cutting through complexity

The perfect storm of technology and capital markets:

The modern history of FinTech

Bob Hayward, KPMG in Singapore
Ian Pollari, KPMG Australia

Is 2015 the 'year of FinTech'? A perfect storm of conditions is brewing that makes financial technology (FinTech) the right solution for the right conditions at the right time. And that time is now.

The investment banking industry is in a state of flux. Seismic shifts, brought about in large part by the monumental costs and complexities associated with increasing regulation, have altered the economics of investment banking forever. The challenges posed by the regulatory environment added to the pressures from customers for higher yields and lower fees present challenges for banks' capital markets businesses. And as the digital revolution and reduced information asymmetry continue to transfer more power to the buy-side with greater levels of electronic, or self-directed trading, the sustainability of intermediation must, at some point, come into question.

There is also the issue of trust. Beyond the investment banking and capital markets sector's legacy technology systems, trust has weakened between customers, investors and the banks that serve them, between counterparties that trade with each other and even between regulators.

Power to the buy-side

Technological advances will continue to reshape capital markets' operating models and service delivery paradigms over the next several years. The 'democratisation' of technology has already seen buy-side institutions assuming more control over the trading systems they employ, reducing their dependency on the sell-side to supply them with the tools they need. This shift will continue to gather momentum as the buy-side becomes more empowered, seeks to preserve returns in a difficult market, takes more control over the quality of execution and the sell-side struggles with its capacity to respond.

For those investment banks that wish to thrive, now is the time to adapt with new business processes and operational models, steeped in innovation and engineered for a new set of business realities and more intense levels of competition, particularly from 'new world' entrants. Therefore, the emergence of FinTech represents both a threat and an opportunity for the capital markets sector.

High technology, low barriers to entry

Interestingly, technology itself has eroded barriers to entry in the FinTech marketplace. It's never been easier and less expensive to start a new financial services venture than today. It only takes a little capital to tap into almost any capability required – all delivered on demand 'as a service' through cloud computing anywhere in the world and requiring no upfront investment. Some of the leading financial institutions are encouraging this wave of innovation by opening up their existing systems through new Application Program Interfaces (APIs) that can help build new global-caliber FinTech software applications.

The price and timing couldn't be better for development. The cost of computing and IT has fallen dramatically, even as the large banks continue to struggle under the weight of their legacy infrastructure and traditional application burden.

A symbiotic relationship is emerging in which traditional companies saddled by internal technology constraints are cultivating relationships with smaller, more nimble FinTech companies. Banks with more than 100 years of history are suddenly creating FinTech-focused venture capitalist (VC) funds, asking staff to mentor start-ups in FinTech incubators, forming research teams to understand every emerging FinTech business model, writing API layers across their current systems and inviting newly formed ventures to company-sponsored accelerators and hackathons.

Demand for tech-inspired innovation is trickling into the thinking of investment banks. This traditional world is primed for 21st century modernisation. Though this transition can be a challenge, outmoded IT systems are slowly being replaced with modern technology often born of innovation outside the banking industry. In some instances, investment banks are beginning to outsource critical IT infrastructure and explore the creation of industry utilities in non-competitive, manually intensive and costly processes, such as anti-money laundering (AML), Know Your Customer (KYC) and customer onboarding. We expect to see further development of these approaches and a new level of flexibility in technology implementation, particularly as legacy back-office IT systems are gradually removed from service.

Timing is everything

We believe the shift in the current environment is more than a mere window of opportunity. In fact, we foresee a long-term and permanent shift in the way of doing business, as investment banks embrace financial technology in their daily dealings. So, if you are not already engaged with FinTech, the time is now.

We are already seeing a change in capital markets. Though these changes are not nearly as evident as online and mobile banking on the consumer side, a revolution is underway in the back-office space as the new business model takes hold.

Disruptive effects

FinTech is disruptive to banks' 'business-as-usual' models. The advent of FinTech is generational – figuratively and literally – with a younger breed of innovators providing timely and creative solutions. FinTechs bring radical ideas to build, deliver, access and advance IT infrastructure at investment banks. This union of pacesetters and the established banking order seems to work: FinTechs innovate in ways that banks find hard to do. And the banks need this infusion of fresh thinking to remain competitive – or get ahead.

