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QUIC RESEARCH REPORT

Financial Institutions Group

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The Future of Financial Institutions

What Developments and Innovations Affect Financial Institutions?

Introduction

Many financial institutions are seen as traditional businesses, which rely on classic business models such as offering loans or insurance. In recent decades, the widespread adoption of computers has allowed businesses to operate more efficiently, changing the way many businesses function. As technology and new innovative developments have continued to advance, we live in an environment where the future of financial institutions is exciting and ever-changing.

Overview of Content

In this report, we analyze potential changes in several major subsectors of financial institutions:

- Banks
- Insurance
- Investment Management
- Payments
- Capital Markets
- Algorithmic Trading

QUIC Research Reports focus on emerging investment themes that affect current portfolio companies and companies under coverage.

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Introduction

Overview

Technology has become so ever-present that it is now difficult to imagine how a large-scale business could ever operating without it. This report seeks to identify disruptive trends that have affected financial institutions, as well as what may be in store for the future. Each subsector of financial institutions is analyzed individually.

Example: Past Innovations

Looking backwards on past innovations, let's examine the banks sector over the past several decades. The introduction of the ATM allowed consumers to withdraw cash without ever needing to visit a bank branch. Credit cards allowed consumers to take on small amounts of debt that could be spent anywhere, lowering the consumers' reliance on paycheck timing. Online banking has allowed banks to eliminate the cost of operating a brick and mortar location, and has allowed individuals to conduct banking through their computer or smartphone. As a result, cybersecurity has become a growing concern. Past innovations have changed the way we do banking, and in this report we highlight some of the disruptive trends affecting the industry.

Regulatory Implications for Innovative New Entrants

Fintech's emergence has changed the global financial landscape. Financial regulation is traditionally seen as lagging – where regulators may be one step behind rapidly changing businesses. This lag is magnified given the rapid advancement of fintech, making regulation a difficult task.

Earlier in 2016, Bharat Masrani, CEO of TD Bank, called for greater regulation of fintech. He emphasized that security breaches as well as potential solvency issues make under-regulated startups potentially putting their consumers at risk. Essentially, if a company acts like a financial institution, it should be regulated like a financial institution. Some may argue that innovative new entrants should be able to have more leniency to develop and increase competition within the industry, but ultimately this should not be done at the expense of consumer safety and well-being.

EXHIBIT 1

A Changing Landscape in Financial Institutions

Much of the industry is at risk to changes in technology, and a majority of CEOs believe new technology may have a significant effect on their businesses

Up to 28% of Banking and Payments business at risk by 2020

Up to 22% of Insurance, Asset Management and Wealth Management business at risk by 2020

63% of insurance CEOs believe that the Internet of Things will be strategically important to their organization

81% of banking CEOs are concerned about the speed of technological change

52% of asset management CEOs believe that cloud computing will be strategically important to their organization

Source: PwC Global Fintech Survey 2016 and PwC's 19th Annual Global CEO Survey

Banks: Deposits and Lending

Consumer preferences for financial products and services are constantly changing. This can be seen through the development of virtual banks to the evolution of mobile banking capabilities, and the development of "banking as platform" movement.

After the financial crisis, banks' lower risk tolerance has limited access to traditional bank lending. Over the same period of time, alternative lending platforms leveraging peer-to-peer (P2P) models have experienced rapid growth.

Deposits & Changing Consumer Preferences

With the changing demands of customers, financial institutions are required to create a broader virtual experience that is centered around the customer. In recent years major trends in deposits include:

Online banks: Improved technology is allowing online banks to offer attractive value propositions beyond just lower cost. Most virtual banks established to date are subsidiaries of large traditional financial institutions, such as Tangerine and the Goldman Sachs online bank.

Mobile banking: The high everyday use of smartphones has led many financial institutions to add digital channels for basic transactions. Unfortunately, these channels often struggle to meet customers' demands for full mobile platforms.

