



Pensions, Climate Change and a Just Energy Transition

Zoë Yunker, Jessica Dempsey, and James Rowe
University of British Columbia & University of Victoria

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ABOUT US

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About the Authors

Zoë Yunker (zoey@uvic.ca)

Jessica Dempsey (jessica.dempsey@geog.ubc.ca)

James Row (jkrowe@uvic.ca)

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Introduction

Canada's pension fund assets almost mirror the entire country's gross domestic product, and this percentage has nearly doubled since 2008 ("Funded Pensions Indicators," 2018). The considerable power and financial heft of pension funds means that their investment strategies are central to either mitigating or accelerating the climate crisis. The UN Intergovernmental Panel on Climate Change (IPCC) makes it clear that surpassing the 1.5-degree limit will cause catastrophic changes to our planet and those living on it (International Panel on Climate Change, 2018). Now that we have surpassed one degree of warming, the imperative to reduce emissions and transform our energy system has never been more urgent.

Transitioning away from our fossil fuel-dependent energy system will require astonishing amounts of capital: between 2019 and 2015 it is estimated that \$120 trillion will be required to finance fossil fuel alternatives (Lacey et al, 2019). Canada's pension funds appear to be unfit for the challenge ahead, continuing to direct billions of dollars into the fossil fuel industry through all forms of asset classes (Rowe et al, 2019; Yunker et al, 2018). Meanwhile, a new financial discourse replete with investment vehicles and codification systems has emerged in response to the climate crisis. This discourse goes by many names, but it is generally captured by the term "green finance". It is one of the fastest growing financial sectors, and is presumed to become a new standard of investment ethos as we move closer to the devastating impacts of climate change.

The question is, does "green finance" offer a viable infrastructure for energy transition? As this paper will go on to explain, the answer depends largely on what we envisage "energy transition" to consist of, and on the values which undergird it. As we stand at the precipice of climate crisis and the energy transition which will necessarily flow from it, the opportunity to shape the next energy system presents itself in real time. Here, we suggest that thinking about pension capital as a support structure for a just energy transition that considers the lives it impacts requires having a deeper conversation about the purpose, role and responsibilities bound up in pension funds themselves.

Like many institutions subject to interests of power and the politics they engender, the role and purpose of the pension fund is a matter of perspective. While labour has often envisaged pensions as a means of producing retirement security and (in some cases) supporting local economic development, corporations and the finance sector typically focus on pensions as a site for economic productivity and capitalization. These alternative visions of pension capital have subsequently animated a long-held détente between unions, the financial sector and employers around two core debates: who should have access to coverage, and how the assets of funds should be invested.

Maybe unsurprisingly, pension funds' reform process bears the imprints of much larger political and economic regimes battling for dominance throughout the 20th century, marked in part by the transition from an economic paradigm of controlled capitalism to that of neoliberalism. This economic transition is essential reading for our ability to comprehend why and how pensions' current options for reform in the face of climate change look the way they do. It also tells us about the ways that a pension funds' purpose and function is articulated by the current economic rationality. In what follows, a history of Canadian and international pension reform identifies the contemporary Canadian pension fund as a specific iteration within a long- contested debate about what pensions should and could be for their beneficiaries. It will argue that the maximize return logic which undergirds contemporary standards of

pension investment portends pensions' capacity to support the interests of the workers they serve and the climate they rely on.

A Brief History of Pension Funds

The first reference to a pension fund on known record dates back to 1285, but more details emerge in the 1600's, when the British Parliament committed to pay for military personnel and their families following their years of service through taxes and other streams of government funding (Clark, 2000). The substantial cost levied on the government as a result of this fiscal arrangement meant that in 1840 the state began to pass laws requiring all beneficiaries to contribute to the fund. Clark notes that while these early pension funds are different from their current articulation, the UK's pensions provided the juridical basis for pension development in much of the Anglo-American world (Clark, 2000).

Canada's system was less developed than its US and UK counterparts. Its first form of old-age security came in a 1908 initiative which offered citizens—albeit those who could afford it—with a private savings account through the purchase of government annuities. Canada's pension system didn't emerge until the Pensions Act was passed in 1927 (Karami, 2011). Under the act, the federal government agreed to halve the costs of pensions with provinces, pending citizens' ability to prove their level of need.¹ With an income replacement ratio of 25%, the plan meant that the private pension sphere continued to be a considerable portion of workers' pension income—if they had any (Karami, 2011). These workplace pensions left a considerable amount of power in the hands of employers to discipline and recruit workers through their pension funds which were ostensibly under their control. Skerrett and Gindin (2017) note that Canadian unions harboured suspicion towards such funds as tools of capital being used against them.

The 1940's was a time of momentum for collective bargaining rights throughout North America. As major unions began to bargain for collective pension plans, pension coverage expanded across private and public sector workplaces (Skerrett and Gindin, 2017). Some union members advocated for broad pension coverage beyond specific industries or sectors (Skerrett and Gindin, 2017). These mobilizations bore fruit: in the 1950's, a process of pension universalization led to a more distributed pension system in Canada. This led to the establishment of the Canada/Quebec pension plans in 1966, which instituted compulsory payments for all employees to make contributions to the plan (Karami, 2017). Even still, considerable limitations on the plan tilted benefits in favour of single working men and away from women, immigrants and Indigenous peoples (Karami, 2017). Companies generally rejected the notion of universal public plans (Skerret and Gindin, 2017). Indeed, while corporations may have stood to pay less costs for pensions overall, they were nonetheless "contrary to their class identification with the general political predilection against higher taxes and the expansion of the welfare state" (Skerrett and Gindin, 2017, p.258).

