension assets constitute approximately 57.3 per cent of the global GDP of US$ 87.27 trillion at current prices in 2019

For those focusing on stability and sustainability of returns over a longer time horizon of 25 years, on an average, a 4.5 per cent fixed income return can be achieved at a 4.4 per cent risk by following the BofA Merrill Lynch Australia Corporate Index with a return to risk ratio of 141.36 per cent (Correlation with treasuries 46% and equi-

[1] The Global Risks Report 2019, World Economic Forum.
[2] Global Economic Prospects 2019, World Bank
[3] Global Pension Assets Study 2019, Thinking Ahead Institute

...continued on page 10

Pension News

Should Workplace Pension Plans be More Mandatory?

Governments everywhere are trying to nudge people to save more through various incentives such as tax-exempt pension contributions and structures such as automatic pension accounts (though in most cases members can opt-out). But what about employers? What is their view on providing pensions and, in particular, auto-enrolment plans? One would think that employers' self-interest would tend to push them away from any mandate to provide retirement savings mechanisms and responsibility to collect and remit deductions from payroll.

Well, some data just came in and it appears that in the UK at least, employers think it is a good idea to provide retirement savings accounts and in fact expand their availability. A recent survey conducted by CBI (Confederation of British Industry) and Scottish Widows found wide support for auto-enrolment plans and a desire to extend enrolment to more workers. In the UK, an auto-enrolment framework for worker pension accounts was phased in between 2012-2016, where each employer was required to set up a plan with payroll deductions and automatically enrol each worker. However, workers are exempt from auto-enrolment if they earn less than GBP-10,000 or if they are self-employed contract workers.

In the "Future Savings" survey of 240 employers, 74% wanted to eliminate or reduce the GBP-10,000 earnings trigger and to also make pension accounts available to self-employed workers. As well, 71% of the companies think that employers need to make more contributions to workers' pension accounts to help them provide needed retirement income.

Because the auto-enrolment scheme was just recently introduced, the CBI/Scottish Widows survey also asked if company leadership supported employer-provided workplace pensions. Ninety-eight percent agreed there is a business case to do so, and 95% agreed there is a moral case.

In Canada, meanwhile, Québec is the only provincial jurisdiction to mandate workplace pension plans. Starting in 2014, employers without other pension vehicles were required to enrol in the VRSP (Voluntary Retirement Savings Plans) program. The VRSP is a variant of the PRPP (Pooled Registered Pension Plans). Administration and fund management of PRPPs and VRSPs is outsourced to the financial institutions that provide the plans, so individual employers don't get bogged down with running pension plans.

Meanwhile, other countries also have mandatory pension plans for workers. For example, in 2004 Nigeria launched a national contributory scheme for employers with three or more workers. Perhaps the UK and Québec thought this was a good idea and therefore followed suit a few years later. What about the other Canadian provinces or other countries?

80 Million People in Caribbean and Latin America at Risk of Poverty in Old Age if Pension Changes Not Made

Angel Gurria of the OECD launched the first edition of "Pensions at a Glance: Latin America and the Caribbean" at the Inter-American Development Bank (IDB) in Washington DC. The Pensions at a Glance report provides detailed comparative indicators of pension structures in 26 countries.

One key finding is that 63 to 83 million people in the region will be at risk of living in poverty by 2050 due to inadequate savings and pensions, as a result of only 45 per cent of workers contributing to any kind of retirement plan.

IDB president Luis Alberto Moreno, speaking at the April 20 meeting, said that governments in the region must act now to take advantage of "a demographic dividend that cannot be missed. If we get more people to contribute to our pension systems, and if we adjust the systems to rising life expectancy, we will be able to provide adequate coverage to future generations."

One key finding of Pensions At a Glance is that today there are eight people of working age for every person in retirement, but that rate will drop to 2.5 to 1 by 2050, which underlines the need for governments to act now to ensure that workers are steered into adequate schemes while there is still time.

Withdrawals from Pension Plans Due to Financial Hardship or Medical Disability Costs

Did you know that you (or members of your pension plan – if registered under the Pension Benefits Standards Act, 1985) may be able to make one or more withdrawals from your pension plan for financial hardship or disability?

