OSC Investor Advisory Panel

HORIZON PROJECT:
Initial Report

June 2021

INTRODUCTION

The mandate of the Investor Advisory Panel (IAP) includes an issue-identification function. Specifically:

- We are directed to bring forward for the Commission's consideration policy issues that may emerge from our consultation activities related to investor protection.

- In addition, we are asked to comment on the potential implications for investors posed by those issues.

As part of our advisory work, therefore, we began scanning the horizon two years ago in an effort to identify **emerging disruptive influences** – in new technologies, investment products, market strategies, business models, service modalities and other forms – that may impact investors either negatively or positively.

Our goal in undertaking this "Horizon Project" is to advise the Commission on how it can best grapple with the challenges posed by these forces, and also how the Commission can promote change that may be beneficial for investor outcomes.

To increase our understanding, we have initiated discussions with individuals and institutions we identified as having key perspectives or insights in this area. To date, forty-seven individuals

and delegations from investor advocacy groups, investment industry organizations, banks, asset managers, public policy agencies, the FinTech community and universities have met with us (see Appendix). We asked each invitee to identify potential emerging dangers for investors that regulators will need to anticipate and potential benefits that regulators should be careful not to impede.

Each invitee was encouraged to be open and candid with us. We assured them we would not attribute specific comments to anyone. Consequently, this report highlights and summarizes the broad themes that we heard voiced most often.

Also, this report is an initial one only since we expect disruptive change to be a continual challenge for regulation going forward, and therefore we see the Horizon Project as a mainstay of the IAP's work. We anticipate providing the Commission with additional reports and updates in the future.

CONTEXT

When we embarked on this project, it was already clear that the financial service sector is being heavily disrupted by new players, innovative technologies, novel products and business models, and rapidly changing expectations. We noted, in particular, three macro-influences creating opportunities and challenges for investors, financial service providers and market regulators.

1. Big Tech's inroads into finance

Today's largest technology firms ("Big Techs" such as Microsoft, Apple, Facebook, Amazon, Google/Alphabet, Ant/Alibaba and Tencent) all gear their business models toward operating digital ecosystems of interconnected products and services. Currently, these platforms focus primarily on areas such as e-commerce, internet search or social media. Leveraging their strong

technology capabilities, including Artificial Intelligence (AI), some Big Techs have become important providers of information services and infrastructure. Amazon Web Services, for example, is one of the dominant players in cloud computing for financial institutions' risk management, core banking systems and data analytics.

It appears that Big Tech is beginning to make more direct inroads into finance. Starting with payments, their involvement has expanded into the provision of credit (particularly consumer financing and microloans with shorter maturities), banking, crowdfunding, asset management and insurance. Geographically, Big Tech's expansion into financial services has been more pronounced in emerging and developing economies, particularly China. By augmenting their business lines in these jurisdictions with financial services, Big Techs have been able to diversify revenue streams, access new sources of data and reduce frictions in their core non-financial activities, thereby making their respective ecosystems more attractive and more accessible to users.

If Big Tech attempted to provide financial services in this country, it would have broad regulatory implications. As a result of their unique capabilities, massive resources and extensive networks, these mega entities would almost immediately enjoy significant competitive advantages. This in turn would allow them to quickly become large service providers – possibly the dominant ones – in Canada's financial marketplace, making them a challenge to regulate by being simultaneously "too big to fail" and "too big to jail".

Mindful of this possibility, the IAP was keen to evaluate the likelihood and assess the potential impact of the entry of Big Tech into Canada's financial services market. We wanted to understand better the opportunities offered by Big Tech to make the financial sector more efficient, improve customer outcomes and promote financial inclusion; and its potential to create or increase risks for financial stability and consumer protection, abuse of data privacy and jeopardization of cyber security. Most importantly, we wanted to see if we could identify a

regulatory sweet spot that could at once support the benefits of Big Tech and minimize the potential risks to the financial system and its participants.

2. The "Uberization" of regulation

A second phenomenon that informed our decision to embark on the Horizon Project was the already demonstrated ability of platform companies (e.g., Uber, Airbnb) to disrupt not only the economic sectors they enter, but also the regulatory regimes that had heretofore governed those sectors. Specifically, Uber's brash "act first, apologize later" entrance into urban ride hailing markets around the world totally disrupted what, to that point, had been a highly regulated taxi industry.

Prior to Uber, private taxi interests operated under regulatory regimes that featured anticompetitive barriers to entry and price controls but also included public interest provisions in the form of customer and labour protections and safety requirements. Uber's ability to use its technology advantage to achieve high customer adoption and loyalty allowed it to bully policymakers and achieve outcomes compatible with its business model while skirting most labour and safety standards. Taxi regulation was neither structured nor prepared to deal with this disruptive combination of innovation and audacious, rapid deployment. As a result, the regulatory regime found itself by-passed and rendered largely irrelevant to what was actually happening on the ground.

Our Horizon Project aims to assess whether Canada's financial regulatory system might be vulnerable to a similar fate. We fear it is, primarily because regulatory reform on key consumer measures often proceeds in an exceptionally cautious and slow manner, with many reforms whittled down to accommodate the interests of other market participants. This engenders a perception that regulation is neither delivering a full measure of investor protection nor moving forward with an appropriate sense of urgency. As a result, we are concerned that a significant segment of the investing public, like the ride-hailing public, will conclude they are better off

using the low-cost, innovative services of new entrants operating outside of the regulated perimeter.