¹ Even then, notes Karami (2017), pensions under the Act maintained a tone of exclusion, with substantial restrictions on those who hoped to gain access to pension funding (Karimi, 201



The Political Ground of Investment Decisions

Beyond gaining greater access to pension funds, unions fought for the right to have a say over the investment of their assets “in ways that they deemed socially responsible and pro-worker” McCarthy (2017) notes. But the labour post-war success in gaining broader pension coverage was more successful than its simultaneous attempts to influence pension investment practice: Reflecting on this dynamic in the US, McCarthy adds that “American firms failed to keep unions from winning retirement plans, but they did succeed in retaining administrative control over them” McCarthy (2017) added (p.110).

This was due in large part to a powerful countermovement headed up by corporations and the industry associations representing them. In the US, the Taft-Hartley Act passed in 1947 directly prohibited unions from controlling their pensions (Skerrett and Gindin, 2017). The Act was grounded in arguments suggesting that labour’s control over pension assets would afford it with the power to meddle with public assets at the expense of beneficiaries. Before the Act’s passage, for example, the House Committee on Education and Labour agreed that “Certainly, it is not in the national interest for union leaders to control these great, unregulated, untaxed funds derived from exactions upon employers.” (US House, 1947 quoted in McCarthy, 2017, p.110). House Representative Donald O’Toole noted at the time that the bill was written “sentence by sentence” by the Association of Vehicle Manufacturers (O’Toole quoted in McCarthy, 2017, p.111). O’Toole’s statement reflects corporate capital’s strong antipathy to labour’s influence over pension investment practice and it also points to industry’s willingness to participate in legislative processes to inhibit it.

This overt advocacy makes sense given that industry circles were increasingly coming to understand the economic potential of pension funds. The notion that pensions could provide a new source of capital was gaining a foothold in industry circles. In 1958, the Association of Manufacturers Unions in the US vocalized the latent economic boon that was to come, stating that “the process of amassing funds for financing retirement inherently results in great accumulation of capital from a source relatively new to financial history.” (McCarthy, 2017, p.108). The Association claimed that while pension funds should ensure safety of beneficiaries, they should also “contribute a creative element to our economy as well” (McCarthy, 2017, p.108).

Pensions thus became a new driver of economic production in their own right, providing them with a new gravitas in the global economy. This shift coincided with pensions’ growing investment in financial speculation, where they began to play a vital role propping up security and bond markets. As pensions drove up stock prices in the secondary markets they also improved corporate credit ratings and paved the way for new firms to access cheaper lines of credit (McCarthy, 2017, p.108).



The Neoliberal Turn in Pension Fund Management

The neoliberal turn emerging in the 1970's further foregrounded the interests of corporate capital into pension reform (Skerrett and Gindin, 2017). Broader political and economic changes were instrumental in this shift; this included neoliberal legislative measures to stem growth in wages, privatize infrastructure and public services, and to curtail trade union activity (Skerret and Gindin, 2017, p.259). These transformations impacted the pension landscape. First, the erosion of the labour movement that accompanied the neoliberal turn further contributed to the gradual transition away from robust public pension coverage for workers: benefit pensions were increasingly giving way to defined contribution plans (Gindin and Skerrett, 2017, p.259). Second, neoliberal policies dovetailed with the logic of maximizing financial return as the *raison d'être* of pension funds.

Prior to the 1980's, the courts' articulated a conservative role for trustees' investment practice, requiring them to invest in low-risk assets such as government securities (Archer, 2017). During the 1980's, the principle of maximizing returns became encoded in Canadian trust laws. This gave way to the "prudent person" standard of trusteeship, where prudence was equivocated with the ability to maximize returns, absent the limitations of the aforementioned regulatory inhibitions. Higher-risk investments were now accessible to pension trustees, so long as the prudent person standard was followed. While provincial variations of trust law create subtle distinctions, the overall sentiment that fiduciaries must act in the "best financial interests" of beneficiaries asserted the primacy of financial prudence in all investment decisions (Archer, 2017). The maximize-return mandate is associated with a series of profound transformations in the ways that pension funds chose to invest their assets.

Bryan and Rafferty (2017) articulate the outcomes of the maximize return logic, articulating pension funds as sites of "risk shifting" that extend "capital's reach into working class life and beyond the wage relation" (p.81). This redistribution of risk is occurring on a number of contingent and mutually reinforcing fronts: first, as pensions move towards defined contribution schemes where beneficiaries are responsible for their own retirement income, the worker takes on new frontiers of risk adjusted to the vagaries of financial markets. Second, relaxed regulations on pension fund management means that funds can invest in riskier instruments beyond the government bonds and other forms of secure investment they were historically constrained by (Bryan and Rafferty, 2017). This is reflected by pension managers' increased reliance on risk-laden instruments such as derivatives and hedge funds as well as fixed income debt investments—many of which include fossil fuel infrastructure and extraction projects—and investments in domestic and international infrastructure. *Securitization*, the process whereby illiquid assets such as public infrastructure are made liquid and thus newly able to be absorbed into the financial system, is thus endemic to a financialized economic system. Skerret (2017)



discusses the ways in which the largest Canadian pension funds in particular have been investing in privatized social and physical infrastructures, identifying such a trend as “a key dimension of financialization” (p.122).