For financial hardship, the amount that can be unlocked depends on your expected income. If your income is projected to be zero, you can make a withdrawal up to 50% of the YMPE (Year's Maximum Pensionable Earnings). In 2019, the YMPE is $57,400. If your projected income is 75% of the YMPE, you are not eligible to unlock or withdraw for financial hardship.

Note that you can make more than one withdrawal for financial hardship in a calendar year, but you only have 30 days after the first withdrawal to make another withdrawal.

You can also unlock for medical or disability costs, if those costs are expected to be 20% or greater of your expected income in the calendar year. If they are, you can withdraw an amount up to the full medical disability cost, to a maximum of 50% of the YMPE.

There are a number of forms to fill out to make a withdrawal for financial hardship or medical costs, which are reviewed for approval by the relevant regulator.

US State Pension Shortfalls Get Worse

A new report from the PEW Charitable Trust shows that funding for public sector retirement plans in states across the US is getting worse.

New Jersey, for example, has only set aside 38% of what it needs to meet its pension commitments. Because public sector workers' plans are guaranteed by state constitutions, this means taxpayers will be on the hook for any future shortfalls, or retirees may have their benefits cut. At current levels in New Jersey, this works out to USD $10,648 per person. Only two states in the union, South Dakota and Wisconsin, are in surplus positions. The other 48 states have a combined shortfall of approximately $1 trillion.

Compounding the problem is the fact that many states have also made commitments to cover retiree healthcare needs. These healthcare and other post retirement benefits get even lower funding priority than the retirement plans, generally, and unlike the retirement plans, post retirement benefits are not guaranteed by state constitutions. This means that pensioners could be left without coverage if states decide to rewrite the rules when they can no longer afford to pay the benefits.

Welcome aboard

Penad welcomes three new clients representing a very wide range of system development requirements.

Lynch Brokers

This large Group Life & Health benefits broker in Barbados has been in business for over 150 years (since before Canada was a country!!!) and services the needs of approximately 1,000 Employers and their many employees in Barbados and internationally. Penad's Group Life & Health benefits administration solution is being implemented to make it easy for Lynch Brokers to track and service the accounts of each Employer and member and take care of the vast needs of their membership, from invoicing for unique personalized coverages to processing claims to providing easily accessed management reports and Business Intelligence for the sales and service people.

Saskatchewan Association of Rural Municipalities

SARM provides Group Life and Health Benefits to the thousands of employees who work for the nearly 300 member municipalities belonging to the association. SARM was using a complex array of legacy programs with disparate databases to take care of invoicing Employers and processing claims for members. Now all stakeholders are stored and are accessible within the central Penad PX3000™ database and SARM administrators can quickly take care of all monthly processing along with its unique annual billing process.

Investing Pension Assets to Do Good:

Is it Legal?

By Randy Bauslaugh

There seems to be no end of confusion about whether pension fund fiduciaries can use plan assets to achieve positive or responsible social or environmental goals. Despite the confusion, the law is clear. If environmental, social and governance (ESG) factors are used to enhance financial performance or mitigate financial risk there is no question that taking them into account is not only allowable, but might even be legally required. If taking them into account for financial purposes also achieves a collateral social or environmental goal, that's OK too. But taking ESG factors into account for the primary or sole purpose of pursuing social or environmental goals is not legal for pension fund fiduciaries. Investing for good, can only be a secondary or collateral purpose.

A couple of years ago Ontario pension standards legislation was amended to require plan administrators to indicate in the plan's Statement of Investment Policies and Procedures whether plan fiduciaries take ESG factors into account in making plan investments, and if so, how. Before approving an ESG disclosure statement, plan fiduciaries should understand their basic legal obligation or even better, have the statement reviewed by a lawyer.

The legal analysis starts with purpose. The Income Tax Act dictates that the primary purpose of a pension fund must be to provide financial benefits in the form of lifetime retirement income. Accordingly, where ESG factors are relevant to that purpose – financial risk or reward – they are proper components of the fiduciary's analysis of competing investment choices. In that context, they are not illegal and are not merely collateral considerations or tie-breakers. Indeed, ignoring ESG factors that are relevant to financial purpose, may be a violation of fiduciary duty.