Banking as platform: Through modern applications, open interfaces, and collaborative business models they will open their doors to innovators that will build on the banks capabilities.

As customers' demands grow, it will become harder for financial institutions to meet all the needs of customers. As a result, banks should determine what part of their business to keep and what partnerships can deliver better value to customers.

Lending

Retail banks receive savings from account holders and provide interest on the savings in return. With those funds, they originate loans to borrowers.

Lending intermediaries take calculated financial risks and use their scale to offer stability, but their focus is limited to low-risk borrowers and they charge high fees. As a result, the needs of risk-seeking savers and high-risk borrowers are not fully served by traditional banks.

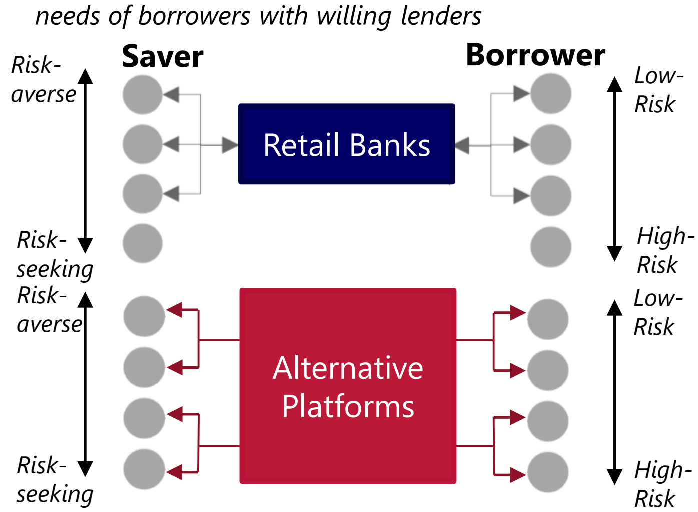
Alternative lending platforms, such as Lending Club, directly match lending needs of borrowers with willing lenders without a bank as an intermediary. Overall, alternative lending platforms typically provide an online marketplace where lenders have the flexibility to choose based on risk tolerance.

Key characteristics of alternative lending platforms include P2P lending with lower costs, such as Lending Club, as they assess creditworthiness beyond the traditional metrics with more lean, automated processes.

EXHIBIT 2

Traditional vs. Alternative Lending Platforms

Alternative lending platforms directly match lending needs of borrowers with willing lenders



Source: World Economic Forum

Insurance

Overview

Historically speaking, insurance companies have innovated at a slower pace than their peers in the financial institutions space. Although the impacts of disruption will be felt across all types of financial institutions, the greatest impact of such disruption is likely to be experienced by the insurance sector. The separation of traditional value chains and increasing levels of consumer connectivity are two key trends that will certainly shape the future operating landscape of insurance companies.

Breaking Apart the Value Chain

Now, insurance companies face the prospect of their value chains becoming much more specialized, which will force insurers to determine which of their core competencies they want to invest in more heavily. The traditional insurance company's value chain consists of the following: R&D/Product Manufacturing, Distribution, Underwriting, Claims, and Risk Capital & Investment Management.

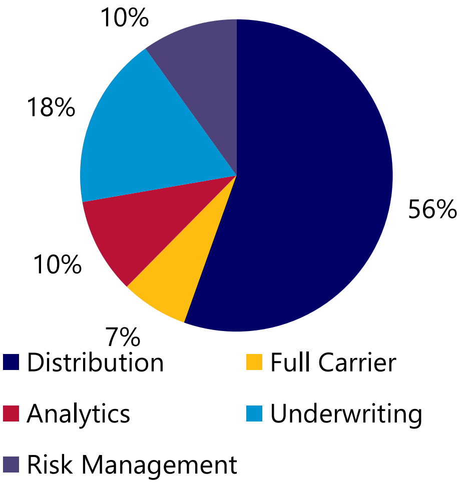
The advancements of new technologies are putting pressure on each element of the value chain, but most prominently, distribution and risk capital. Distribution is being rapidly changed by online aggregators, which provide platforms for premiums from across the industry to be compared. This makes policies become widely available, and forces producers to compete on price, add distance between the insurer and the consumer, and ultimately undermine the competitive advantage of big-name insurers.

