starling

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Introduction

Starling Trust Sciences is a leading RegTech firm, headquartered in the United States, and actively engaged in the Australian market since 2017. Starling is pleased to offer this submission to the Senate Select Committee on Financial Technology and Regulatory Technology as it considers the opportunity for RegTech to create jobs in the Australian market and to help preserve the integrity of its financial sector.

Combining behavioral science and machine learning/AI, Starling's Augmented Risk Intelligence platform allows management to spot deficiencies in operational risk management processes, to forecast where employee misconduct is most likely to occur, and to map the employee trust networks by which these behaviors are likely to spread, contagion-like, throughout a firm. Armed with such leading indicators, management moves from hindsight to foresight in addressing intransigent operational risk problems. With Starling, banks can scale operational risk oversight across global operations in real-time, moving to continuous oversight versus periodic spot-checks. And Starling allows firms to replace certain manual processes with automation, generating superior results with fewer staff resources and at lower cost.

Starling is an industry thought leader. Our writings on the topic of RegTech and non-financial risk management have been run by Reuters, Fox Business, *Forbes*, *American Banker*, and other news media outlets, and we have received recognition from Regulation Asia, Fintech Global, and CB Insights, among other commentators writing on the space. Our annual *Compendium*, detailing efforts by central banks, regulators, and international standard setting bodies to strengthen supervisory capabilities aimed at culture and conduct risk, has become a widely read industry resource. Notably, our most recent issue featured commentary from Greg Medcraft, James Shipton and Gail Kelly. (next update, March 2020)

Starling is well regarded among global bank regulators. We have been invited to present our ideas at events hosted by: the NY Federal Reserve Bank, the Hong Kong Monetary Authority, the Monetary Authority of Singapore, the Southeast Asian Central Bank (SEACEN) Centre, the Bank of International Settlements, the Basel Committee on Banking Supervision, and the Financial Stability Board, among others. And Starling is one of only eight firms selected to run a cross-border trial of its tools under the auspices of the Global Financial Innovation Network, a knowledge-sharing body newly established among global regulators, with particular leadership from the UK's Financial Conduct Authority and the Australian Securities & Investments Commission. In this direction, we are currently exploring several opportunities to work with Australian banks and other potential partners in the Australian market.

Events in Australia, leading to and following from the Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, make apparent the desirability of an improved means by which to anticipate and mitigate the culture and conduct related risks that continue to trouble the banking sector, resulting in harm to customers, shareholders, and to Australian society more broadly.

Offerings from the emergent RegTech ecosystem hold promise in this regard and, because the need is so currently pressing in Australia, we believe there is an opportunity for the country to set itself apart as a leader in the global RegTech space, as we have argued elsewhere. (see link here) In addition to helping ameliorate social ills, we believe that a commitment to advancing RegTech, on the part of the Australian government and its financial sector regulators, may prompt the creation of new jobs, as RegTech firms devote attention and resources to the opportunity represented by the Australian market.

RegTech is not Fintech

We wish to limit the scope of our following commentary. Starling is a RegTech firm and, as such, our remarks here aim to address the interests of firms in that space. While it may be that our remarks are pertinent also to some fintech firms, this is incidental. Further, our remarks take as their focus our own narrow niche within the universe of RegTech offerings: the improved management of non-financial risks, and most particularly those that flow from firm culture and employee (mis-)conduct.

Many RegTech firms – including Starling – focus on the financial sector. As a consequence, perhaps, it is regularly the case the RegTech and fintech are discussed in the same breath. Indeed, many see RegTech as a subsidiary of fintech. But RegTech is not fintech, as the Committee recognizes in its Issues Paper. However, we would wish to emphasize here a key distinction that is not referenced therein.

Most fintech firms seek to bring financial products to market, impacting consumers. Those offerings require regulatory oversight, much as do product offerings brought to market by traditional financial firms, and engagement between fintech firms and financial regulators is most often driven by this imperative. For instance, this is a key driver behind the development of “regulatory sandboxes,” which serve to create a safe space within which to conduct product trials until such time as those products may win needed regulatory approvals. In sum, fintech firms look to regulators for *permission*.