We regard this potential migration away from safeguards as an alarming but real possibility, and therefore we were anxious to use our Horizon Project to better assess its likelihood and determine how it can be avoided.

3. Social responsibility and sustainability

The third disruptive influence that both prompted and informed our Horizon Project was the rise in social consciousness manifest in heightened awareness and advocacy for gender and race equality, environmental sustainability and stakeholder empowerment. These intensifying societal imperatives have already begun to alter government policy, industrial strategy and consumer behaviour. Financial regulation inevitably will be impacted by them, too.

Historically, the focus of financial regulation, across jurisdictions and products, has been:

- Prudential regulation – ensuring stability and soundness of financial institutions by safeguarding capital and liquidity adequacies as well as the quality of their risk management,

- Business conduct regulation – ensuring that financial institutions conduct business with their customers in a fair, transparent and honest way, and

- Systemic regulation – ensuring financial stability and access to finance for businesses and other organizations, and preventing the financial system from jeopardizing the economy as a whole.

Now, regulators are being urged aggressively to include social responsibility and sustainability considerations in their policies to help reduce economic inequalities and support a greener environment. These additional factors are bound to affect the delicate balancing of interests that determines how broadly and deeply regulation will be designed to protect investors. We were curious, therefore, to learn how this is unfolding.

KEY LEARNINGS

Big Tech and wealth management

One of the things we wanted to better understand and assess was the likelihood of Big Tech firms entering the retail wealth management services sector, particularly for the mass market. Given their formidable capabilities in artificial intelligence, data management and mobile technology, Big Tech firms seem well-positioned to offer a wide range of financial services directly to consumers. These services would include, but not be limited to, the electronic payments or banking-like services that many already offer. Conceivably, they might also include comprehensive and fully-integrated assistance in investments, financial planning, cash flow and debt management, insurance coverage, mortgage financing, pension options, access to public benefits programs – and virtually all other aspects of consumers' financial lives.

Just as we began looking at this, the Financial Stability Board (FSB) issued a report on possible impacts of Big Tech entering the consumer financial sector.[1] The FSB noted that Big Tech firms could materially alter the financial services marketplace, potentially bringing both advantages and risks:

> *BigTech firms typically have large, established customer networks and enjoy name recognition and trust. In many cases, these companies could also use proprietary customer data generated through other services such as social media to help tailor their*

[1] Financial Stability Board, *FinTech and market structure in financial services: Market developments and potential financial stability implications* (February 14, 2019)

offerings to individual customers' preferences. Combined with strong financial positions and access to low-cost capital, BigTech firms could achieve scale very quickly in financial services. This would be particularly true where network effects are present, such as in payments and settlements, lending, and potentially in insurance. Cross-subsidisation could allow BigTech firms to operate with lower margins and gain greater market share. Hence, while BigTech firms could represent a source of increased competition for incumbent financial institutions, in some scenarios, their participation may not result in a more competitive market over the longer term. A greater market share of BigTech may be associated with unchanged or higher concentration, along with a change in composition away from traditional players. A striking example is the mobile payments market in China, where two firms account for 94% of the overall market.

In assessing the financial stability implications posed by Big Techs, the FSB noted that, so far, the interplay between financial institutions and financial technology firms (FinTechs) has tended to conform to three models:

(a) Financial institutions partnering with or taking over FinTechs, thereby improving the financial institutions' efficiency;

(b) FinTechs providing a service which is complementary to the services provided by financial institutions, thereby improving the effectiveness of existing services (e.g., facilitating payments), though potentially also weakening the bonds between customers and their existing financial institutions (e.g., through open banking); or

(c) FinTechs competing directly with existing financial institutions, reducing margins in the affected segments and reducing the financial institutions' capacity to cross-subsidize products.

Regarding this third model, the FSB then concluded:

The entry of BigTech firms could expedite or amplify these effects through these firms' existing wide customer base, trusted customer relationships, strong capital positions and easy access to external funding, and potentially different business focus (for instance to

> *exploit data rather than rely directly on fees). Therefore, while the financial stability implications of FinTech have generally been judged to be small because of their relatively small size, this could change quickly with deeper involvement of the large technology providers.*

In an effort to explore these matters further, we invited Facebook, Alphabet/Google, Microsoft and Apple to meet with us, but they did not engage. We have been told that the Big Tech firms also declined to reveal much to the FSB, though Facebook and Google sent representatives to speak at a meeting of the FSB's Financial Innovation Network in Toronto in June 2019. Both representatives stated emphatically that their firms had no intention of becoming financial institutions. Nevertheless, in the course of our Horizon discussions we have heard from banks and other sources that all Big Tech firms are actively engaging in bank-like initiatives and are aggressively hiring personnel away from banks to support these activities.[2]

We believe it is likely that these efforts will not stop at building banking services and will venture into related areas, including wealth management. Several of the delegations we consulted shared this view. Citing Big Tech's advanced capabilities in artificial intelligence, brand familiarity and consumer loyalty and trust (notwithstanding growing concerns about data integrity and privacy), they predicted Big Tech will enter the mass market for wealth management and will be able to dominate it in relatively short order.