Indeed, following the 2008 Global Financial Crisis, Canada’s biggest pensions have become internationally renowned for their direct ownership of domestic and international public infrastructure. Major Canadian pensions such as the OTPP own a considerable share of privatized water assets in Chile²—one of the only countries in the world outside of the UK that allows direct private ownership of water utilities. These investments are in direct contravention of the work of Chilean unions attempting to restore public ownership of water (Skerrett, 2017). In sum, this new terrain of financialized investment produces risks that are at times antithetic to the interests of workers’ capital specifically, but also to global populations writ large.

“Environmental Social and Governance” (ESG) Takes on Climate Change

Aware of the parasitic capacity of the profit imperative, the finance sector has broadly acknowledged that market-based decision making can produce externalities in social and ecological realms (McCarthy, 2017). In the 1980’s and 90’s, financial activists and academics began to draw lines between the incommensurability of the short-term decision-making of investment managers’ and the long-term horizons of pension funds’ obligations to their beneficiaries (McCarthy, 2017). This discourse has been brewing, vaulting in prominence with the creation of the UNPRI, a UN body that established a number of ESG principles which signatory members are encouraged to abide by (McCarthy, 2017). After the 2008 recession, major investment managers and fiduciaries had begun taking active steps to integrate ESG considerations into their investment practice—generally this included activities such as shareholder activism through proxy voting, corporate engagement, seeking corporate disclosure on operational activities and portfolio screening or “weighting” certain companies or sectors based on particular ESG values. Of note, unlike other types of responsible investment such as “socially responsible investment” (SRI), “economically targeted investment” (ETI) or “activist investing” proponents of ESG generally suggest that ESG investing can be “*more* financially sound than non-ESG investing (McCarthy, 2017, p.103). The correlate of this sentiment is that ESG proponents generally do not advocate for a change in the undergirding logic of pension investment to maximize returns. Instead, discourses around ESG emphasize its potential to help bolster profits by “creating value”; legal analyses since the famed 2005 ‘Freshfields report’ suggest that investors who do not account for ESG issues are failing in their fiduciary duty (A legal framework for the integration of environmental, social and governance issues into institutional investment, 2005).

² Chile’s neoliberal government legislated a legal regime that secures investments in water, even guaranteeing a 10.3 per cent return on investment (some investments are netting up to 25 per cent rates of return per year, Larrin and Shaeffer, 2010).



Climate change has emerged as a focal issue for discourses around ESG investing, and subsequently a new economy in “green finance” is a considerable site for dialogue in the investment industry with major financial institutions forecasting that “green” labelling will become standard issue for a fund to gain financial viability (RBC Capital Markets, 2019). In alignment with ESG advocates, a focal hinge on which “green” finance rests is the question of profitability: investments need to generate favourable rates of return in order to receive broad uptake in major financial markets, and the policy fixes required to sustain them are a dominant theme throughout the green finance sector (Della Croce et al, 2011; Lacey et al, 2017; Polzin 2017).

Investor action and awareness around the concept of climate risk is a relatively new phenomenon. It was galvanized in 2010 with a conference convening pension managers and sovereign wealth funds at Columbia University in 2010 (Andersson et al, 2016). There was a tepid response from investors at the time, but a few managers did show some interest by attending a follow-up conference a year later in Bellagio (Andersson et al (2016). The first iteration of the “green index” was founded at this meeting, galvanizing the creation of decarbonized indexes from S&P and MSCI (Andersson et al, 2016). Such indexes provide certainty for investors whose fiduciary duty limited their ability to invest without some form of standardization that ensured a given level of risk, offering a “scalable vehicle” for investors to decarbonize their portfolios (Andersson et al, 2016).

Another way that investors draw on ESG to integrate climate risk is through investor shareholder activism, including casting proxy votes investee companies. Yet research shows that as proxy voting can be ineffective in the context of climate change (Baran Doda et al, 2016; Yunker et al, 2018). Indeed, it is unlikely that companies whose main business model entails the extraction and/or production of fossil fuels would be willing to sacrifice its main source of profit, just as it would be unlikely for a pension fiduciary to request a company in which it has shares to do so given the logic of maximizing return. With this assumption stated at the outset, this paper will not analyze the relative merits of shareholder engagement for energy transition.

Instead, we focus on the current investment strategies and tools available to pension funds interested in managing their climate risks. This analysis of the current state of play in “green” investment circles provides critical background for the ensuing critique of pension finance’s ability to support meaningful energy transition.