This is not necessarily the case for RegTech firms. Such firms seek to create products that are most often unlikely to touch consumers directly. As such, these technology offerings typically fall outside the scope of direct regulation. Rather than looking to regulators for permission to operate in the market, what most RegTech firms require from regulators instead is their *collaboration*. This is driven by a commonality of interest: regulators act to safeguard the public through supervision of the financial firms they oversee, while RegTech solutions providers operate consistently with that cause in seeking to provide financial firms with a superior set of tools with which to satisfy their regulatory mandates.

Examples of such collaboration between public and private entities are numerous. We believe that a particularly helpful illustration is found in the collaborative ecosystem in the US defense and intelligence communities, where grant-making bodies such as the Defense Advanced Research Projects Agency (DARPA), under the US Department of Defense, and the Intelligence Advanced Research Projects Activity (IARPA), an organization within the Office of the Director of National Intelligence, have long worked to promote private sector research into matters of critical national interest through research grants.

More recently, the US government has made venture capital available to startups through the Defense Innovation Unit (DIU) — “the Pentagon's Innovation Experiment”— established to help the military make faster use of emerging commercial technologies, and In-Q-Tel, the CIA’s venture capital unit, working to accelerate the adoption of cutting-edge technologies that help preserve national security.

If Australia wishes to establish itself as a leading global hub for RegTech development, inviting foreign direct investment and creating technologies for global export, perhaps it may consider promoting this through new agencies, such as DARPA, IARPA, DIU and In-Q-Tel. Alternatively, budgetary resources might be awarded to existing agencies (e.g., ASIC, APRA, AUSTRAC), earmarked specifically for us in promoting RegTech innovation, development and adoption. The requisite Treasury resources to fund such an initiative adequately would be orders of magnitude *less* than the monies lost to the Australian economy as a consequence of the misconduct scandals that have filled the headlines in recent years.

Culture & Conduct Risk

The Operational Risk Exchange ("ORX") is an industry body made up of operational risk executives from banks, insurers and other financial institutions worldwide. ORX was established to create "a platform for the anonymised and secure exchange of high-quality loss data relating to operational risk." After a November 2018 examination of public reports and its own loss records, ORX found that, "since 2010, global fines and settlements related to misconduct have reached almost $607bn." (USD)

The bulk of this was absorbed in 2011-12, with a drop off in the years that followed up until 2018, which witnessed a marked increase. "It's impossible to know if this uptick signifies the start of a trend towards higher conduct risk losses," ORX observed. "What is clear, however, is the continuing intense scrutiny of conduct and culture by regulators worldwide," it concluded little more than a year ago.

Events during 2019 show ORX to have been right in anticipating continued "intense scrutiny" of culture and conduct risk by bank regulators. Nowhere was this more evident than in Australia, where the new acronym GCRA was spawned as a catch-all reference to the growing importance of Governance, Culture, Remuneration & Accountability issues for regulated firms in banking, insurance and superannuation. As the Committee is no doubt aware, so-called 'culture costs' associated with the GCRA agenda will weigh on the profitability of the country's Big Four banks and are likely form a permanent part of their fixed cost base for the foreseeable future.

The challenge now, for firms and their supervisors alike, lies in determining how best to *evidence* that a firm's culture is what management intends it to be, and that it is demonstrably operating to shape employee conduct in desired directions. This is not a trivial task, and it is made more complicated by a ready insistence that culture is 'soft stuff' and not something that submits to quantitative metrics.

During his appearance before the Royal Commission, former NAB board chair Ken Henry was asked whether he felt that his firm had adequate risk controls in place, and if he felt it were possible to measure the firm's culture. After answering in the affirmative, Henry was unable to articulate a clear response when pressed to indicate how the firm did so. "We will know we've got a healthy culture when we see things like fewer incidents of noncompliance with external regulation but also with internal policies," he stated. Counsel for the Commission was unimpressed by this reactive stance.