ESG factors are often referred to as "non-financial" factors (as Manitoba's pension standards legislation does). If ESG factors are not financial factors, then they cannot be advancing the primary purpose of a pension plan to provide financial benefits in the form of lifetime retirement income. Factors that do not contribute to the financial analysis of competing investment options should not be considered by pension fund fiduciaries. But when ESG factors inform financial performance assessment, sustainability or risk, they are *ipso facto* financial factors and can be, and where they are known and relevant, must be taken into account by pension fund fiduciaries. ESG considerations are often very important financial factors, so labelling them as non-financial simply because they aren't part of the usual accounting jargon is very confusing.

But what about the non-financial interests of the beneficiaries? What about a plan for the Cancer Society or some other socially engaged enterprise? What about using pension fund assets to invest in a way that ensures the foreseeable sustainability of the jobs of the plan members, or improves the communities in which they live and work?

One of the hallmarks of fiduciary or trust law is to treat the interests of the beneficiaries as paramount. But this does not mean pension fiduciaries may exercise their investment discretion to take into account non-economic factors that are not relevant to the purpose of the pension fund simply because it may benefit plan members in some other way. That is true even where the social or environmental investment direction comes about as a result of a vote or survey of plan participants.

By way of example, one cannot presume that a pension fund for employees of the Cancer Society or the Heart and Stroke Foundation can simply adopt an investment policy for their pension fund that excludes investment in tobacco products. It is one thing to ban tobacco investment by the Cancer Society in relation to its donated funds, since the purpose of those funds is to support the goals of the Society, i.e., to reduce the incidence, causes and impact of cancer. It is quite another thing for the Cancer Society's pension fund to adopt such an investment policy for its pension fund. That's because the primary purpose of the Society's pension fund is not to reduce the incidence and impact of cancer, but rather to provide financial income security to its employees in retirement. This is not to say that the Society's main pension plan documents could not be drafted in such a way to impose such limits to achieve social purposes consistent with the Society's mission; but that other purpose would have to be secondary, and it would have to be legally authorized by something other than a statement in an investment policy – preferably a legally sound direction set out in the plan text or trust agreement.

A main contributor to the confusion around the use of ESG factors is the language that labels ESG considerations as non-financial factors. This needs to change. Happily, significant advances in financial analysis research appears to demonstrate that a recalibration of the usual financial metrics is underway. One study conducted in 2015 that combined the findings of about 2,200 individual peer reviewed studies demonstrated that the business case for taking ESG into account in investing is empirically well founded. Roughly 90% of the researched studies found a non-negative relationship between ESG and corporate financial performance (predominantly measured by stock returns). The large majority of studies reported not only a positive correlation with returns, but that the positive ESG impact on corporate financial performance appeared to be stable over time.

Unfortunately, very few of these studies disentangle motive. But they do suggest that integrating ESG considerations into financial analysis results in strong empirical evidence of outperformance. In other words, ESG factors can and arguably should be considered and used as financial factors.

The same cannot be said for ESG factors that are used in a context where the financial risk and return objectives appear to be secondary to achieving a positive social or environmental purpose. Not surprisingly, where the primary motivation for taking ESG factors into account is not financial, the results appear to be less consistent. Investment motivated by non-financial ESG considerations are a mixed bag of values based considerations and moral and philosophical perspectives, with focal points that relate to many different concerns such as climate, employment opportunity, human rights,

or alleviation of poverty, and many include exclusionary perspectives on gambling, alcohol or tobacco. Where the motives for taking ESG factors into account are primarily non-financial, it is not surprising that the empirical evidence, although difficult to isolate, provides a less clear-cut picture than it does for ESG integration motivated by financial goals.

Several jurisdictions are now considering or have passed legislation to require pension fund fiduciaries to indicate whether they consider ESG factors, and if so, how. One good piece of legal advice is never say "never". Pension fund fiduciaries who say such factors are never taken into account may simply be making an admission that they do not fully understand their legal duty as pension fund fiduciaries. And that is true even where the fiduciary is merely passively invested in mutual funds, including those adopted for money purchase arrangements. In that case the disclosure statement might be as simple as "We consider the extent to which our investment managers incorporate and engage on ESG factors, as one of many criteria in the investment manager selection process."