Green Bonds, Renewable Technology Investments as a Site of Risk-Shifting

Risk is one of the cornerstones of finance, and it is accordingly prominent in finance’s response to climate change. Green bonds—bonds whose investments are targeted towards various environmental projects—offer a clear example of the ways



in which risk is being shifted to accommodate capital interests in light of climate risks. After the first green bond was developed in 2008 (“From Evolution to Revolution,” 2018) they have been emerging as an increasingly powerful vein of sustainable finance. “The green bond market is helping accelerate cleaner economic growth and a more sustainable future” noted the Royal Bank of Canada in its report on its 2019 Green Bond Conference (RBC Capital Markets, 2019, p.4) Annually, the green bonds represented \$169 billion in 2018 (RBC Capital Markets, 2019). While this is a large sounding number, it pales in comparison to the global bond market at over \$100 trillion in the same period (*Sifma Capital Markets Fact Book*, 2019).

Conversations around green bonds are animated by questions about profitability. Bond interest rates and risk levels need to be competitive, suggest experts, or else they will fail to increase their market share (Leahy, 2019). For example, Mark Leahy (2019), head of fixed investment at SGX, suggests that governments, NGO’s philanthropic entities or “ESG-savvy companies” should help prop up green bonds by funding “coupons” to subsidize bond interest rates, making the funds financially desirable to investors. These subsidizers (“the payers”) would gain “credits” for their funding activities, and a trading market of such credits would be established, replete with curves and hedging tools. Leahy (2019) underscores the notion that green bonds are meant to be profitable, adding that “this “new carbon market [...] could be just what the finance sector needs to find a new and profitable purpose for the 21st century.”. The undercurrent of such a financial schemata is that the logic of maximizing returns should continue to drive the green bond market, and that government, NGOs and companies should work together as market actors to facilitate the viability of the profit maximization approach in the face of the climate crisis.

The risk mitigation discourse is not limited to just green bonds: “green” versions of equity, fixed income, infrastructure and debt finance are all discussed in the context of financial risk. Writing for the OECD in 2011, Della Croce et al (2011) highlight the disjunct between the high-risk profiles of innovative renewable energy projects and the low risk-appetite held by pension fund fiduciaries. In addition to strengthening climate policies in order to send market-signals in favour of renewable energy, she suggests that governments should be prepared to make sure that “adequate, investment-grade deals at scale come to the market” by taking on risk through debt positions, reducing risk on investments through various subsidies or issuing green bonds (p.7). “Public finance can “crowd in” private capital by compensating private investors for what would otherwise be lower than their required risk-adjusted rates of return” they add (Della Croce et al, 2011, p.24).³ Polzin et al (2017) adopt a similar position, calling on governments to apply policies and hedge risks in the interest of supporting renewable energy finance throughout the lifecycle of project development. They cite the reluctance of major institutional investors to finance early stage clean energy startups, suggesting that large institutions such as banks and pension funds are more likely to finance “larger,



mature clean energy companies as well as project and infrastructure with debt or equity' (Polzin et al, 2017, p.27). They add that:

"To attract institutional investment into green projects governments have to structure projects as attractive investment opportunities for investors, providing risk return profiles that match the expectations of investors when considering such assets." (Polzin et al, 2017, p.23)."

In this context, "green" investment vehicles relieved of investment risk via public actors might offer up a powerful example of risk shifting, as the finance industry redistributes the cost of maintaining high returns to government and civil society actors. On the other hand, some Left commentators like Parenti (2019) also argues that private capital is necessary for a green transition and that state capital is needed to kickstart these flows; one needs to be attentive to who is bearing the risk and reaping the benefit.

Classifying "Green" Investment: Taxonomies and Benchmarks

Another core discourse in green finance seeks to classify investments in accordance with their capacity to reduce GHG emissions and develop alternative energy sources to fossil fuels. Green taxonomies—classification tools that will indicate the degree of climate impacts reflected in a particular company and its assets—are prominent instruments in this context.

The EU has been championing green finance initiatives through the work of its Technical Expert Group (TEG) on Sustainable Finance formed in 2018 as a result of the Commission's Action Plan on Financing Sustainable Growth (EU Technical Expert Group on Sustainable Finance, 2019). Along with the TEG's initiatives on developing green bonds and sustainable benchmarks, they are also involved in the development of a green taxonomy. The taxonomy consists of a list of economic activities with associated "performance criteria" that denotes their classification within the sphere of "green" finance.⁴ To use the taxonomy, the investor would calculate the percentage of the company in alignment with taxonomy objectives, and these percentages would be added up to equate the total percentage of a given fund's "taxonomy-eligibility" (EU Technical Expert Group on Sustainable Finance, 2019). The taxonomy is slated to become law, requiring all institutional investors "marketing environmentally sustainable investment products" in the EU to explain how they used taxonomy's criteria. "The taxonomy will progressively become the EU standard for investment managers and clients" said Pascal Canfin, French MEP that

³ Meanwhile, this discourse does not foreground that governments continue to subsidize fossil fuels at \$4.7 trillion annually (Coady et al, 2019).

⁴ The taxonomy specifies six environmental objectives including climate change mitigation, adaptation, sustainable use of water and marine resources, transition to a circular economy, pollution prevention and control and the protection of healthy ecosystems. (EU Technical Expert Group on Sustainable Finance, 2019).



leads the European Parliament's environment committee (Canfin cited in Khan, 2019).

