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THE FINTECH EVOLUTION: FROM DISRUPTION TO EMERGING ECOSYSTEM

Five Trends to Watch in 2017

EXECUTIVE SUMMARY

In the world of fintech, it is safe to say the description of “rapidly evolving” is a good one. From digital technologies to new business models, the growing fintech industry has turned the legacy world of financial services decidedly on its ear.

Sure, some fintech startups have come and gone, blinking in and out in a neon-hued blur of clever slideware and bank-bashing banter. But others have thrived. And (dare we say) we see several now taking root as new incumbents in the U.S. financial landscape.

While it can sometimes be hard to distinguish between what’s future-state and what’s fluff in the never-ending hype cycle, we see several important trends in the continued evolution of fintech.

In this special report, we offer our perspectives on those trends and their impact on an emerging ecosystem—one where fintech proves vital to a better future state for U.S. financial services.

TREND #1: FRICTION, BE GONE

Something interesting has happened to financial consumers: They have lost patience with poor customer experience.

Gone are the days when the average consumer would willingly suffer through long hold times, slow web pages, entering their account number three different times (only to be asked again for it verbally by the time they got a human voice), or having to call five different 800 numbers to resolve one issue with a single payment transaction.

Sure, they'd grumble. But it's a fact of life, right?

No longer. Consumers are unwilling to suffer for the sake of a simple financial transaction anymore.

And it's all fintech's fault.

Many fintech startups take their first steps into the world as direct-to-consumer offerings—bypassing the traditional incumbents in a hard-push effort to get to market fast, to test, to tinker, and (hopefully) to stick.

Traditional bankers can groan all they like about how the upstarts aren't saddled with cranky legacy technology or immersed in deploying the latest regulatory requirement bolt-on. That's true ... but irrelevant to the financial consumer now aware of—and hungry for—the art of the possible.

While we sympathize with inconvenient facts, they are undeniable. And one thing the startups have proven with crystal clarity is this: If you want consumers to fall in love with your stuff—and abandon the “old stuff”—you have to design for delight.

Friction has no place in the concept of delightful user design.

Traditional financial services firms that ignore this fact will do so at their peril. Designing processes, customer interactions, and products that delight financial consumers may well be (substantially) more challenging for incumbents hamstrung by last-century technology. But—and it's an important

“but”—it is no less imperative for their survival than it is for that of the startups.

So how can incumbents compete? For starters, they can be brutally honest about the current state of their customer experience.

They can map those customer journeys and see where the sticking points are—and you can bet they’ll find plenty.

In many cases, financial service providers have more opportunity than they realize to delight with design—**experience design** that is.

“Customers are using technology their way, regardless of if your customer experience strategy aligns with their journey.”

Digital customer experience begins with research, not guesswork, to study personas, behaviors, and expectations throughout every stage of the customer lifecycle.”

Digital Transformation Report, Altimeter, 2014

They may not be able to do much about their state of technology near-term, but that doesn’t mean they can’t do anything about improving their customer experience.

From overhauling process flows to eliminating the redundant (and annoying) practice of verbally collecting an account number the consumer has already entered, the opportunities for taking friction out of the customer experience are just awaiting discovery.

Traditional financial service providers must put fresh focus on delivering delightful customer experiences in this emerging ecosystem—even if hamstrung by legacy technology, even if it’s hard.

They must become friction hunters.

Financial service providers hoping to compete for consumer affection in today’s world will prioritize relentless pursuit of delight by design.

TREND #2: ENTER REGTECH

Speaking of poor customer experience, legacy technology, and bolt-ons ...

In its March 2016 magnum opus on technology in regulatory compliance, the Institute of International Finance (IIF) offered this definition for a distinct and emerging faction of the fintech sector:

“Regtech is the use of new technologies to solve regulatory and compliance requirements more effectively and efficiently.”

Simple yet sufficient.

Perhaps the IIF figured regulatory compliance is complicated enough—no need to overcomplicate the description of its potential savior.