In capital markets, these disruptive players are getting a seat at the table. Boards and bank leadership face a dilemma: They often are aware of FinTech innovation but can't duplicate it within their own walls. The solution? Bypass their own IT providers in favor of FinTechs born in the digital age and not burdened by the entrenched constraints in the industry.

The downsides of disruptive FinTech

It is not surprising that for all of the benefits of FinTech, there are an equal number of potential pitfalls. There are always some downsides with new disruptive technologies, and the effects here are compounded in the world of investment banking and capital markets.

1. **Security risks –** There are new risk exposures in the new world. While the banks and market providers generally consider themselves to be impenetrable fortresses, FinTech can open the virtual vault door to criminal activities. As the technologies advance, so too do hackers' abilities and resources. Today, we see that the nature of attackers has grown highly organised and even reaches the level of nation states. We are only now discovering how big the risk will really be for the industry, and whether or not the threats will hamper acceptance of FinTech on a broader level.

2. **Regulatory attention –** When it comes to regulatory issues, the downsides for FinTech might even be more profound and immediate than potential security risks. Technology generally helps circumnavigate traditional national borders. In the case of FinTech, national borders might seem less relevant, but regulatory agencies on all sides are keeping a close watch, particularly when it comes to international sovereignty issues, legal jurisdiction, protecting customer data and taxation.

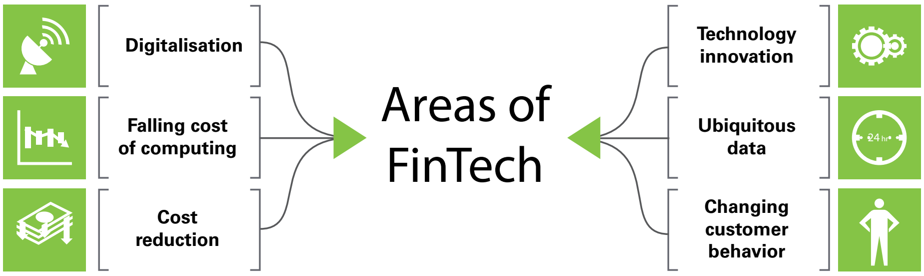
   While regulators with risk management on their agenda currently are a perceived barrier to FinTech ventures, we expect to see a higher level of coordination among the banks, FinTech firms and regulatory officials. This might be easier said than done, but it would be a disservice to stifle such a promising industry change at this stage of development.

3. **Culture –** There is a cultural challenge on how technology will be accepted in institutional banks. For example, in Seoul, the South Korean government realises that FinTech is changing the nature of financial services. But the industry there is highly regulated, and the government worries about the viability of their existing banking infrastructure going forward; without FinTech innovation, is there a new risk of technology complacency and eventual obsolescence relative to other countries? Without taking some steps to advance their financial technologies, South Korea's financial institutions risk losing competitive advantage by allowing their financial environment to become non-competitive on the global arena.

While innovation usually emerges from highly refined areas of the world, sometimes, true innovation emerges from more constrained environments, such as China and India, where they are accustomed to working in environments of low cost expectations, unsophisticated consumers of financial products, spotty infrastructure and a rapid rate of change.

Revolutionising financial markets

In the highly globalised world of investment and commercial banking, the financial capitals of New York and London are becoming the hubs of FinTech



Source: KPMG's *Unlocking the potential: The FinTech opportunity for Sydney.* October 2014.

innovation. FinTech firms are sprouting up in places where the technology is needed most and where innovators congregate. This crossroad where finance meets technology is potentially a whole new marketplace in the making. Capital markets need to work with these FinTechs to adapt to new opportunities – and they seem to be catching on.

Competitive advantage is the name of the game. As FinTech takes hold, innovation matters most where it can impact the stability, simplicity, costs of doing business and profitability in financial institutions. The futures of FinTech and the investment banking industry will become more interconnected. The so-called perfect storm of technology and capital markets will not blow over – particularly as new advances on the technology front coupled with evolving thinking from banking leaders hold such great promise for the industry.

The investment banking landscape is changing rapidly and the stakes are high. Ultimately, the firms that emerge as the leaders in the decades to come will be those that are best able to quickly respond to changes in their external environment, business mix and operating models, as well as meet the needs of increasingly sophisticated and empowered corporate clients and investors.