> **Doing good all by itself is rarely going to be accepted as proper for pension fund fiduciaries.**

There is no end of confusing language around ESG factor integration. Its not surprising that a fiduciary might mistakenly conclude that a proper purpose is to do good – to promote ethical behaviour or to achieve social or environmentally responsible behaviour. But doing good all by itself is rarely going to be accepted as proper for pension fund fiduciaries. On the other hand, pension fund fiduciaries are frequently able to achieve positive collateral effects by complying with their legal obligation to focus on using ESG factors for financial purposes.

A proper perspective on ESG for pension fiduciaries is one that sees it as financial insight, not as doing good. More information is usually better than less information when making investment decisions. As a result, fiduciaries, fund managers and their consultants should be demanding better and more fulsome ESG disclosure. They should also be considering appropriate ways to engage on ESG issues to enhance financial performance or mitigate financial risk. The motive ought to be to manage financial risk and reward by using ESG considerations just like any other considerations in the financial risk-performance-assessment matrix.

Fiduciaries and their advisors who understand this will no doubt gain more confidence in devising and disclosing appropriate ESG investment policy that first and foremost serves their fiduciary duty to plan beneficiaries. And who knows, it may also spin off some other social or environmental good.

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Documenting ESG Disclosure: Do's and Don'ts

Do get the disclosure checked by a lawyer. Any written statement can and will be used in evidence. It is expected fiduciaries will engage with their actuarial consultants and investment professionals, but the final copy should be reviewed by a lawyer.

Do keep the disclosure short and to the point. Four or five sentences should be sufficient for most pension funds, except possibly larger funds that engage in direct investments and more sophisticated investment consortia or investment structures. More documentation will be required to support particular actions that are taken, but that will usually be in the form of minutes of particular decisions.

Never say 'never.' Fiduciary duty requires pension fund fiduciaries to consider relevant factors. If a relevant ESG factor is brought to the attention of the pension fund fiduciaries, they should not ignore it. If fiduciaries determine that they will not consider ESG factors they know about, they better explain it.

Don't get too specific. Fiduciary duty requires factors relevant to financial performance and financial risk mitigation to be considered and others to be ignored. Many factors are contextual and cannot be anticipated. A general reference is less likely to provide evidence that fiduciaries unreasonably restricted their discretion or ignored or excluded relevant ESG factors that arose after development of a policy statement. A general reference should be interpreted as including the broadest range of ESG factors, so fiduciaries might consider referencing whatever radar system they have in place for picking them up, rather than the factors themselves.

Don't confuse ESG investment practices with Impact Investing, SRI or ethical investing. If an investment goal is social or environmental change, fiduciaries better make sure foundation documents or other legal parameters support it. The disclosure should indicate they appreciate the differences and it should provide some legally valid reason to demonstrate that they are properly exercising their fiduciary duty and not violating the usual duty to act in the best financial interests of plan members.

What is Motivating Your Search for a New System?

Before you begin your search for and acquisition of a pension or benefits administration software system, it is important to know what is driving your quest. Here are some possible motivating factors:

Because you want to get better control of data.

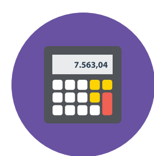
You have a vision of finally resolving troubling legacy data issues and making sure that your administrators and management have easy fingertip access to data that is both up-to-the-minute and accurate. (Too many pension plans are sitting on top of serious data management issues that undermine the entire administration process – converting to a new software system can help clean these up.)

Because you want to increase administrative efficiency.

For example, do you know how many administrative FTE's (Full Time Equivalents) it takes to administer every 1,000 pension plan members in your plan? Once you figure out the answer, the next question is, "How many administrators are optimal? Will the software system we are looking at help us reduce administration labor costs while also improving other efficiency metrics such as response times on standard transactions as well as ad hoc information requests?"

Because you want to reduce IT overhead.

Many pension administration system setups require constant attention from IT people. Is that normal? Shouldn't the computer system be easy enough for administrators to create the reports they need and handle all the aspects of administration on their own, without needing to call the IT department regularly for assistance? Even worse, many legacy systems require expensive assistance from the software vendor for basic things like creating or developing reports or mining the database for data. Can a new system alleviate this IT workload?