While perhaps a less glamorous target than other pursuits for the savvy minds of financial technology inventors, regulatory compliance burden is a real—and growing—challenge to the financial services industry at large.

“More stringent requirements within increasingly dense data landscapes and the rapidly evolving fintech sector have led firms, technology providers and regulators to focus on new technologies to meet regulatory challenges.”

Innovating with RegTech, Earnst & Young, 2016

And make no mistake about it: Fintech firms are not exempt from the perils of regulatory burden.

So leave it to fintech to invent solutions to a problem that’s shifted from the sole domain of traditional financial firms to ... well, to fintech.

Now here's where things get really interesting.

The job of regtech isn't to give all of that legacy infrastructure the boot and start blissfully from scratch.

No, the job of regtech is to pull just what it needs to create *easier aggregation and interpretation of vital data* from multiple sources and often-disparate formats.

Emerging regtech solutions are largely **cloud-based**—with the principles of agility, speed, integration, and analysis prioritized in their design.

Built explicitly to draw from existing systems and data, the potential uses and benefits of regtech appear remarkably promising.

Beyond the obvious benefits of streamlined data collection and simpler compliance reporting, it's the **aggregated data interpretation factor** we find most intriguing—and that reflects a fundamental goal of regtech: To build an intelligence that will not only identify problems but will allow us to *predict such problems and avoid damage to the financial sector in the first place.*

Imagine that.

Our nation's cranky legacy technology stacks can become rich data sources used for the protection of the U.S. financial industry ... not just targets for the next regulatory compliance patch.

And are we the only ones who see a distinct opportunity in these developments to attack even more customer experience friction head-on?

Take KYC (know-your-customer) laws, for example. How many times have you produced your official documents to the **same** financial institution for a new account or expanded services? The same financial institution with whom you've done business since your parents helped you open a savings account in elementary school?

Exactly.

Very little about complying with KYC laws is easy in the world of financial services—and disparate technology structures for varying lines of business (deposits, loans, investments) make it difficult to improve on processes that everyone would agree are fraught with friction and annoyance for the consumer.

In the short-term, we think regtech holds a great deal of promise for streamlining onerous regulatory processes and improving customer experience.

But in the long-term, we are most intrigued by the possibilities of intelligent data interpretation for the prediction and prevention of future financial sector disasters.

We will be watching this space. We think you should, too.

TREND #3: SOLVING FOR SECURITY

It seems that not a single day goes by without news of yet another data breach or cyberattack affecting one industry segment or another in the United States.

In the financial services industry in particular, finding new ways to beat the crooks, cybercriminals, and identity thieves has become an enormous challenge for developers of financial technology.

In their **2016 Data Breach Investigations Report**, Verizon offered a sobering view of reality for financial services providers:

- Eighty-nine percent of security breaches were motivated by financial gain or espionage.
- Web attacks represent the primary vulnerability and **nearly half** of all security breaches in financial services.
- Infiltration happens **fast**—in 98% of cases studied, attackers were able to compromise financial sector systems in a matter of minutes. (Yes, you read that right ... ninety-eight percent.) Even more disturbing, in 12% of those cases, attackers were inside **within seconds**.

For an industry charged with guarding the safety and soundness of our financial systems, this level of threat is of serious and urgent concern.

Lest some fintech companies think this is only a problem for traditional financial institutions, think again.

In two recent and cringe-inducing examples, Washington watchdog and enforcement groups made it abundantly clear that **fintech must show up to this party**.

- In 2015, FinCEN (the Financial Crimes Enforcement Network) announced a \$700,000 enforcement action against Ripple Labs, a virtual currency startup. The offense? ***Failure to follow anti-money laundering rules.***
- Earlier in 2016, the CFPB (Consumer Financial Protection Bureau) fined online payments platform Dwolla \$100,000. And that offense? ***Deceptive consumer language about the methods and quality of its data security practices.***

What's interesting to note about the Dwolla case, in particular, is that **the CFPB did not wait until an actual breach occurred.**

In a bold move, the agency opted to prosecute Dwolla without evidence of actual harm.