This view, while widely held, was not universal. Those less wary of a Big Tech invasion pointed to the marked aversion these firms have typically exhibited to any form of regulation, and hence the possibility they may be unwilling to submit to the extensive degree of regulatory scrutiny that exists in the consumer financial sector. Moreover, in some jurisdictions these firms have been attracting unwanted attention from oversight arms of government, who are beginning to view data giants as having too much power and influence. Consequently, we were

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[2] Facebook's assertion that it has no intention of becoming a financial institution seems largely contradicted by its leading role in the Libra initiative – which Facebook describes as, among other things, a means to bring financial services to 1.7 billion people who are "unbanked".

told, Big Tech may wish to maintain a lower profile in financial services by partnering with banks and other established wealth managers instead of attempting to replace them.[3]

Regardless of whether they believe disruption of wealth management will come from BigTech firms or from successful niche players (e.g., robo-advisors) branching out into a wider array of financial services, nearly all the delegations that spoke to us about it felt this disruption is inevitable – likely coming soon and unfolding very quickly.

If it unfolds in the form of integrated suites of high-tech applications and services designed to assist consumers with multiple aspects of their financial lives, the potential benefits for those consumers will be very alluring – especially if a combination of volume and innovative monetization (e.g., by subscription charges instead of transaction commissions or management fees) makes this more affordable than traditional forms of financial advice. However, Canada's fragmented regulatory system is not well designed to deal with financial service providers that, at once, cross jurisdictions and product types. This shortcoming is often aggravated by a protracted process for identifying, developing and implementing responses to complex investor protection concerns. Canada, therefore, is particularly ill-equipped to deal with any potential downsides that Big Tech's integrated products or services might present for financial consumers.

A strategy for closer regulatory cooperation and operational coordination is needed to meet this challenge responsibly and effectively. Moreover, based on what we have heard, it would be prudent to expedite the development and implementation of that strategy.[4]

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[3] This 'low profile' strategy may be a key element in Big Tech's response to concerns over its allegedly anticompetitive activities, and consequent calls in the U.S., the U.K. and elsewhere for creation of specialized digital markets regulatory agencies. See: Steve Lohr, "Forget Antitrust Laws. To Limit Tech, Some Say a New Regulator Is Needed", N.Y. Times, October 22, 2020.

[4] The limitations of a unilateral, silo-based approach to regulating Big Tech's financial services activities and ambitions can be seen, to some extent, in Canada's Retail Payments Activities Act, a new law to regulate domestic technology companies offering payment services that are not governed by another regulator, as well as foreign companies facilitating payments for Canadian customers. The legislation amounts to an acknowledgement by the federal government that a regulatory gap exists in this area, and concerns about Big Tech exploiting that gap likely

Disruption and the slow pace of reform

Several individuals and delegations we consulted raised concerns about slow regulatory response to disruptive technological innovations and social trends, such as:

- the rising popularity of mobile apps that encourage and gamify low-cost or zero-fee equity trading to such a degree that a growing cohort of consumers, many of them young and new to investing, now find stock trading as impulsive and addictive as video gaming or gambling,

- the use of social media to promote and coordinate tactical swarm-buying of so-called 'meme' stocks by large numbers of widely dispersed retail investors in the belief they're pursuing an activist purpose, when they may simply be being duped into facilitating elaborate pump-and-dump schemes, and

- the emergence and proliferation of unregulated online trading platforms for non-traditional, speculative and possibly worthless assets – e.g., crypto currencies and non-fungible tokens (NFTs) for ownership rights to digital "properties" that can be readily copied.

Sluggishness in the face of these boundary-pushing developments begs the question whether financial regulation, as currently structured and carried out, is adequate for today's rapidly evolving digital market and financial environment. That question is a legitimate one with profound implications.

An inadequate regulatory framework cannot be relied on to produce its two key deliverables: investor protection and a fair and efficient marketplace. Without that reliability, it will not be

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led to the government's response. However, the statute provides only a fragmentary solution. Perforce, it does not apply to financial institutions under provincial jurisdiction, such as credit unions and insurance companies.

able to justify imposing the many frictions and costs associated with regulation – at some point market participants will no longer accept this as a price they must pay for what they're getting in return. Instead, they will seek out alternatives including, as we noted above, novel services from entities operating beyond the reach of regulation. This phenomenon could occur and progress rapidly before its effect becomes fully apparent, potentially creating unperceived risk of a disconnect between regulation and real activity or, in other words, a risk of regulatory irrelevance and failure.

Canadian financial regulators seem slow to grasp the existential nature of this threat; or if they have grasped it, their response is not evident. They do not appear to be building rapid response capability necessary to interdict or redirect the forces of digitization and disintermediation now disrupting financial markets, nor are Canadian regulators devising a strategy for coordinating their efforts across all jurisdictional silos and legislative divides. Their focus on reducing regulatory burden and costs suggests they see that initiative as a sufficient end in itself. In fact, without addressing the more far-reaching problem that disruptive innovation often aims to circumvent regulation entirely, a simple reduction in the degree of regulatory burden will prove inadequate.

Delegations we met with from the advocacy, business and academic communities touched on this point in various ways, but a common theme was the characterization of financial regulation as overly reactive and chronically slow-footed, unable to catch up to what's actually happening on the ground in today's rapidly changing world. These comments echo our concern about regulation being at risk of sliding into irrelevancy as agile financial businesses move on to new frontiers while regulators stay behind, still focused on old issues and hamstrung by jurisdictional limits or product differentiations that are no longer relevant to marketplace realities.