The discourse around which investments should be classified as "green" animates conversations around green bond composition and taxonomies alike. Peter Cripps (2019a) suggests that green bonds are undergoing a period of reevaluation and reexamination: a focal debate hinges on the question of whether fossil fuel companies that invest in initiatives to lessen their environmental impact should be included in green bonds themselves, or whether there should be a secondary "transition bond" stream created to capture such investments (Cripps, 2019a).⁵ Indeed, the Investment Industry Association of Canada has been actively involved in this conversation, advocating for Canada to build its "own unique green bond taxonomy because the evolving voluntary regulations in other parts of the world are likely too restrictive to be applied here." (Investment Industry Association of Canada, 2019). The Association's comment reflects its desire for oil companies to be included in sustainable debt finance, under the auspices that green finance should work to support industry's efforts to transition away from carbon intensity (Duarte, 2019).⁶ In such cases, the limitations of green finance discourse to mobilize fulsome energy transition are starkly apparent.

Investor Coalitions

The concept of energy transition in the pension sphere is also mobilized by investor coalitions. These configurations generally consist of groups of investors that agree to a certain host of principles or actions around climate change. The Portfolio Decarbonization Coalition (PDC) was established in response to a request from UN Secretary General Ban Ki-moon calling for a financial sector initiative that would be presented at the UN Climate Summit of 2014.⁷ Now in operation, the Coalition requires its members to "commit to a concrete decarbonization plan", including reducing the carbon intensity of an investment portfolio (there is no stipulation on how much of the portfolio that must be included), a submission of a "climate oriented, capital reallocation strategy", or a description of an outcome from a corporate engagement with a company which may or may not include an estimate of the GHG's reduced as a result of the engagement ("FAQs," n.d.). As such, the initiative appears to provide investors with considerable latitude to determine their own level of ambition, but it does have a notable degree of uptake. In 2019, the PDC recounts having 32 investment managers signed on as members, with decarbonization commitments of over \$800 billion ("Latest annual report: 32

⁵ BlackRock recently launched a "shades of green" bond category system that offers different levels of stringency. On the "light" green side of spectrum, projects that result in improvements over baseline emissions are awarded green bond status, while "dark green" bonds include "projects that BlackRock determines are most likely to help put the world on the long-term path to decarbonization." such as renewable energy sources and electric transportation (Cripps, 2019b).



investors representing over \$800bn in decarbonization commitments detail progress made,” n.d.).^{8,9}

While it is outside of the scope of this paper to predict whether or not the vehicles and initiatives described above will be effective at reducing overall emissions, it is worth noting that they illuminate a broad spectrum of approaches acting within the green finance sector. This spectrum includes more stringent efforts to remove fossil fuels from portfolios and introduce investment strategies to support renewable investments, but it also includes reformative strategies that are willing to fund oil companies looking to reduce emissions intensity. As such, the green finance terrain is highly politicized with various actors advocating for their interests— fossil fuel companies and the industries profiting off of them notwithstanding. Further, the plethora of options is available to pension managers on an opt-in basis. With the exception of nascent EU regulations that will mandate participation for companies operating within its boundaries, most of the green finance tools are voluntary.

What Green Finance Leaves Out

Both stringent and reformist approaches are characterized by a few striking similarities, however, and the subsequent and final section of this paper will argue that these common threads say much about the kinds of energy transition we can expect from green finance.

Across the proposals, green finance adopts an agnostic relationship to GHGs, meaning that absolute emissions reduction is conveyed as tantamount to effective energy transition. As they approach green finance at the scale of global markets, these discourses carry out a powerful abstraction, flattening renewable energies into a one-size-fits-all category roughly denoted as “green”. This abstraction obscures our ability to comprehend the social and environmental impacts of such technologies on the ground, just as it renders invisible questions of power, energy autonomy and security which are raised any time a new energy system is considered.

⁶ Similarly, current discourses on “green indexes” raise questions about the stringency of

“green” classification. Some benchmarks, such as the MSCI ex Fossil Fuels Index, simply exclude oil gas and coal reserves. Others such as the MSCI Global Low Carbon Target Index maintains investments in fossil fuels, but increases its exposure to “carbon efficient” companies. MCSI presents low carbon indexes as a more “financially practical” alternative to fossil fuel divestment (Briand, Lee, Lieblinch, Menou, & Singh, 2015, p.3). With a lower tracking error than the MSCI ex Fossil Fuels Index, it is suggested to provide a more reliable and less risky investment than the MSCI ex Fossil Fuels Index. MCSI presents low carbon indexes as a more “financially practical” alternative to fossil fuel divestment (Briand, Lee, Lieblinch, Menou, & Singh, 2015, p.3)

⁷ AP4, FRR, CDP and Amundi put forward the proposal.



Classification tools and green funds use emissions intensity as the metric stick for a funds' stringency. For example, BlackRocks' "shades of green" bond funds denote the highest quality rating to investments in any renewable energy source regardless of energy type, firm or local context. While the EU's green taxonomy was still under development at the time of writing, early indications suggest that it will likely ascribe "taxonomy eligibility" to any form of renewable energy and to any producer (EU Technical Expert Group on Sustainable Finance, 2019). Moreover, the fact that taxonomy scores can be acquired for companies whose activities are potentially only partially "taxonomy eligible" suggests that investors will be able to gain taxonomy points for investments in fossil fuel companies that have some renewable operations.