When fintech firms find themselves hauled into depositions on the ***prospect of potential harm*** due to data security insufficiencies, the call to action for this industry becomes abundantly clear:

If fintech firms intend to build financial applications and services that transform the way people manage their financial lives, they must also build technologies capable of defending the health and wellbeing of the financial systems that enable them.

No small challenge.

Hey, nobody said it would be easy. They just said it would be worth it.

TREND #4: BEYOND THE BLOCKCHAIN—DISTRIBUTED LEDGER TECHNOLOGY FOR FINANCIAL SERVICES

Once the initial hue-and-cry of “Bitcoin!” settled down amongst vocal enthusiasts, the promise of the cryptocurrency’s underlying technology—the blockchain—gained some breathing room for genuine consideration.

And that consideration has revealed a plethora of potential applications to many industry segments—most certainly including the financial services industry.

But the blockchain was developed around a very different problem statement (and very different buyer personas) than those of traditional financial services.

Namely, to enable a trust factor for the use of a cryptocurrency among distrustful, anonymous users in a wildly distrustful environment—the internet.

Today, a growing number of financial technologists have forgone absolute devotion to the blockchain as it was designed for Bitcoin and ***have instead used that design as inspiration for new distributed ledger technologies.***

The question now seems to be how do we achieve the benefits of the blockchain in a manner well-suited to the unique characteristics of a regulated financial services industry?

The list of startups and consortiums trying to answer that question is expanding by the week. And some of the answers beginning to emerge from this space are rooted in equal parts classic design thinking and visionary technology development.

Take for instance the position of Richard Gendal Brown, upon taking the role of chief technology officer with R3 CEV, currently the world's largest distributed ledger consortium:

"The reality is that solutions based on selecting the design first and then trying to apply it to arbitrary problems never work out well.

Every successful project I've worked on started with the requirements, not some cool piece of technology."

Richard Gendal Brown, CTO, R3 CEV

He makes a good point.

So let's examine some of the more likely financial service use cases that could benefit from distributed ledger technology—and why.

- **Cross-border e-commerce payments**

We can describe this opportunity in four simple words: *Card Not Present Fraud*.

With its *identity verification and validation of funds capabilities*, distributed ledger technology could be a boon for international e-commerce merchants grappling with high levels of fraudulent transactions.

- **Regulatory compliance reporting**

Oh, we're back to this again? Yes, and there's a good reason why.

Two key benefits of distributed ledger technology are its *immediacy and its transparency of information captured*. This means that financial services firms could record compliance reporting data in shared ledgers, *making the data available to regulatory bodies in real time*.

The benefits? Rather than analyzing after-the-fact data to explain a financial crisis that has already happened, *regulatory bodies could access real-time data* to help predict and prevent financial system disasters from occurring in the first place.

- **Smart contracts for securities and settlement agreements**

With R3's recently announced patent filing for Corda, this use case is already out in the fintech wild (at least in test).

The premise of a smart contract is to allow all parties to a financial agreement to share the same version (thus the same understanding and requirements) of a contract in a shared ledger. *Smart contracts aim to eliminate reconciliation and noncompliance angst among contractual parties.*

And in the case of R3's objectives to also allow regulatory transparency into those contracts.

In today's world of messaging back and forth via email (and even still—gasp!—*faxing* contracts back and forth), the allure of a self-executing, self-policing contract made immutable in a shared ledger is understandably appealing.

Design challenges remain to successfully tailor distributed ledger technology for the needs of the financial services industry—not the least of which is **the question of maintaining consumer privacy requirements using technology built for absolute and total transparency.**

But the fintech industry has indeed made substantial strides from its early infatuation with the original blockchain use case of cryptocurrency.