ESG, Social Responsibility and Sustainability

Some of those with whom we spoke also referred to environmental, social and governance (ESG) considerations that have shifted the basic criteria for evaluating an enterprise's utility, worth and sustainability. Heightened public interest in these issues has posed a number of specific regulatory challenges. In particular, the absence of a uniform framework for ESG disclosure, or even a standardized glossary of terms, has left financial regulators poorly-equipped to confront emerging concerns about "greenwashing," (a term used to describe when investors are misled or deceived about the environmentally responsible nature of a registrant's products, aims and policies), triple bottom line (profit, people, and the planet) and investment stewardship (engaging public companies as a way to advocate for corporate governance policies and practices that promote long-term stakeholder value creation).

Absent a fundamental regulatory re-think and re-tooling, we find it difficult to conceive how regulators will be able to adapt to a financial paradigm prioritizing environmental sustainability and the creation of an economy that is more equitable and diverse. Yet, the OSC and other agencies already are having to conduct market regulation in this context. In our view, therefore, it is both essential and urgent that a game plan be drawn up by financial regulators for the development of well-conceived, consistent and enforceable ESG standards that enjoy broad public support.

Digital identity, data portability and data self-sovereignty

Several delegations spoke to us about open banking. They noted that the privacy and security concerns regularly associated with open banking apply equally to the burgeoning expansion of digital platforms for retail investment. Many groups also commented on Canada's slower progress on this issue relative to other countries. They acknowledged that open banking raised a number of complex policy issues justifying a careful and deliberate approach, but they

indicated that Canada’s big banks were, at least implicitly, encouraging policymakers and regulators to slow walk their work in this area.

The three key policy issues that emerged from our discussions about open banking and data were:

(a) the safeguarding of citizens’ digital identities,

(b) ownership of personal financial information, and

(c) the right of individuals to exert dominion over use of that information, including its portability.

In short, data self-sovereignty needs to be addressed by policymakers and financial regulators in order to provide guide rails for our digital future. This is a national imperative that transcends provincial/territorial borders and product specific distinctions. Regulators at both the federal and provincial levels and across the full range of financial services need to collaborate in a manner and at a pace heretofore not seen in order to ensure that Canada does not fall behind other OECD countries already further along in this process.

Bias embedded in investment tools

Some groups we met with spoke about the presence and impact of bias in algorithms used by financial planners, portfolio managers and investment advisors, as well as in tools available for use by DIY investors. We were told that biases are regularly conveyed from programmers to their machines, often inadvertently but sometimes deliberately; and while a particular bias may be extremely subtle, the impact on investor outcomes can be significant. This raised a number of questions:

- What is the responsibility of financial regulators in overseeing algorithm programming, both to eliminate embedded biases that may harm investors and market integrity, and to ensure that algorithms are designed to perform in investors' best interests and not those of dealers or advisors?

- Do regulators have the necessary resources and technological capacity to take on this responsibility?

- Do they have the expertise required to spot embedded biases or programmed misalignments of interests? If so, how much of a bottleneck will this process create?

- Regardless of whether a regulatory oversight process is imposed, should financial advisors, wealth managers and keystone players in the FinTech ecosystem be obliged to act as "information fiduciaries" – meaning that they have a responsibility to filter bias out of their algorithms? [5]

Many of the same questions associated with designing and overseeing algorithms can be posed with respect to safeguarding the huge repositories of personal data being amassed by our financial institutions. In this capacity their ability to safeguard that data and use it responsibly are important investor protection and financial system stability issues. Are financial regulators currently able to address these complex and concerning cyber security and data privacy issues?

It is not apparent that Canadian regulators possess the resources or technological capacity to develop, implement and enforce effective algorithm and data integrity policies in the financial services sector. These are challenges that transcend any individual jurisdiction or specific regulator, and surmounting them will require a comprehensive, nation-wide approach that spans all financial sectors. These types of collaborative initiatives among governments and

[5] On the concept of information fiduciaries, see https://www.linkedin.com/pulse/ai-inadvertently-fueling-ability-cause-harm-heres-how-marco-iansiti/

regulators have typically been difficult for Canada to mount successfully, but we urge the Commission to promote this approach before Canada falls far behind other countries.

Advisor shortage and homogeneity

Several industry groups spoke to us about a looming advisor shortage stemming from upcoming retirements (the average advisor age in some segments is 59) and persistent recruitment deficits (declining interest in careers as advisors). This is being managed currently by finding efficiencies through adoption of new technologies, but the delegations we spoke to expressed concerns that these efficiencies and the resulting new model of advice are not translating into a better customer experience and, in fact, often result in less advice and lower quality of touch.

A related issue is the relative absence of diversity among financial advisors. This issue has gained attention recently with regard to the under representation of women within the investment industry, and consequent questions about whether a similar imbalance exists in the advice being provided to male and female clients. The problem, however, is not limited to under representation of women. Advisor ranks also do not reflect the ethnically and socially diverse fabric of our country. This lack of diversity has potentially significant and deleterious social and economic implications for Canada's most vulnerable and racialized communities.