Because you want to contain external costs.

Pension plans are getting increasingly expensive to maintain, especially when factoring in the expense of external auditors, actuaries, and consultants. A pension administration system may help to contain costs by handling more transactions, benefit calculations, and even commuted value calculations. By properly organizing the data, a new system can significantly reduce the workload (and hence the price-tag) of external projects such as audits or valuations.

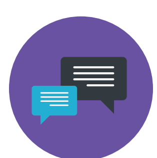
Benefits of a Formal Analysis Process

As you begin to think about your motivating factors for adopting a new system, be sure to document the thinking and questions and findings of your team, so that the analysis process is formalized. The benefits of doing this include the following:

- Clarify issues and problems.
- Identify areas that require further research.
- Assess team functioning (both "strengths" and "things to work on").
- Leads to development of SMART goals based on the key issues.
- Bring discipline to the process.

Because you want to minimize risk.

All stakeholders in a pension plan, from pension plan members to the plan sponsor, from managers to trustees, from administrators to advisors, are at risk if aspects of the pension plan are not properly managed or controlled. If fraud happens, if data is wrong or simply lost, if benefits are not calculated correctly, if investments are mishandled, if contributions and service is not properly tracked, and if plan members and managers cannot get timely correct responses to ad hoc information requests, then everyone loses. A well-engineered administration software system can help to ensure that everything that is supposed to happen does happen (or that timely exception reports alert managers to key deficiencies).



Because you want to improve communications with stakeholders.

A well-designed pension administration platform can help to give all stakeholders a clearer picture of the current status of things. Too often, plan members and others are in the dark or have access to out-of-date or incomplete information. With the right system, pension plan members can access up-to-the-moment account information and statements online, administrators can easily send out up-dates and important information as well as easily responding to ad hoc information requests, and employers, compliance managers, regulators and others can get the reports they need, when they need them.

Because you want to integrate with related systems.

Pension administration is all about tracking and managing the contributions and service of plan members, but it does not take place in a silo. The pension plan members are enrolled in companies or organizations through the HR department, they are paid through the payroll system (and in fact their pension contributions are usually withheld from their paycheques and remitted to the pension department on their behalf), and after they retire they sometimes receive their pension amounts through an organization's own pensioner payroll system. An obvious objective of obtaining a new system, then, is to integrate with related systems and find ways to leverage efficiencies.

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If you would like a copy of the full Penad White Paper on pension system acquisition (what you read here is but a mere tad), please email info@penad.ca.

...continued from page 3

Strategies for Sustainable Investment Outcomes

ties 6%), Bloomberg Barclays Global Aggregate Index with a return to risk ratio of 117.31 per cent (Correlation with treasuries 95% and equities -25%), Bloomberg Barclays Global Aggregate - Corporates Index with a return to risk ratio of 96.14 per cent (Correlation with treasuries 63% and equities -5%), BofA Merrill Lynch Canada Corporate Index with a return to risk ratio of 94.17 per cent (Correlation with treasuries 66% and equities 16%), JP Morgan Government Bond Index Global with a return to risk ratio of 91.85 per cent (Correlation with treasuries 100% and equities -32%).