NAB is not alone. Former Wells Fargo CEO Tim Sloan was pressed on the same matter when called to appear before the House Financial Services Committee in the US Congress. Throughout that hearing — titled, "Holding Megabanks Accountable: An Examination of Wells Fargo's Pattern of Consumer Abuses" — Members complained about an apparent inability on the part of the bank's leadership to drive meaningful change. "Each time a new scandal breaks, Wells Fargo promises to get to the bottom of it. It promises to make sure it doesn't happen again," Republican Congressman Patrick McHenry grumbled, adding, "but then a few months later, we hear about another case of dishonest sales practices or gross mismanagement." Shortly thereafter, Sloan abruptly resigned, ending a 31-year career at Wells Fargo.

A lack of industry standard metrics to address such 'soft stuff' is a key contributor to the persistence of sector-wide misconduct globally. In a September 2018 address, APRA Chairman Wayne Byers rightly observed that, "the finance industry, and the risk profession that serves it, has a natural affinity for measuring things in dollars and cents, percentages and basis points. But that means the conventional risk management frameworks and processes find it difficult to grapple with difficult-to-quantify risks, such as those relating to behaviour and reputation," he added. "If what gets measured gets managed," Byers concluded, "then I suspect that has played some role in bringing the industry to where it is today."

Lessons from Behavioral Science

It is perhaps unsurprising that the word "culture" appears 471 times in the Royal Commission's Final Report. In concluding remarks, Commissioner Hayne wrote, "financial services entities must now accept that financial risks are not the only risks that matter… Financial services entities must give sufficient attention, and devote sufficient resources, to the effective management of non-financial risks."

This much seems uncontroversial. The challenge lies in determining *how* best to manage culture and conduct risk. Increasingly, bank supervisors are looking to the behavioral sciences for guidance.

De Nederlandsche Bank – the central bank of the Netherlands – uses an iceberg metaphor to depict the way in which culture operates. The DNB finds that observable behavior is shaped by underlying "group dynamics", or "patterns of interaction" that work to affect overall group effectiveness. Deeper below the surface, the DNB calls attention to the "mindset" that prevails among employees – "mental models" and "assumptions about reality" that implicitly inform individual and group decision-making and, thus, behavior. For the DNB, it is the supervisor's task to surface these underlying cultural drivers of behavior.

Traditional management theory elevates the importance of incentives in driving employee behavior, and these incentives are seen as primarily financial. But, as social critic Eric Hoffer opined, "When people are free to do as they please, they usually imitate each other." The social circumstances in which people find themselves – their social networks, and the norms within those networks – are extremely powerful forces motivating behavior, often much more powerful than monetary incentives or individual desires.

Behavior, in short, is contagious. It is transmitted via cultural norms: people will behave badly when they perceive that their peers are doing similarly. Dishonesty, fraud and proscribed behaviors tend to spread via processes of social contagion, like most other observed human behaviors.

This epidemiological perspective offers a number of models for diagnostic inquiry and behavior-change interventions, particularly when paired with newly devised "computational social science" techniques.

For instance, with adequate information about both the structure of employee interactions (e.g., by studying email communication patterns in a manner that we have validated) and with information about known cases of past bad behavior, it is possible to forecast "outbreaks" of misconduct and to track behavioral contagion dynamics. These methods can help to identify clusters of employees at greater risk of succumbing to such contagion, allowing us to implement 'inoculation' efforts that target individuals or groups who, by virtue of their network location, have an outsized impact on the culture within the firm. Notably, such individuals are not necessarily obvious in any a formal org-chart.

An industry-wide over-reliance on surveillance and monitoring tools that aim to catch 'bad actors' while 'in the act' implies a tacit expectation that these bad acts will continue unabated, though perhaps more perpetrators will be found and penalized. It would be far better if risk management leaders were able to successfully anticipate misconduct so that it might be headed off proactively, before harm is done.

By distilling hitherto unavailable insights from standard company data sets, RegTech firms making use of computational social science methodologies can better identify and help to mitigate risks that are not sufficiently well captured by current standard metrics and governance processes. Where these tools are informed by behavioral science, they promise to make at least some of the 'soft-stuff' measurable, provide new and operationally impactful insights into culture and conduct risks, and gauge the success of various risk management interventions, thereby helping firms to evidence improved non-financial risk management capabilities. If shown to be successful, such tools might allow for the development of industry-standard metrics, to the benefit of firms and supervisors alike.

