Innovation Ecosystems

Unlocking real value through fintech innovation

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Barely a day goes by without another announcement from a fintech startup that says it is going to do to capital markets what Uber and Airbnb have done to the transport and accommodation industries. Many of these initiatives are founded on the growing realisation that the central pillar of modern commerce, capitalism, is being morphed into something new based upon the possibilities presented by almost limitless digitisation, the sharing economy and a world of almost zero marginal cost.

And yet for capital markets the journey looks much harder; not because they are more complex (fundamentally they are not) but because the entrenched technologies, processes and regulatory obligations that comprise global financial markets make success so much harder to come by. In this paper Steve Grob looks at two different types of innovation that are emerging within the buy-side and the sell-side and what is required for them to be truly disruptive.

Capital markets today

A useful starting point is to look at the true state of capital markets as they have emerged from the 2008 crisis. Whilst optimism and greater trading volumes are becoming apparent, it is also clearly evident that this is not just a cyclical recovery. Instead, it is the inception of an entirely reshaped industry that is being driven by the twin pressures to demonstrate relevance whilst, at the same time, ratcheting down cost to reflect the new economics of the industry.

Regulators are making capital markets increasingly transparent and so it is no longer viable for the sell-side simply to intermediate itself between its customers and sources of liquidity. Buy-side firms are on the hook too, especially to demonstrate to their own investors how they procure research, allocate costs and get the best possible execution quality from their brokers. And so the traditional relationship between the buy-side and the sell-side is being fractured and replaced with something far more arm's length and transparent in nature. Put simply, both

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sides have to show clearly the real value-add that they bring to the party.

Regulation is also driving the second problem, cost. The regulatory hurdles of operating in capital markets are getting higher each year, as does the real and opportunity cost of capital. This means that firms are having to scrutinise every aspect of their operations and develop creative ideas to solve for a cost problem that is only going to get worse.

What is interesting, though, is that firms need to solve *simultaneously* for both these problems, irrespective of whether they are positioned as a global or super regional flow monster or as a niche specialist. Key to getting this right is being able to successfully define all your activities into those that are necessary but non-differentiating and those that can or have the potential to add demonstrable and differentiating value.

Innovation, then, can be split into two camps; that which adds differentiating value to demonstrate *relevance* ('Type R' innovation) and that which helps reduce *cost* ('Type C' innovation). Each comes with its own very specific set of characteristics and challenges and yet, as we shall see, the same approach can be used to overcome these challenges and improve the outcome for both.

Examples of Type R and Type C innovation

Obvious examples of Type R innovation in the sell-side include products such as algos or smart routers that are designed to achieve better trading outcomes. Their creators regularly advertise them in the trade press with each claiming greater efficacy over their competitors. But there is a new class of more exciting applications emerging in the battle for relevance and value-add. These work by providing context to any particular trading situation. They intelligently bring together multiple sources of structured and unstructured data to help the user understand *why* something is happening rather than just *what*. Another example of Type R innovation comes from those applications that help traders interpret the trading landscape more efficiently. Both help the sell-side offer demonstrable value to their clients.

The buy-side can benefit from understanding context better too. Today the problem isn't about getting data to support a particular trading thesis, but rather it is about filtering out the noise and then effectively curating what is left. Finding a needle in a haystack is just as much about how you shape the haystack as how you search through it.

The final dimension to Type R innovation comes from using the information that is distributed around the firm in more imaginative ways. For the buy-side, tools are emerging that allow portfolio managers to look intraday into back office systems and so help drive better decision making. Similar tools for the sell-side are helping them better understand historical trading shapes too, and so offer genuine insight to their clients.

The second type of innovation – Type C – is all about efficiency and driving down cost. This has always been a mantra in capital markets, but it has taken on a new urgency as increased capital ratios, billion

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dollar fines and shrinking marginal returns really start to bite. To make matters worse, the greater transparency that will result from unbundling and other regulatory initiatives means that execution costs and research procurement will be opened up to even greater scrutiny.