Over a similar longer term horizon of 25 years, equities can provide a 6.9 per cent return at 14.2 per cent risk. Those who want to explore deeper into equity markets, should note that their risks are systemic, cross-sectional and time-varying in nature. We find that return seasonality exists in the global equity markets and many markets tend to have relatively high (or low) returns every year in the same calendar month. We find that most of the global equity markets had very high returns in the months of April and December and negative returns during the months of May, June, August and September. The annualized average return across all the markets was as high as 31.37 per cent for developed markets (DM) and 44.9 per cent for emerging markets (EM) in the month of December, followed by 25.84 per cent for DM and of 37.7 per cent for EM in April, 14.77 per cent for DM and 24.5 per cent for EM in January, 13.99 per cent for DM and 20.1 per cent for EM in February, 11.41 per cent for DM and 14.2 per cent for EM in March, 16.09 per cent for DM and 21.3 per cent for EM in July and 10.26 per cent for DM and 12.5 per cent for EM in October.[4] While the more adventurous ones can bet on these seasonal trends in equities, we also found that markets have their own characteristics, depending upon their level of informational efficiency and maturity, among other things. The key takeaways from this research[5] are that though the CAPM provides an excellent risk-return framework and the market beta may reflect the risk associated with risky assets, there are opportunities for investors to take advantage of dimensional and time-varying return anomalies in order to improve their investment returns. Through our analysis of return variations linked to market factor anomalies or factor/dimensional beta using the Fama-French 3 factor, Carhart 4 factor, and Asness, Frazzini and Pederson (AFP)'s 5 and 6 factor models, we found significant variations in explaining sources of risk across 22 developed and 21 emerging markets with data over a long period from 1991 to 2016. Each market is unique in terms of factor risk characteristics, and market risk as explained by the CAPM is not the true risk measure. Hence, contrary to the risk-return efficiency framework, we find that lower market risk results in higher excess return in 19 out of the 22 developed markets, which is a major anomaly. However, although in the majority of the markets, the AFP models result in reducing market risk (15 countries) and enhancing Alpha (11 countries), it is also very interesting to note that, the CAPM is second only in generating excess returns in the developed markets, as these markets are more efficient in terms of information dissemination. Our study shows that each market is unique in its composition and trend even over a long time horizon and hence a generalized approach in asset allocation cannot be adopted across all the markets.

Going deeper into market factor characteristics of equities and applying the responsible investing principles of Environment, Social and Governance (ESG) factors on them, we find that, Alpha, Sharpe, Sortino and Treynor ratios of ESG overlay on factor-based strategies, particularly on 'low volatility', 'multi-factor', 'quality' and 'value' in that order, reduce both systematic and idiosyncratic risks to a large extent and can provide excess return to investors investing in the global equity markets. Both relative to the market benchmark and risk-free rate, the Low Volatility ESG Index recorded the best risk-adjusted return, i.e. an expected return of 87 percent as compared to 80.1 percent for Multifactor and 72.2 percent for Quality ESG for 100 percent of given risk.[6]

Finally, taking a cue from Black-Litterman's global equilibrium model and market clearing concept, we believe that investors will go for strategic or tactical asset allocation, only if they have some forward looking views or indicators. In one such portfolio optimization process using the Index of Economic Freedom (IEF) as a risk-return smoothing parameter for global equity markets, we found that significantly superior portfolio performance can be achieved at a lower risk. Our study shows that the Index of Economic Freedom contains superior information in terms of idiosyncratic country-specific risks which the market seems to ignore or under price.[7]

Investment in other alternative assets would require a thorough knowledge and understanding of investment opportunities—across strategies, geographies, industries, whether available through funds or direct investments, in the primary and secondary markets. While non-financial impact is important, the financial viability of the venture is key, especially for venture capital or growth stage investments. Developing sustainability risk metrics and an emphasis on new product development to enhance the available investment opportunity set would provide fund managers with more options for achieving sustainable returns. We will deal with these alternative assets in the next issue of Signature.

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[4] Based on own research covering MSCI country indices from January 1970 to September, 2018 for developed markets and from January 1988 to September 2018 for emerging markets. Taken from 'Do Bulls and Bears Act Seasonally? Evidence from the Global Equity Markets', International Journal of Finance and Economics (under review),

[5] Does One Model Fit All in Global Equity Markets? Some Insight into Market Factor Based Strategies in Enhancing Alpha, Mohanty S S. International Journal of Finance and Economics, 2018; pp. 1–23

[6] Taken from own research 'Alpha Enhancement in Global Equity Markets with ESG Overlay on Factor-based Investment Strategies' (under publication)

[7] Mohanty, Subhransu, Enhancing Portfolio Performance in Global Equity Allocation with a Forward-Looking Indicator (2018). The Journal of Investing Winter 2018, DOI/10.3905/joi.2018.1.073

Ready to Invest in BitCoin?

Pension fund managers are starting to think seriously about getting in on the new asset class known as cryptocurrency (eg Bitcoin, Ethereum, etc.). In May, Fidelity Investments released a survey of 400 U.S. institutional investors, finding that 22% already have some exposure to cryptocurrency and another 40% who are open to such investments in the coming few years. What could possibly go wrong with investing pension money in the untraceable non-governmental e-currencies favoured by drug dealers and arms smugglers?