While we are not in a position to propose solutions for these retirement and diversity problems, we do think steps can be taken that will mitigate their consequences in the near term. Specifically, regulators can and should broaden their investor education programs to teach investors how to locate qualified, affordable advice and how to evaluate the quality of advice. This will require extensive outreach across ethnic, social and economic communities about the types of advice and level of services available; but to be truly effective, it will have to be supplemented by a sector-wide initiative to standardize titles, set minimum proficiency

requirements and establish a uniform market conduct standard. Again, we see this as an area where consistency and collaboration across jurisdictions and across product lines will be crucial.

Mobile wealth management

Several banks and FinTech delegations told us that mobile payment and banking apps have significantly altered the way individuals manage their finances while living abroad. Increasingly, they find it unnecessary to establish bank accounts in their new place of residence, and instead simply use their phone apps to continue banking from their country of origin.

We expect the same phenomenon will occur, increasingly, in mobile trading and wealth management for people living outside their home countries. But this also suggests that Canadian dealers and advisors are likely to face foreign competition as mobile apps make it possible to serve anyone anywhere, provided authorities in the dealer's country permit non-resident accounts.

This will give Canadian investors more service options to choose from, including better price alternatives; but it also will present obvious investor protection challenges where consumers choose to invest outside the Canadian regulatory system. At the same time, if this competitive environment arises, Canadian firms likely will want to be able to serve foreign nationals, and regulators permitting this will need to have resources in place to ensure those clients receive the full measure of investor protection afforded under Canadian rules.

Digital addicts and orphans

Most of the banks and industry delegates talked to us about the accelerating demand for digital services, especially mobile, and how this is changing the way they do business. For example, one major bank told us that 80 per cent of their consumer loan transactions in 2021 are expected to flow through customers' phones. The bank's representative also observed that this

industry-wide uptake of technological facilitation has been so disruptive and swift that "everyone's over their skis in the way we lend money now."

Similar effects are likely to arise in the facilitation of investments. We were told it already has manifested itself in the form of broad, easy access to investment loans from FinTech lenders that operate with no oversight from securities regulators or prudential authorities. As well, an element of potential overreach can be associated with mobile investment apps that make trading quick, simple, convenient and – more concerningly – impulsive, excessive and somewhat addictive.

A few delegations also expressed concern that consumers' embrace of digital technologies carries a risk that they may harm themselves by enabling features and settings on apps they do not fully understand. This raises a question of whether the apps should be vetted by regulators to ensure they provide investors with adequate, understandable instructions for their use. A broader but related question is whether the best response to disruptive technology involves helping investors use the technology more adroitly or requiring that the technology be improved so it better serves investors.

Consumer advocates and industry organizations also noted that widespread digital adoption may jeopardize access to advice and services for certain groups outside the mainstream. Dealers and advisors may eventually find it uneconomic to service digital illiterates, people who lack access to equipment or reliable connectivity, others who have lost the ability to use technology due to cognitive decline, and individuals who simply do not wish to have an online footprint. How will service to these groups be assured? It's a foreseeable problem, and a policy response needs to be formulated.

Digital development in Canada

As noted above, several delegations spoke to us about open banking. They also talked about disruptive influences relating to digital services generally, and one presenter, from an investment dealer, made several comments we found particularly insightful. These included the following:

- Development of digital services depends on consumers having the ability to gain truly secure access. A regulatory framework is needed to accomplish this.

- Countries that established such a framework efficiently found it took only a short time to do so. In Canada, however, regulatory fragmentation is making it a lengthy process.

- Modernization of payment rails opens up avenues for fraud – so regulators need market-wide fraud detection capability.

- The rest of the world is moving forward. Canada can't afford to maintain its status quo. But our regulators and policymakers need to address this in a consumer-centric way, not based on minimizing costs or maximizing shareholder value for industry players.

- Right now, it's unclear who, if anyone, is leading this initiative in Canada. Government needs to take a leading role to ensure it will be policy driven.

Regulatory obsolescence

Distilling much of what we have learned so far during the Horizon Project, two leading academic scholars expressed the view that Canada's existing regulatory structure requires radical disruption because it is fundamentally obsolete and misaligned with the needs of its core users. They based this assessment on the following:

- Financial regulatory agencies in Canada are perpetually stuck operating in silos, but financial consumers increasingly need an integrated, holistic regulatory approach to advance and protect their interests. This disconnect actually constitutes a danger to consumers because it spawns so many regulatory gaps and inefficiencies.

- Financial intermediaries are being eliminated by technological innovation, and in future most financial transactions are likely to be peer-to-peer with certification via some form of blockchain. Consequently, there will be few, if any, pinch-points where regulation can function effectively the way it has in the past. Regulation must be fundamentally re-imagined in order to work in this new environment.

We had previously heard similar sentiments voiced by delegations from the advocacy, business and academic communities. Their comments included the following observations:

- Financial regulators are overly cautious, too reactive rather than proactive, and too accommodating to industry preference for maintaining the status quo.

- They are constantly solving last year's – even last decade's – problems.

- Regulators have normalized an ultra-slow response to policy development and implementation – which contrasts jarringly with the fast-paced imperative of business.

- Regulators have normalized excessively long transition periods, even after they've determined that products or practices are so harmful that they must be banned. Consequently, there exists a risk of loss of public confidence in regulators' effectiveness and even their competency.