Legitimate opportunities exist to advance the principles of trust, validity, and immutability within the financial system.

And as Don Tapscott, CEO of Tapscott Group, has said:

“The financial services industry is up for serious disruption—or transformation—depending on how it approaches this issue.”

Based on what we see, it's clear that a growing number of fintech firms and financial institutions are voting with their tech investment dollars for transformation.

TREND #5: CORE BANKING, MEET FINTECH

In contrast to the early days of fintech-versus-banks, today's climate has developed a distinct air of collaboration.

Where some financial institutions once viewed fintech firms as the barbarians at the gate—to be repelled at all costs—most are now intrigued by how they can benefit from collaboration with the barbarians.

Sure, some may still wield their torches and pitchforks, but a growing percentage of financial institutions have traded lonely defense for mutually beneficial offense.

From incubation labs to open APIs, FIs have spotted enough opportunity in fintech innovations to want in on it ... **opportunity they would otherwise have a hard time coaxing out of their legacy technology stacks.**

"The industry understands the legacy systems problem, but appears torn as to the best way to proceed."

Robert Barba, American Banker, September 2015

But what we find interesting in this new dialogue is what's often **not** mentioned: *Nearly all of these FI's legacy technology stacks are provided by a handful of core banking vendors.*

In the United States at least, three big names command more than 90% of the core banking technology market. We won't name them here because if you've spent more than 24 hours in the fintech industry, you already know who they are.

In an era where banks are increasingly judged by the quality of their digital experiences, it seems jarring to consider that most of them are running on decades-old technology.

But if an FI's core banking vendor is reluctant to assist with integrating someone else's technology, what's a bank to do?

Well, many banks have opted for **middleware**—a technology bridge to keep the old technology safe (and separate) from installation of advanced digital technologies.

While it's a way forward, **thoughtful design is critical** to ensure compatibility of things like compliance, data analytics, and reporting.

Without thoughtful design of this bridge, the middleware approach can inadvertently introduce new inefficiencies (or worse—inaccuracies) to bank operations.

More often, the easier and less expensive option is to **simply go with the product offered by the core banking vendor**. Banks must weigh the prospect of integrating the often-superior products of fintechs against the cost, hassle, and time involved in forcing such an integration on their core banking vendors.

But we've begun to spot some examples of FIs who have bitten that bullet—**opting to purchase a competitor's digital technology** and integrate it with their core banking platform.

We think this is an important shift to which core banking providers should start paying attention.

Typically, when these large legacy players spot innovation they find useful to their portfolios, they simply acquire the innovation. And for a decent number of fintech firms, that was the point of the startup—build something great, sell it to one of the big guys for big bucks.

But not all fintech firms are in that mode and not all important innovations can be bought.

Consider this real-life example.

A senior banking executive recommends the purchase of a mobile banking platform to her board.

It costs more but is superior to the version offered by the bank's core vendor.

Further, integration with the core vendor platform will add to the expense.

The executive is blunt that the bank will largely be dependent on the core vendor's timeline for completing such an integration.

Now that takes courage.

How does this story end? **The board approved the recommendation.**

Scenarios such as this should send a particularly clear signal to legacy core banking players.

"A modern bank must be digital, and a bank can't be digital with a core built in the last century."

Alexander Lopatine, Founder, Nymbus

Banks are in a fight for their futures amid an increasingly agile and competitive landscape. They cannot afford for the cinder blocks of legacy technology to weigh them down.

So, core banking? Meet fintech. Fintech? Meet core banking.

Perhaps it's time to break down the last wall of non-collaboration. Perhaps it's time for all players to come to the table to advance this emerging ecosystem.

That ecosystem is developing quickly, intent on providing **superior customer experiences** and intent on doing so while **ensuring the safety, soundness, and integrity of our vital financial systems.**

We think those who reject the best innovations for achieving the promise of this emerging ecosystem—regardless of inventor—may find themselves left wishing they hadn't.

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