Two themes are emerging in this new battle on cost. The first is the recognition that front office is perhaps approaching a point of diminishing marginal returns in terms of the benefits of further automation. This is leading firms to look at other areas of their workflow and, in particular, at post-trade. Because post-trade automated before front office, much of its workflow is dominated by legacy technology. On top of this, it is often characterised by inefficient work practices that have sprung up on a 'needs must' basis to cater for individual situations. So whilst most firms boast very low breakage rates in affirmation processing, for example, the cost of the last mile getting there is exponentially high. Applications that automate exception handling through standardised workflow are good examples of Type C innovation that can really drive down cost. Not as glamorous or as cool as front office tech maybe, but possibly far more impactful in the long term and certainly on the bottom line.

The second theme that has emerged in Type C innovation is the need for greater co-operation. Historically it has always been hard for market participants (especially the sell-side) to leave their weapons at the door, sit down with their competitors and discuss how they can work collectively to lower operating costs for all. What has changed, however, is the growing realisation that firms are unlikely to get to an acceptable cost level *on their own* and so the only choice is to look at how pieces of workflow can be standardised and operated on a collective basis. Naturally, this works well for those areas that are non-differentiating, such as trade reporting, affirmation processing or data standards.

The really interesting question, though, concerns how far this type of collaboration might go. Blockchain technology, for example, has the potential to collapse the cost of clearing and settlement to almost zero. It will only work, however, if everyone adopts the same blockchain technology; otherwise the need for intermediaries remains. It's hard to imagine a world without custodians, CSDs and clearing houses, but then who would have thought that we would so happily get into strangers' cars summoned up only minutes before on our smartphone.

Barriers to innovation adoption

All established industries can sometimes struggle to assimilate new innovations, but fintech and capital markets throw up some distinct problems for would-be disruptors. First, there are the obvious – but very real – general hygiene factors that need to be met. Many innovators (especially the Type Rs) can struggle to convince large market participants that they meet the mark in terms of resilience, security and regulatory compliance. A bigger problem, however, is that many new innovations (again, especially Type Rs) only really work if they can be embedded in the trader's existing workflow. This is driven by the obvious need to preserve screen real estate and, of course, habit.

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More important, though, is the need to operate dynamically so as to reflect what the trader is actually trying to do at any one point in time. Only by being tightly coupled with existing workflow can Type R innovation hope to gain mainstream appeal.

Another challenge for Type R innovators is the cost of selling and delivering their technology into the financial sector. Naturally, cloud-based delivery reduces the cost but many firms are reluctant to allow their sensitive trading data to potentially go wandering lonely in the cloud. Some regulatory authorities – the Monetary Authority of Singapore, for example – even go so far as to actively prohibit cloud-based trading systems altogether. Even ASP-delivered systems are subject to much higher regulatory and client scrutiny than in many other industries.

This barrier isn't just built upon well-placed concern about cyber security and infosec, but is also formed from a political agenda that is determined to avoid systemic risk.

Type C innovators face an additional hurdle if they are going to succeed. This can be defined as the 'first telephone' problem whereby any idea (however useful) only really works in practice once it is widely deployed. The challenge is particularly acute in capital markets where complete end-to-end trading workflow depends upon the collaboration of multiple counterparties, all operating at different speeds and with different sets of priorities. Achieving uniform momentum across enough parties concurrently can be a significant barrier to new technology adoption. What is needed is the means to coordinate, lead and execute upon initiatives. Without this the alternative is death by a thousand committee meetings.

Innovation ecosystems

Innovation in capital markets today is clearly about more than just having a good product, angel or VC backing and a cool website. Type R innovation needs to find a way to work within existing customers' workflow and Type C innovation needs to solve for the distribution problem.

Both of these problems can be addressed by taking an ecosystem approach which allows the interaction between old and new technology (Type R) and the bridge between old and new work practices (Type C) to happen more smoothly. Essentially, an ecosystem is an interconnected network that is empowered by elegant organisation which allows each member to be more successful than they would otherwise be.

Examples from other industries abound with perhaps the most famous being Apple's App Store. The problem with the App Store approach in capital markets, however, is that the demands from financial institutions are such that any 'store owner' would either have to abrogate all responsibility for its apps or spend almost its entire time vetting and monitoring its app providers.