<u>Starling's "Lived Experience" in the Australian Market</u>

The Committee has expressed interest in learning of the "lived experience" of RegTech firms operating in Australia. As such, it may be of interest to learn that, in the last two years, Starling has met with senior risk and compliance leaders among all the Big Four banks (CBA, NAB, ANZ and Westpac) as well as at Macquarie. We have maintained a continuous and close engagement with senior leadership at ASIC and have sought to do so, less successfully, at APRA. We have discussed the issues remarked upon herein with members of the APRA Capability Review panel and with the Australian Banking Association. And we maintain an ongoing dialogue with leaders at several of the major consultancies, accountancies, and law firms that are busily standing up practice groups that target culture and conduct risk issues.

This experience affords us several observations.

- At least as concerns RegTech tools aimed at culture and conduct risk issues, an unfortunate 'stalemate' seems to thwarts the adoption of such tools: regulators are reluctant to stipulate what 'good' culture and conduct risk management looks like, other than in the form of *ex post* outcomes; and firms are reluctant to invest in new methodologies and technologies absent some indication from regulators that these will be viewed favorably. It would seem that this area may be ripe for legislative intervention to promote necessary collective action.

- Among the Australian regulators with which we have engaged, ASIC appears to most committed to advancing the culture and conduct risk management agenda and appears perhaps best placed to champion Australia's nascent RegTech sector. An appropriate concern for conflict issues and improper endorsement of particular firms or technologies places a natural constraint on ASIC in this regard. This would seem to be another matter to warrant consideration by the legislature.

- Australian banks seem in a rush to catch up with the approach to non-financial risk management taken by their international peers, many looking in particular to the example of UK firms which have already had to accommodate that country's adoption of a Senior Managers Regime that imposes individual accountability for failures in such risk management efforts. In this direction, there appears to be a great reliance on advisory firms rather than technological innovation.

- This rush to adopt methods from abroad is, perhaps, understandable. But gives inadequate attention to the persistent failure of international banks to grapple with culture and conduct risk issues successfully themselves. It would seem to us ill-advised that Australian firms should seek to double down on an industry-wide reliance on surveillance & monitoring tools that have proven inadequate, or on HR-driven staff surveys and ethics training measures that are clearly ineffectual in driving behavior change, however much they may represent 'good hygiene.'

- Instead, there may now be a unique 'moment-in-time' opportunity for Australian firms to establish industry-wide best practices through the development and adoption of RegTech alternatives. A consortium of banks came together to create Mastercard and Visa when they experienced a shared interest in developing these payment systems. The same was seen when a consortium of banks funded and adopted the Symphony communications system, as a lower cost rival to the Bloomberg chat terminal. It would seem that Australian banks might work together in similar fashion to fund, develop, adopt and export RegTech solutions.

- With appropriate legislative and government support, this might work to 'promote ingenuity,' as the Committee has called for in its Issues Paper, and lead to Australia's neighbors looking to it as an exemplar of technological innovation.

Support for Submission by Australia's RegTech Association

We view Australia as an important market for us and we will invest in Australia as business opportunities for Starling take clearer shape in the Australian market. The work of the Senate Select Committee on Financial Technology and Regulatory Technology is critical in this context.

Along with Australia's position as a financial center come increased expectations that Australia will play a leading role in global banking regulation. By creating an environment that encourages innovation, experimentation, and investment in RegTech solutions, we believe Australia has an opportunity to improve trust in financial markets while boosting bank profitability and furthering the interests of Australia's bank customers, employees, shareholders, and broader society.

There is a clear need for the Australian government to do more to prompt the industry to try new tools rather than simply doubling down on past failed approaches in an effort to *seem* diligent without any real commitment to *evidencing* meaningful change. Financial centers successful at implementing new solutions will enjoy an increase in trust and the benefits that come from that. We believe there is an opportunity for Australia to respond to recent crises at its large banks and superannuation funds with positive reforms in this area and, thereby, to improve Australia's position as a RegTech innovation hub for the greater Southeast Asia region and the world.