Incumbent organisations will not be able to successfully innovate on their own. Partnering with FinTech companies provides large banks a broader range and lower cost access to innovation, greater agility, potential investment opportunities and, above all, strategic optionality for an uncertain future, where collaboration will be king.

KPMG's magna solution – trader surveillance

The capital markets sector is seeing a number of exciting new FinTech companies emerge, across the full spectrum of the marketplace (exchanges, investment, networks, brokerage, research and risk management).

- **Cinnober –** started as four men working in a basement in Sweden, now employs over 230 people. Cinnober is an independent provider of mission-critical solutions and services to major trading and clearing venues including exchanges. Their TRADEExpress trading system is a multi-asset trading platform serving high-volume trading venues globally.
- **eToro –** an online social trading tool with social investment network, lets investors and traders tap into the crowd and copy traders they like. eToro encourages people to connect with one another to discuss, trade, invest, learn and share knowledge across the network.
- **Metamako –** a technology company based in Australia that specialises in solutions for latency sensitive businesses. They build smarter trading networks through ultra-low latency devices for exchanges and the trading community.
- **Robinhood –** is a zero commission stock brokerage based in Palo Alto, US. It allows traders to place orders to buy and sell stocks, and the self-directed orders will receive the best possible trade execution (across all stock exchanges).
- **Magna –** KPMG's Magna solution provides a tool for the proactive detection of unauthorised trading activity, allowing organisations to monitor risk exposure in real time, flag instances of abnormal or risky behavior, and investigate and resolve cases before the risk escalates.
- **Estimize –** based in New York, is an open financial estimates platform which facilitates the aggregation of fundamental estimates from independent, buy-side and sell-side analysts along with those of private investors and students.

Some of these FinTech companies are featured in *The 50 Best FinTech Innovators* report, produced by KPMG Australia in partnership with the Financial Services Council and Australasian Wealth Investments.

Six steps to capital markets FinTech adoption

1 Vision and strategy

- FinTech start-up activity tends to occur in large metropolitan areas
- Establish a coherent and supportive entrepreneurial vision and strategy for FinTech at a city level (Sydney)
- Consider FinTech in a broader global capital markets context and particularly Asia as an export opportunity.

2 Commitment

- It is important for government (and regulatory agencies) to publicly state their commitment to supporting the development of the FinTech sector
- Maximising the opportunity will take strong commitment from government and industry.

3 Alignment

- To accelerate the development of the FinTech sector, alignment and coordination of activity and investment is required (government, regulators, start-ups, industry, academia)
- Explore adjacent opportunities and benefits across sectors, e.g. financial services, professional services.

4 Accessibility

- Critical to any start-up is access to funds and expertise
- Beyond this, there is also a need for access to regulators, government and data
- Government providing a single point of contact for start-ups to remove bureaucracy
- Banks need a clear point of entry for FinTech where various stakeholders can come together.

5 Collaboration

- A 'centre of gravity' or physical focal point needs to be established
- FinTech requires established capital markets' organisations and new ventures to come together
- Problems need to be shared and safe environments created to truly foster innovation.

6 Promotion

- Capital markets and FinTech both need a champion and voice at local and global levels
- This needs to be at both an industry level and also at a political level
- Promotion can be used as an effective tool to attract capital, investment and the best talent (locally, regionally and globally).

Source: *Unlocking the Potential: The FinTech Opportunity for Sydney*, October 2014.

> There are new risk exposures in the new world. While the banks and market providers generally consider themselves to be impenetrable fortresses, FinTech can open the virtual vault door to criminal activities.

CONTRIBUTORS

Bob Hayward
Principal Advisor
Management Consulting
KPMG in Singapore
T: +6564118172
E: bobhayward@kpmg.com.sg

Bob is the leader of KPMG's CIO Center of Excellence for Asia-Pacific. In this role, Bob works with IT leaders across the region to take maximum advantage of technology innovations to drive growth, enhance customer experience and improve bottom line results.

Ian Pollari
Partner, Banking
KPMG Australia
T: +61 2 9335 8408
E: ipollari@kpmg.com.au

Ian Pollari is a partner at KPMG Australia and is currently the Head of KPMG's Banking sector in Australia, leading the firm's banking practice across Audit, Tax and Advisory. Ian co-authored the first Australian study into Financial services technology titled, *Building Momentum: The FinTech Opportunity for Sydney.*