These changes are expected to transform the insurance landscape as a whole in the future. Potential changes could include the largest players consolidating the market, a steep increase in the cross-selling of multi-line policies, and/or a shifting focus to niche and commercial lines.

EXHIBIT 3

Where in the Value Chain are Insuretech Firms Focused?

Accenture identifies distribution as a key area of focus



Source: Accenture

With respect to risk capital, a separation of insurers from their investment risks is expected to continue. Hedge funds and other alternative investment managers have been providing increasing amounts of reinsurance to insurance companies over the past five years, increasing the underwriting capacity of insurers and reducing their exposure to catastrophic risks.

Increasing Levels of Connectivity

As the Internet of Things allows consumers to connect nearly every object in their lives to the internet, insurance companies will have a wider sample of customer data to help tailor their offerings to. Connected homes and vehicles will help insurers to provide personalized insurance policies to consumers, while also being able to better assess and underwrite the risk being assumed. It is critical that insurers leverage this influx of data in order to keep up in a changing marketplace and combat the threat of new entrants.

Investment Management

Overview

Traditional Wealth Management can be separated into three distinct service areas: advisory, brokerage and value-add services. In recent decades these services have been primarily concentrated into the ultra high-net worth segments. Recently, post financial collapse regulation, customer expectations and technological advancements have widened the focus of many institutions and wealth managers.

The exchange-traded fund (ETF) industry has grown significantly in recent years, stealing share away from traditional investment managers. This has ultimately increased competition in the traditional asset management business, causing downward pressure on fees.

Key Innovations

Automated management and advice have allowed for high-value advisory and management services to be offered at extremely competitive prices. Automated management has proven itself to be effective, tailorable and a palatable amongst consumers.

Social trading platforms have recently found success in empowering individual investors to build, share and discuss their portfolios. These services encourage consumers to negating the advisory of large financial institutions and instead invest independently.

Retail algorithmic trading has provided higher-level platforms for sophisticated investors to easily build, test, share and execute trading algorithms.

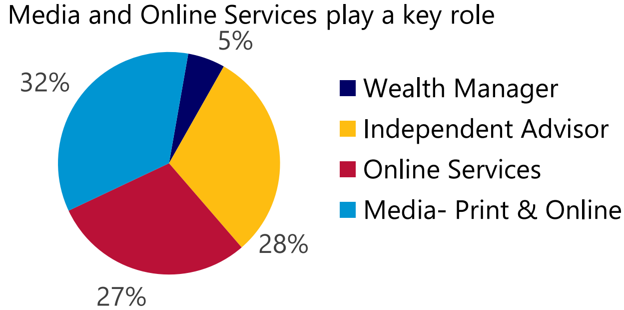
Externalisation

Technological developments in cloud computing and the viability of 3rd party outsourcing in the financial services industry has allowed smaller players to overcome traditional investment management barriers. Real time databases, computing and financial modeling can be outsourced, allowing start-ups to attract clients through specialization rather than the traditional 'one-stop shop' model. These developments further pressure larger investment management shops to either specialize in relationship based business or streamline their current operations.

EXHIBIT 4

Sources of Investing and Saving Advice (2015)

Media and Online Services play a key role



Source: Equinti Wealth Management

Innovative Characteristics and Their Implications

Technologies disrupting the investment management industry often reduce barriers to entry, encourage individual research and work to destigmatize investing.