Similarly, mainstream veins of green finance adhere to the standard of maximizing returns discussed previously: for proponents, the inherent challenge of a transition away from carbon-based fuel sources is profitability (Lacey et al, 2019). Renewable energy sources must provide favourable returns to "attract investment" in competitive financial markets. As such, decisions on whether to invest in a particular technology are guided by the investment's ability to pass on profits to its investors—meaning that operating costs including wages and operational expenses are to be minimized. Unfortunately, the cheapest and highest return-yielding renewable energy investments are not necessarily the most equitable.

Solar, or photovoltaic (PV) energy provides a poignant example of the maximize return imperative when extended to renewables. Dustin Muvaney (2013) explains that thin film PV manufacturing which began as something "akin to a high-tech cottage industry" has been usurped by a new technology called crystalline silicon PV—largely produced in China. The switch was particularly attractive for companies because Chinese PV's were often sourced through contract manufacturing agreements which provide greater flexibility for companies but often rely largely on migrant workforces with little to no job security. Indeed, when a pensions' operating logic is the maximization of profit, such investments are a logical choice. "After all, stock markets do not care whether the basis of higher corporate profits is low wage labour." McCarthy notes (2017, p.109).

With its commitment to the logic of maximizing returns, a financialized lens on energy transition also fails to ask questions about the *type* of energy transition we want to build. Financial institutions and their investment practices have substantial bearing on the ways in which energy is owned and distributed (Hall et al, 2016). Hall et al (2016) discuss the ways that the local banking sector in Germany has facilitated municipal and community (or "civil") ownership of energy infrastructure throughout the country. Municipal control of energy infrastructure in Germany often means that energy security and regional interests are factored into financial decisions about investment, and revenues from power are reinvested to support grid services. Municipalities can decide to favour long-term interests over short term returns, and indeed, this framing is often required to justify the initial costs of local grid



development. In contrast, the UK's neoliberal market-based finance sector dominated by large banks has been largely unable to provide finance for civic ownership structures. Many of the local banks funding civic energy systems in Germany are known as savings or co-operative banks which are anchored in the particular area in which they operate: "each and every savings bank can adapt its actual business to the condition it finds in the local area; and that is very important. That is this decentralised model" said an executive from a savings bank quoted by Hall et al (2016, p.11).

Meanwhile, the globally-scaled "green finance" vehicles discussed above may effectively tilt away from fossil fuel investments, but they are ill-equipped to apprehend the nuance of local energy systems and equitable energy industries at the community level. Moreover, the "maximize return" logic suggests that such considerations would be antithetical to mainstream pension investors' interests. The relationship between institutional finance and energy distribution and ownership is rarely taken up in the academic and public literature (Hall et al, 2019), but its absence is not incidental. "We need to grapple with the role of energy in fueling the very stuff of social theory – modernity, democracy, capitalism, and ideas of freedom" says Huber (2013, p8). Huber's point is that each of these social logics will be fundamentally imprinted by the energy system we choose. The preceding analysis suggests that pension funds and the finance industry in which they are enveloped currently hold an unprecedented position to shape the terms and values of our next energy system and the groundwork of our societies along with it.

Green finance's operating principles thus open up a new site of *securitization* where the energy transition is dependent on the financial market to absorb the threat of climate change and transform it into a new site of capital accumulation. Soederberg (2011) explains securitization as a process which encapsulates and transforms the crises of capital accumulation and the resistance to it as issues that require the further entrenchment of markets to solve. This dynamic echoes of Klein's *Shock Doctrine*, where neoliberalism is intensified and entrenched in sites of crisis. Indeed, Soederberg (2011) articulates the *marketization of resistance* emerging from a securitized and financialized pension landscape, where critiques to pension financialization are limited proposals for new investment management strategies in the absence of larger conversations around the parasitic symptoms of financialization on the ultimate interests of the worker and the structures of energy systems themselves.

By attempting to encapsulate climate action within the logic of maximizing returns, green finance appears to breathe new life and thus legitimacy into mainstream ESG discourse in the context of the climate crisis. This surfaces long-held tensions in ESG investing where "environmental" and "governance" values are given prominence at the expense of the "social" (McCarthy, 2017). McCarthy (2017) explains that environmental and governance issues—the "E" and the "G"—are more amenable to the logic of maximizing returns, while the "social"—the "S"—is not so



amenable to the interests of short term profits. It is worth questioning whether green finance—and even the fossil fuel divestment movement itself— may inadvertently reinforce financialized pension systems and their parasitic impacts on labour and social values by legitimating their ethical capacity in the midst of climate crisis.

What Else is There?

As pension capital—and the green finance sector in general—bends over backwards to envelop climate action into the logic of maximizing returns through complicated market mechanisms, a legitimate follow-up question might ask: why is the maximize-returns logic so pervasive?