- Also, there is a risk of regulation becoming increasingly irrelevant as financial services and products expand and evolve while regulators struggle to keep pace, hamstrung by limited resources and bureaucratic procedures – with the result that regulation remains largely reactive rather than proactive, and never catches up to what's actually happening on the ground.

- These problems are exacerbated by the siloed nature of financial regulation in Canada. It cripples the response to many important issues, creating regulatory lags, lacunas and vacuums.

We found many of the same observations expressed eloquently and concisely in a report issued by the Deloitte Centre for Government Insights,[6] as follows:

> Sweeping technological advancements are creating a sea change in today's regulatory environment, posing significant challenges for regulators who strive to maintain a balance between fostering innovation, protecting consumers, and addressing the potential unintended consequences of disruption.
>
> Emerging technologies such as artificial intelligence (AI), machine learning, big data analytics, distributed ledger technology, and the Internet of Things (IoT) are creating new ways for consumers to interact—and disrupting traditional business models. It's an era in which machines teach themselves to learn; autonomous vehicles communicate with one other and the transportation infrastructure; and smart devices respond to and anticipate consumer needs.
>
> In the wake of these developments, regulatory leaders are faced with a key challenge: how to best protect citizens, ensure fair markets, and enforce regulations, while allowing these new technologies and businesses to flourish?
>
> The assumption that regulations can be crafted slowly and deliberately, and then remain in place, unchanged, for long periods of time, has been upended in today's environment. As new business models and services emerge, such as ridesharing services and initial coin offerings, government agencies are challenged with creating or modifying regulations, enforcing them, and communicating them to the public at a previously undreamed-of pace. And they must do this while working within legacy frameworks and attempting to foster innovation. They must balance their charge to

[6] W.D. Eggers, M. Turley and P. Kishnani, *The Future of Regulation: Principles for Regulating Emerging Technologies* (2018)

protect citizens with advancing innovation in new technologies and businesses, resisting the urge to overregulate.

ADDITIONAL THOUGHTS

The body of this report contains the key takeaways from what we have learned to date in our Horizon Project interactions. However, we also wish to note some of our own perspectives and views that factored into our conclusions and recommendations.

Consumer centrism must replace outmoded regulation

Canada's financial regulatory framework reflects the jurisdictional divides set out in our Constitution overlaid by the multi-pillar financial service sectors that have historically operated in this country. The framework's leverage stems from oversight of financial intermediation processes and financial intermediaries in product-specific channels – a regulatory mechanism designed for twentieth century realities but ill-suited to today's digitized financial services sector, which is characterized by disintermediation, product-line overlap and smart technology.

If we continue using the existing framework, only two outcomes are possible: we'll either be forcing a square regulatory peg into today's increasingly rounded reality, leaving significant gaps, or we'll be trying to put the brakes on that rounding's progress by impeding innovation and frustrating competitive growth. Neither of these outcomes will serve Canadians well going forward. Instead, our financial regulation must adapt by jettisoning jurisdictional and product-based jingoism in favour of a consumer-centric policy stance that prioritizes consumer outcomes.

Regulatory consistency

Regulators with overlapping jurisdictions need to become highly adept at treating similar issues in a similar manner. Inconsistency creates unfair treatment of different providers and their customers, and also encourages "regulatory arbitrage" by providers who configure their businesses in a manner that places them under oversight by regulators perceived to be less stringent.

Collaboration

Regulators should greatly expand inter-agency collaboration and also dialogue with outside parties in finance, technology, academia, and consumer advocacy. Robust collaboration is necessary for rapid learning amidst technology change. In general, more meetings should occur that have policymakers, software experts and consumer advocates in the same room.[7]

Regulatory predictability combined with empirical standards and outcomes-based metrics

Businesses generally avoid markets where the regulatory risks are both high and unpredictable. Consequently, regulators need to eliminate subjective standards that leave industry uncertain about how to comply and, wherever possible, explicit quantitative metrics should be established for that purpose. These empirical standards can lay the groundwork for shifting some aspects of regulation to an outcomes-based design, focused on actually achieving the policy goals that underlie legal and regulatory requirements. Also, predictability in financial

[7] Functional integration among agencies does not have to await legislative change. Existing coordinating bodies, such as the Canadian Securities Administrators (CSA), can be broadened and reinforced – see Paul Bourque, *The case for keeping our current national regulatory system*: https://www.investmentexecutive.com/inside-track_/paul-bourque/the-case-for-keeping-our-current-national-regulatory-system/ In addition, the Joint Forum of Financial Market Regulators – which spans securities, insurance, pensions and mortgage brokering – could usefully be expanded to include or continually synchronize with agencies overseeing banking, payments and any other consumer financial products or services.

policy is important and regulators should try to avoid changes or inconsistencies that are not supported by evidence and cost/benefit analyses.

Regulatory simplicity and principles-based regulation

Regulatory policy should strive to minimize regulatory compliance costs, which are passed along to consumers, and which deter innovation in the financial field while making it harder to service less-profitable market segments. In a similar vein, regulatory policy should de-emphasize rules-based strategies and concentrate on principles-based approaches, tied to measurable standards. Rules-based regulation cannot keep up with marketplace innovation, and implementation costs of proliferating new rules are unsustainable.