This is one of the problems for the fintech incubators and digital villages that are being set up by various industry participants. The other is that whilst they can provide valuable guidance (and money) they can do little to

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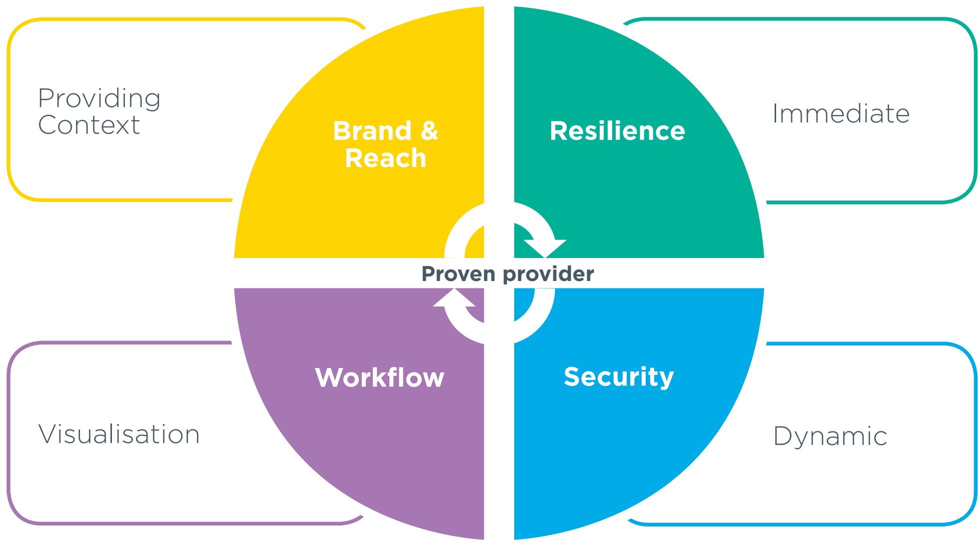

actually help new firms execute. And, if anything, potential customers are likely to be less enthusiastic or supportive of a technology that has been hatched from a competitor's incubator.

So, what is really needed is something that is far more controlled and based upon a genuine partnership between a proven, established provider that can cover areas such as workflow and resilience, and the newcomers that are now free to innovate in areas such as context and visualisation (see diagram above).

Ideally the proven provider should be stepping up to take full responsibility for the overall outcome to their mutual customers – commercially, technically and legally. Any ecosystem of this type also needs to ensure that the newcomer's technology is elegantly embedded within the established provider's platform too. Otherwise the result can quickly descend into a Frankenstein's monster of poorly integrated or even conflicting parts.

Doing this right can take time and money (often in short supply for Type R innovators) but the outcome, if successfully executed, is likely to be way more certain and impactful. This is because both parties can focus on what they do best whilst leveraging the skills, reach and resources of the other.

Ecosystems can also work well for Type C innovation. Competing firms need to be encouraged to work together and share ideas, something that is much more easily achieved when organised by a trusted, neutral third party. To be clear, though, this needs to extend beyond just the establishment of technical standards. Organisations such as the FIX Trading Community do a great job of extending the reach of the FIX Protocol, and even in establishing working groups to

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understand the impact of different pieces of regulation. But on top of this is the need to define new workflow and then build and operate any resultant innovation on a utility basis at a fixed margin. By way of example, the specification for using FIX in post-trade affirmations has existed for over ten years and yet it is only recently that a standardised workflow has been defined and is now being rolled out across the industry. This helps to underline the point that if the same organising party also has distribution across the buy-side and the sell-side, then the result in terms of driving industry change can be extremely powerful.

The road ahead

Capital markets will continue to reshape themselves and, in so doing, drive the need for the buy-side and the sell-side to innovate, both to demonstrate relevance and to reduce cost. Fintech innovation that isn't clearly solving for one of these problems or the other will struggle to gain traction. Even those that do will still face some unique challenges in crossing the chasm into mainstream success. The elegant organisation that well-developed ecosystems can provide bridges the journey from the old to the new.

Those firms that can help the buy- and sell-side assimilate new technology in this way will come to dominate.

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