The first answer is somewhat predictable: retirement security is viewed as paramount by pension beneficiaries, and the impetus to maximum financial returns is regularly seen as the best path towards that security. But its prominence is also a product of political influence: the maximize returns logic supports pension funds' desire to generate surplus capital, and it simultaneously directs capital towards companies that are able to offer competitive rates of return. But the maximize return logic also has a powerful administrative function, providing a standardized means by which to weigh investment decisions. In practice, the interests driving particular financial institutions are not so tidy: Clark (2016) points the myriad ways in which internal interests and corruption can infiltrate any institution regardless of its investment mandate. Still, abandoning the maximize return logic as an underlying guide for investment decision making altogether requires that we embark on a largely uncharted discussion about accountability and its relationship to pension fund stewardship.

Alternative models of pension provisioning do exist despite the overarching momentum towards financialization. The Caisse de dépôt et placement du Québec (or "la Caisse") is one of them. Founded in 1965, La Caisse was established to support the development of Quebec's economy and helped support its desire to strengthen its economic autonomy relative to the Canadian government (Bernier, 2013). As such, it had an explicit mandate to foreground the province's economic development in its investment decisions. While the Caisse was permitted to invest in global equities and bonds, it was expected to limit these investments and tilt investment towards Quebec's economy, including supporting the province's financing projects and supporting Quebec-based corporations. Caisse's first annual report cited that there had been "manifest intention on the part of the legislators to create an institution to which a role would be given in the financing of the economic development of Quebec." (p.9) The fund became a major purchaser of Quebec ad Hydro-Quebec bonds, reducing the province's reliance on the English-Canadian and American financial sector. While Caisse is widely credited with supporting and furthering Quebec's economic development, it has also faced criticism for becoming overtly politicized in its investment decisions: a decision in 1979 to lend funds to the



province and Hydro Qubec at below-market rates inflamed these criticisms (Brooks, 1985).

The Alberta Heritage Savings Trust Fund, established in 1976, was similarly established under explicit mandate to support Alberta's economy—particularly in the development of its oil and gas sector. Essentially, the AHSTF was established as a means of reinvesting surplus emerging from the oil and gas industry. This fund went even further than the Caisse in terms of its explicit willingness to relinquish high rates of return in the interest of regional economic benefit for the province of Alberta, mandating lower requirements on rate of return according to the degree to which investments support the province's economy. Compared to the Caisse, where managers and directors are shielded from direct government intervention in investment activities, the AHSTF receives directives from the provincial treasurer and government (Brooks,) In this case, one might imagine the ways in which governments can steer fund investment in their favor. And in the case of Alberta specifically, a distinctly pro-oil government means that fund investment will follow accordingly.

It makes a good degree of sense, then, that the prevailing logic in the media and in financial circles suggests that pension funds should avoid making direct investments in local development projects with beneficiaries' interests in mind, "given the opportunities for corruption and subversion of customary rules of decision making" (Clark, 2016, p178). Clark (2016) elaborates that:

"One reason why pension fund investments in community-based development projects have a bad reputation is the presumption of guilt: that local interests are antithetical to social interests and that when local interests dominate investment decisions, the trust obligations of trustees to plan beneficiaries are more easily subverted" (p.173)

Clark (2016) posits that values-driven investment decisions are not necessarily more prone to corruption than those carried by large institutional managers. In some cases, Clark suggests that the social contract afforded by being part of a community may even inhibit corruptive tendencies. The perceived "neutrality" of the maximize return logic may be part fallacy, but to move towards alternative values based on the interests of equitable energy transition requires a level of insight and expertise which Canada's pension fund investors are likely ill-equipped to manage.

The question of decision making authority and who gets to wield it thus becomes paramount. To start, Canada's public pension funds are directed by trustees, but these fiduciaries are barred from steering investment selection as a whole. Instead, institutional pension fund managers (and their myriad external investors) are tasked with the substantial role of deciding how to invest Canadians' public pension funds (Davis, 2008). These managers are not democratically elected, nor are they accountable for explaining their investment decisions to beneficiaries



and trustees. Their decisions are bound by the mandate of maximizing financial returns, and their ability to do so is what affords managers personal ascendance through promotions and financial results-based bonuses. This configuration of imperatives is vastly unfit to grapple with the notion of the just energy transition—one which requires a working and localized knowledge of community structure, energy systems, funding dynamics, social equity and more. The narrow definition that currently translates as “financial expertise” is the first layer of power which would need to be reshaped and redistributed in order to make pensions better equipped to support an equitable energy transition.

But if we assumed that trustees *were* able to influence investment decisions *and* were equipped with the knowledge and community networks to make decisions about energy systems, we still need to grapple with a formidable power dynamic: “at the heart of the trustee decision making process is the fact that trustees have more information than beneficiaries”, Clark (2016) points out (p.179). Inevitably, beneficiaries will not be equipped to amass the contextual knowledge required to adequately manage investment decisions for their pension plans. Given the beneficiaries’ dependence on the trustee’s ability to make reasonable decisions about their retirement security, a substantive “accountability regime” should be a pivotal feature of pension reform. Under Davis’ (2008) articulation, an accountability regime will require the participation of beneficiaries to “allow the issue of the relationship between the corporate form, regulation and social responsibility to be raised in a forum where there is a potential for democratic governance” (p178). It will also lean on governments acting in the public interest to establish means of democratically electing trustees to adequately reflect the needs of beneficiaries. Questions of power, role and the rightful holders of decision making power over public funds are beyond the scope of this paper, but it reflects fertile ground for further discussion: The conversation around energy transition and pension funds must place pension fund governance and decision making front and centre.