Adequate regulatory reach and appropriate regulatory forbearance

Today, an unregulated individual can create a financial app that millions of people are able to access. Some small innovators will create financial tools and advice without even knowing that regulations exist, much less how to comply. Current regulatory mechanisms are designed for a much more centralized, concentrated marketplace focused on institutionalized participants (dealers, banks, registered advisors and exchanges). Regulators will have to decide how and how much to address new, small experimentation and how to avoid choking off desirable ideas. Also, regulators must maintain a healthy skepticism toward established interests, who may seek to protect legacy industries from new, innovative and disruptive competitors.

Confronting market forces and behavioral reality

In addressing the challenges and opportunities posed by disruptive forces, financial regulators must be prepared to deal with and, where necessary, push back against the natural tendencies of their three stakeholder groups:

- Financial consumers – many of whom lack sufficient acumen to competently navigate markets on their own, and who therefore will be prone to making mistakes when facing disruptive change;

- Issuers and investment industry players – who, in seeking to maximize profit, predictably will decry regulatory burden while trying to limit competition and while resisting any change that threatens their legacy advantages; and

- Governments – whose ideological leanings or political fortunes occasionally may tempt them to intervene in market regulation in a partisan way.

Given these natural dynamics and predictable behaviours, it is vitally important that regulators play the role of honest broker and maintain the critical balance of stakeholder interests. Any overt tilting of the scales will only cause those who feel shortchanged to re-channel the same immutable tendencies and behaviours in new, and possibly more problematic, directions.

Equally, good policy responses to disruptive change will not be achieved through over-reliance on consumer education programs, new rules to improve business conduct, or reduction of regulatory burden. These are all important and worthy initiatives that must be continued, but they are not individually or collectively the key to staying on course while managing disruption. What will work – indeed, in our opinion the only thing that will truly work – is a continual practice of evidence-based policy formulation with steadfast focus on improving consumer outcomes. Enhancing the welfare of financial consumers is the proverbial rising tide that floats all stakeholders' boats, and therefore it warrants being the determinant factor in how market regulators respond to disruptive change.

Agility, data-centrism and security

Regulators will have to become adept at keeping up with the speed of technology change. The technology sector has pioneered the concept of "agile" workflow that involves cross-disciplinary collaboration and rapid development of solutions, in contrast to linear, sequential processes of design and decision-making. Regulators will have to become agile – adept at rapid learning, testing of innovation, rapid course correction, and creation of regulatory tools that can be updated and improved continuously.

The regulatory system will also need to become much more data-centric. It must be equipped with the resources necessary to gather adequate amounts of data, the right quality of data, and the capacity to analyze information. It must also be able to design for high security and protection against both cybercrime and loss of privacy.

SUMMARY AND CONCLUSIONS

We are living in a time of rapidly accelerating transformation – truly an Age of Disruption – marked by exciting opportunities but also abundant challenges in financial regulation. There is no single source of these disruptions. Many arise from fintech innovations that spawn concerns about such things as digital identity, data portability or sovereignty, and the impact of algorithmic bias. Other disruptions emerge from the way shifts in societal priorities intersect with our capital markets – shifts that have ignited and currently animate the ESG, social responsibility and financial sustainability movements. There are also disruptions purely structural in nature, such as the looming shortage of advisors and the homogeneity of their existing ranks.

In addition, disruptive catalysts come in all sizes, from niche app developers creating new trading modalities, or helping established financial firms add incremental functionality, through

to Big Tech behemoths potentially building comprehensive AI-powered wealth management ecosystems capable of radically altering and dominating the way advice and services are delivered to retail financial consumers.

Optimizing regulation in this onrushing state of flux will be extremely difficult. Policymakers must find ways to foster innovation while safeguarding market participants from the harm it may bring; but traditional regulatory approaches and processes are ill-suited for this task. Financial service regulation is expected to be deliberative, careful and therefore slow. It is not equipped to respond to rapid, disruptive change; and regulatory bodies typically are designed and operate to prevent risk, not capture opportunity. They are structured to address the attributes and requirements of a clearly defined financial industry with large barriers to entry, not a decentralized and fast-spreading marketplace.

Here in Canada, especially, financial regulatory agencies are hard-pressed to corral disruption or harness innovation. Despite being filled with talented and dedicated people, these agencies operate in a patchwork system of multi-jurisdiction product-specific mandates that were not designed for integrated function and are somewhat discordant (partly overlapping, partly gaping). This leaves our regulatory system able to respond only slowly, if at all, to major shifts in the external environment; and faced with rapidly unfolding problematic change, our system is apt to produce piecemeal fixes rather than a well-woven fabric of holistic solutions.

Everyone stands to lose as a result. To the extent that disruptive innovation receives a disjointed regulatory response or escapes oversight altogether, Canadian consumers will be blindsided by new risks or left to cope with the uncertainty of being only partly protected from them. At the same time, if innovation is inadvertently stifled by a slow-moving regulatory process that doesn’t efficiently foster invention or permit it to be used and mobilized, then we’ll fail to reap its benefits and our domestic financial industry likely will suffer compounding setbacks as Canada becomes, more and more, a bypassed backwater. Furthermore, the authority of financial regulation may be profoundly degraded if these failures, in combination,

make consumers indifferent to a system that isn't delivering full investor protection or robust innovation benefits. As we've noted, a resulting "Uberization" effect may encourage agile, audacious financial service providers to operate outside of the regulatory perimeter through new direct-to-consumer models designed to eliminate intermediaries, and thereby render less relevant the regulatory bodies that oversee those middlemen.