A couple of years ago, one lucky Penad staff member attempted to buy into Bitcoin when it was trading at just over $1,000 per coin and was around seven months from touching $19,000. The experience went like this ...

First, figure out how Bitcoin works. The basic idea behind a blockchain currency (which is what Bitcoin is), is that you buy a unit of currency and you store the currency in a digital wallet. On the cryptocurrency's end, they have a file called a ledger, which records, in sequential order (the blockchain), all the owners of each Bitcoin or fraction thereof and to whom it was transferred. So, if you sell a Bitcoin or use it to buy some heroin or sunglasses (effectively transferring it to a new owner), the ledger records the new owner.

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But how do you first get your hands on some Bitcoins? That is where our attempt to get in on the action led to some strange discoveries. It is not like you can just go to the bank and purchase one. You need a Bitcoin exchange where an agent happily takes your money, goes out and accesses some Bitcoins on your behalf at the trading price (less a substantial transaction fee), and then sends you the link for your coins. Sounds easy enough, except these exchanges are completely unregulated and therefore you have no idea if you will ever see your Bitcoin after you send the money. If you are a fund manager for a pension fund, try explaining that to your boss why you sent money to a stranger to purchase a virtual coin with zero intrinsic value, only to have the funds disappear.

If you manage to safely navigate the purchase, you then need to store your Bitcoin, either in a virtual wallet which resides with a service provider online, or in an actual digital wallet, which is an encrypted thumb drive or hard disc that you keep in a secure location. If you lose the password to the wallet, there is no way to recover your Bitcoins. If you own an actual wallet, you could lose the disc it is stored on. There is a famous case of a guy who had mined thousands of Bitcoins when they were worth less than a penny each. He left them on a hard disc, which he mistakenly threw in the trash one fine day. They eventually rose to $142,000,000 in the dump.

Oh, and what about a virtual wallet? Would you trust your valuable coins with some service provider on the internet? The owner of such a virtual wallet and crypto exchange in Nova Scotia died unexpectedly late last year, and it turned out he was the only person with the passwords for the digital assets stored on his hard disk. His wife looked everywhere for the passwords, but his customers ultimately lost hundreds of millions of dollars.

Finally, how secure an asset is a crypto coin itself? A Bitcoin has no intrinsic value or underlying assets such as real estate or an operating profit-making company behind it, so the currency is propped up simply by the confidence of the next purchaser. In real estate speculation, they call this the "greater fool" strategy, where your success is based on your ability to find a greater fool than yourself to pay you more than what you paid. As well, the cryptocurrency itself, founded perhaps by a 19-year old kid in his basement, might not be stable for the long haul. An example of this is Ethereum (founded by a 19-year old kid in his basement in Toronto), which essentially split in two last year after a hacker breach and robbery. As a result, the coin price dropped from nearly $2,000 to less than $200 and has barely recovered since.

Bitcoin itself has significant structural problems, such as the size of the ledger file mentioned above. Every time a person buys a pair of sunglasses with Bitcoin, that transaction is added to the ledger. Being a blockchain, the ledger is the ultimate logfile of who owns which Bitcoins, so there are thousands of computers around the world storing copies of the ledger to make sure everyone who needs it has a record. As the number of transactions keeps increasing almost exponentially, the ledger gets bigger and bigger (it is currently 250 GB) which leads to storage issues and also problems with updating speed. Bitcoin can reportedly process five transactions per second, currently. MasterCard? 38,000.

So, are you ready to throw your pension money into crypto? This Penad staffer, after doing the research and seeing the many risks (and the huge environmental footprint of mining Bitcoins – another story), decided to not go ahead with his planned purchase. Then he sat back and watched the price increase 19-fold over the next seven months.

In the real world of professional investments, there are moves afoot by some big players to try to create index funds and other vehicles for investing in cryptocurrencies. Fidelity Investments in the US has tried to solve the insecure wallet problem by introducing "Fidelity Digital Assets" late last year with a framework for secure custody and trade execution. So, now there is a secure mechanism to hold the coins, but it may be awhile before pension funds have enough information to bet the assets of their retirees on this emerging asset class.

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