However, to date, Starling's experience in Australia is consistent with that of other firms that have submitted testimony to the Committee. Specifically, we would like to recognize and endorse the testimony submitted by The RegTech Association (RTA), offered on December 12th on behalf of its member firms, and here we would wish to emphasize two points that were made by the RTA.

Challenge: Regulations that emphasize Remediation vs. Transformation

Australia requires less in the way of remediation and more in the way of transformation. Events of the past two years demonstrate that there is much more to be done to restore integrity to, and trust in, Australia's financial sector. In the last three years, CEOs at three out of four of Australia's Big-Four banks have been defenestrated as a consequence of non-financial risk related management failures. Further, the APRA capability review revealed a number of shortcomings in that organization's response to overseeing culture and conduct risk. It is increasingly clear that simply doing more of the same is simply inadequate.

New tools and approaches to financial regulation are required – by firms and regulators alike. As the RTA has argued, it is critically important for the emerging RegTech industry that the response to bank scandals, from both regulators and other public institutions, goes beyond mere reactions to these crises and established procedures for short-term remediation. Transformative technologies are called for and Australia's RegTech industry is poised to help deliver such transformation. The legislature, government and regulators can play a role in encouraging investment in solutions that, though still emerging, offer the potential to address root-causes. While regulators may shy away from explicitly endorsing specific vendors or solutions, they can still support these new technologies in a number of ways.

1) Emphasizing a balance between pressing for incremental enhancements to existing surveillance and compliance solutions vs. supporting the development and adoption of new technologies;
2) Recognizing investment in new technologies as evidence of good intent in enforcement actions, and perhaps encouraging such through tax credits; and
3) Providing assurances that issues discovered through the use of new technologies will receive special consideration when reported to regulators.

Challenge: Lack of Capital and Long Sales Cycles

All startups that sell into enterprises must contend with long sales cycles and complicated procurement processes. Innovative RegTech firms selling into banks face even greater challenges, however, as they must also contend with an uncertain regulatory environment themselves. RegTech solutions in general tend to be perceived as cost centers that must justify their investment by reducing a firm's risk exposure or by cutting costs. Because it can take months or years for new solutions to demonstrate success in this direction, investment in risk and compliance solutions naturally favor those that facilitate short-term remediation and incremental improvements to existing processes.

Unless the Australian legislature and government act explicitly to press for and otherwise subsidize the trialing of new solutions, banks will have little incentive to risk making such investments themselves. Faced with reluctance among prospective bank customers, and only soft endorsement from regulators, RegTech firms face a perhaps insurmountably high hurdle. They will struggle to win customer revenue, venture investment, and most will thus suffer a prolonged 'crib death.' Moreover, Australia will fritter away an opportunity to achieve global leadership, doing further injustice to its already aggrieved people.

The RTA has described several models whereby the government might support the emerging RegTech industry. While we are not in a position to endorse any particular solution, we strongly encourage the Australian government to explore a variety of approaches in order to determine which may have the greatest effect, and we would also point to other examples where governments have taken a lead role in promoting RegTech solutions.

For instance, as the Committee itself observes, at a policy-level, this is seen most clearly in the efforts of the UK Financial Conduct Authority to promote RegTech, encouraging investment into the space. (In full disclosure, Starling is proud to be advised by the former CEO of the UK's FCA, Martin Wheatly.) More directly, the Government of Singapore has established a multimillion-dollar fund that provides resources to banks that are willing to trial promising RegTech technologies. (Note, Starling is similarly delighted to be advised by Siew Kai Choy, former head of risk governance and data analytics at Singapore's sovereign wealth fund, GIC.)

"Never let a good crisis go to waste"

Australian leadership is called upon to restore the integrity of its financial sector, and the global RegTech community stands ready to lend support in this direction. The current crisis in Australia's financial sector creates an imperative and a space for a collaborative partnership between the public and private sector – one that will likely draw in the active participation of venture capital and RegTech solutions providers from abroad. Starling is grateful for the opportunity to provide these comments and we look forward to supporting efforts to position Australia as a leading center for the RegTech industry.