In our view, the only way Canadian financial regulation can avoid this dystopian fate is by regulatory agencies coming together, formally or informally, to develop rapid response capability for dealing with disruptive change. The initiative must be a comprehensive one, crossing all financial areas and all of the country's jurisdictional divides, or it likely will prove ineffective. It must re-imagine and re-tool regulation in order to produce forward-looking, system-wide, holistic solutions instead of piecemeal ones; and it must be able to produce those solutions quickly if Canadian consumers and financial service providers are to navigate rapidly evolving financial markets safely, confidently and successfully.

Additional resources will be needed to accomplish this. In particular, regulators must develop and maintain sufficient technical expertise to detect flaws or risks embedded within the design and structure of new fintech systems and innovative products. No doubt, this will be expensive, but it is necessary.

We believe that the OSC, as a key financial regulator, should be in the forefront of efforts to overcome the structural impediments, secure the funding and rally the political resolve needed to bring about comprehensive, system-wide rapid-reaction capability in response to disruptive change. And although we have said this reform must be fully integrated across all federal and provincial financial regulatory agencies in order to be effective, we still urge the OSC to do everything it can on its own in the meantime to:

- Speed up OSC policymaking and rulemaking,

- Address known problematic issues relating to “greenwashing”, data integrity and algorithmic bias in financial products, services and tools,
- Develop a policy response to ensure appropriate advice and services continue to be available for “digital orphans”, and
- Broaden investor education and outreach to teach consumers how to locate qualified, affordable financial advice and how to evaluate the quality of advice.

We know the OSC’s resources are stretched and its “to do” list already is long. We are not eager to add yet more problematic items to the list; but we believe these challenges are going to turn up anyway, quite soon, and the greatest harm will come if Canada’s regulatory system is unprepared when they do. Our aim in the Horizon Project is to provide some preview of the dangers and opportunities ahead. We hope this initial report proves useful for that purpose.

APPENDIX – LIST OF PARTICIPANTS IN THE HORIZON PROJECT

To date, the following individuals, groups and organizations have shared with us their views on emerging disruptive influences that are affecting or likely will affect investor protection in Canada.

ARK Invest
Renatto Leggi – Client Portfolio Manager
George Whitridge – Analyst
Maximilian Friedrich – Analyst

Bank of Canada
Scott Hendry – Senior Special Director, Financial Technology

Bank of Montreal – BMO Financial Group
Bruce Ferman – Chief Operating Officer, BMO Private Wealth
Silvio Stroescu – President, BMO InvestorLine

BlackRock
Margaret Gunawan – Managing Director, Head of Canada Legal and Compliance
Joe Craven – Managing Director
Tom Clark – Managing Director
Rebecca Randall – VP

Canadian Association of Retired Persons (CARP)
Marissa Lennox – Chief Policy Officer

CrowdSmart
Richard Swart – Partnership Advisor
Amanda Reed – Global Asset Innovation Advisor
Lara Druyan – Managing Director, Silicon Valley Data Capital

Edward Jones
David Gunn – Country Leader for Canada
Hugh Corbett – Associate General Counsel

Evree Corp.
Doug Steiner – CEO
Louis Ng – VP

Facebook
Leena Im[*] – Head, Global Public Policy

Federation of Mutual Fund Dealers
Matthew Latimer – Executive Director

Financial Consumer Agency of Canada (FCAC)
Judith Robertson – Commissioner
Frank Lofranco – Deputy Commissioner
Charles Gibney – Senior Researcher
Marilyn Leblanc – Senior Advisor

Financial Planning Association of Canada
Jason Pereira – President

Financial Stability Board (FSB)
Stephen Murchison – Chair, Financial Innovation Network

Google
Erika Peterson[*] – Global Partnerships, Google Pay

Highview Financial Group
Dan Hallett – VP, Research and Principal

Investment Funds Institute of Canada (IFIC)
Paul Bourque – President and CEO

Kenmar
Ken Kivenko – President

MBC Law Professional Corporation
Harold Geller – Associate

Nest Wealth
Randy Cass – CEO

Ontario Securities Commission
Pat Chaukos – Director, OSC Launch Pad

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[*] Limited comments provided at a meeting of the Financial Stability Board's Financial Innovation Network in June 2019.

Questrade
Edward Kholodenko – CEO
Christine Day – CIO

RBC – Royal Bank of Canada
Jennifer Publicover – SVP, Products and Strategy, Wealth Management

Scotiabank
Shawn Rose – EVP and Chief Digital Officer

University of Toronto – Faculty of Law
Anthony Niblett – Associate Professor, Academic Advisor, Future of Law Lab
Josh Morrison – Director, Future of Law Lab

University of Toronto – Rotman School of Management
Richard Nesbitt – Adjunct Professor

University of Victoria – Gustavson School of Business
Michael King – Lansdowne Chair in Finance

Vanguard
Kathleen Bock – Principal, Head of Americas Region
Mario Cianfarani – Head of Institutional and Retirement Distribution

Wealthsimple
Blair Wiley – General Counsel and Head, Regulatory Affairs
Rachel Factor – Communications Director

Wellington-Altus Private Wealth Inc.
John DeGoey – Portfolio Manager

Western University – Ivey Business School
Chuck Grace – Lecturer