The question of scale in decision making is critical. Canada’s pension system is currently composed of “extraordinarily large pools of capital-seeking global investment opportunities with large diversified portfolios” (Archer , 2017, p.170). In such funds, system-wide risks need to be taken into account when factoring in investment decision-making, and the interests of beneficiaries which trustees are to account for are wide-ranging. If we were to move towards a pension system that put investment decision-making power into the hands of trustees (while making those trustees meaningfully accountable to beneficiaries) what organizational structure and scale should pension funds adopt?

This question of shape and size relates directly to funding capacity: Skerrett and Gindin (2017) propose a universal public pension plan as a fix for financialized funding requirements. In contrast to neoliberal pension models that promote public-private management and “demand and even foster a closer integration into the private and increasingly deregulated financial industry”, a universal pension would



deemphasize its reliance on finance and focus instead on a “public and primarily pay-as-you-go funding structure”(Skerrett and Gindin, 2017, p.262). It would do so via a policy agenda of progressive restructuring of federal subsidies that currently privilege higher income individuals. This system would have a democratizing function: instead of pension funds whose beneficiaries are limited to public sector workers or those in participating private companies, a universal pension would provide an equitable retirement income¹⁰ to the entire population. It could be imagined that such a fund would transform the image of the pension fund as a site of privilege to a democratically owned and operated fund to be used for communities as they work to develop their own energy systems away from fossil fuels. While Skerrett and Gindin (2017) do not extend their argument to energy transition, their analysis can inform conversations about the relationship between private and public funding as a means of propelling a new energy system.

Subsequently, and perhaps most importantly, a pension that diverges from the logic of maximizing profit will necessarily grapple with the tension baked in to the system of financialized pensions producing antagonistic interests within their own beneficiaries. Bryan and Rafferty (2017) explain the crux of this tension, suggesting that “labour as worker wants high wages and good working conditions. Labour as pension fund investor wants high rates of return” (p.88). Skerret and Gindin (2017) see this tension as a fundamental barrier to any reform around pension funds given that worker solidarity has been the primary lever of constraining the financialization of pensions to date.

The argument put forward here—that we should grapple with the limitations that the maximize returns mandate poses to just energy transition—is a formidable task. Is it reasonable to pursue such an expansive ask? Andre Gorz’ (1967) work is helpful here. Amidst the backdrop of consumerism and the widening global inequality, Gorz saw revolutionary change becoming stymied by the perils of comfortable consumption. Gorz argued that this complacency means that we need to create space for conversations about *effective* reform (“non-reformist reform”) strategies that have the potential to produce transformative change from within the capitalist system. Gorz explains that these “non-reformist reforms” should fundamentally disrupt the capitalist status quo, and put this disruption to use by opening up opportunities for its subversion. They should also help build popular momentum by decentralizing power and limiting state control. Finally, they should be embedded within a dynamic strategy that aims towards more radical and transformative change.

¹⁰ While the Canada Pension Plan goes some of the way towards this goal, Skerret and Gindin’s (2017) universalized pension system would see a minimum retirement income that is sufficient to support all individuals regardless of employment background.



By aligning with the maximize return mandate at all costs, much of “green finance” discourse does little to challenge the fundamental inequities it sustains. At a minimum, it may provide opportunities to drive down the cost of renewable energy solutions, and this may create ripple effects in the heavily fossil-fuelled energy market we face currently. Its shortcomings suggest that it is unfit to serve as a “non-reformist reform” according to Gorz’ (1967) application. For one, it does not advance conversations around pension fund governance, decision-making and trusteeship that is imperative for a funds’ capacity to support just energy transition, as described previously. Secondly, by limiting its asks for GHG mitigation while remaining agnostic to the social impacts of investments and the community building capacity of energy investment, green finance circumscribes the movement-building capacity across labour, rights *and* environmental groups that a more expansive vision of pension fund accountability in the climate crisis might otherwise harbour

Perhaps a more revolutionary reform is latent in the work of rejuvenating conversations about the power and potential of pension capital as a community resource that has threaded itself throughout the history of pension reform in the 20th century. In this vein, Skerrett and Gindin (2018) advocate for a robust initiative to educate workers about the dangers of financialized pension investment. Such funds are inherently volatile and subject to erosion, and they also prey off the devaluation of workers’ rights through privatization, falling wages and the pressure to reduce other operational costs. A similar project is worth approaching in the context of energy transition: this would underscore the relevance of communicating the financial risks that climate change levies on beneficiaries’ funds, and it would articulate the substantial power that institutionally managed funds possess over the terms of the energy transition on which we have now embarked.

With a planet on track to rise over three degrees by the end of the century (“Global temperatures on track for 3-5 degree rise by 2100: U.N.,” 2018), the cost of inaction on climate change outstrips any short-term returns that pensions may reap through business as usual investment practice. But as investors gear up to push green finance into the mainstream, we should be wary of this new site of financialization— not only because its continued reliance on profit maximization may be unfit to reign in the world’s most powerful fossil fuel companies, but because it is ill-equipped to facilitate a just transition that considers the quality of the lives it impacts.



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