They are more accessible, transparent, personalised and convenient for investors not falling into the high-net or ultra-high net worth brackets. These trends put pressure on the investment management industry as they empower the individual investor and put pressure on wealth managers. We see these trends in consumer preference forcing financial institutions to streamline their traditional 'one-stop' model of wealth products, eroding the advantages of scale in the advisory industry and increasing competition between traditional players and new-entrants. These changes will cause investment management divisions within large firms and banks to intensify their emphasis on client interaction and create additional value through brand royalty and consumer trust.

Payments

Overview

The payments subsector is a space heavily affected by technology. Since the introduction of credit and debit cards, as well as e-commerce in the 1990s, electronic payments have grown in popularity. All of these have contributed to the growth of the industry, which has slowly displaced cash and cheques.

There are several key benefits of electronic transactions which are described below.

Convenience: Simply put, it's much more convenient to hold a single card in your wallet instead of large amounts of cash. It also reduces the number of times a consumer needs to visit a bank to allow them to continue spending.

Monitoring: From the perspective of regulators or governments, it is much easier to track electronic payments than cash transactions. This allows greater insight for tax, regulation, etc.

Efficiency: As a business or financial institution, it greatly reduces the cost and effort required to manually keep track of physical currency rather than electronically.

Safety: Transactions through payments protect consumers and vendors from theft and fraud by recording transaction records and reducing the need to physically hold cash.

Potential Impact to Payments Industry

The payments industry may be heavily affected in several manners.

Increased automation may help the industry accelerate. Differentiating factors like card brand and design will become less prominent, making it more difficult for issuers to differentiate.

In the industry, processing credit payments is significantly more costly than debit purchases. This is based on merchant service charges required to support the transactions. In the long-run, companies may use incentives to pressure consumers to use debit cards or bank accounts rather than credit cards.

As consumers shift toward digital wallets, they will no longer face the restrictions of a physical wallet limiting how many cards can be held at a single time. This could allow niche cards to gain popularity. Ultimately, this could lower the brand strength of major financial institutions as digital wallets are diluted with other cards.

Cryptocurrencies

Cryptocurrencies may disrupt the payments space. Given that no government has full control over the currency, issues may arise. Cryptocurrencies are useful because they are best suited for transferring value rather than storing it like another medium of value such as gold.

P2P Transfers

The ability for consumers to rapidly transfer funds between two people has become so common it can now be done via smartphone in seconds without any charge. Given the rapid rate of adoption, these may put downward pressure on traditional payment methods such as wire transfers.

Potential Areas of Concern for Payments

Firstly, as more financial transactions are conducted via alternative payment methods, financial institutions will lose insight into payment history to asset / loan portfolio aspects of some or most of customers' finances.

Also, there may be increased concerns around security and compliance as financial institutions face a new set of risks associated with payment methods that they cannot control such as cryptocurrencies.

Capital Markets

Investment Banking Disruption Overview

On the M&A side, some firms have begun to go in-house using their own M&A teams of ex-bankers to complete transactions rather than hiring a bank. However, this is fairly uncommon, and does not represent a major industry headwind at this time.

On the financing side, in the past, capital raising has been a business exclusively done through banks, where investment opportunities are restricted to sophisticated institutional investors. With rapid developments in alternative funding methods, the capital raising side of investment banking may be ripe for disruption.

Alternative Peer-Based Funding Methods

Alternative peer-based funding methods have allowed firms to gain new ways to access capital, primarily at the smaller funding stages during the early growth phase such as seed investments.

This allows investors to interact directly with the business. In addition, it opens doors for asset classes with potentially more attractive returns or which are currently unavailable to retail investors such as corporate bonds. Ultimately this could lead to increased competition in the market, and downward fee pressure on investment banks and commercial loans.

Potential drawbacks include that investors must be sophisticated enough to understand the underlying risk of their investments, and the opportunity for large information asymmetries due to potentially lacking regulatory disclosure requirements. Many companies trying to issue their own securities without an advisor may misprice their securities, causing underpricing or under-subscription.

At some point, it is possible that alternative funding methods could grow into legitimate funding options for large companies. Large companies could partner directly with investors via a peer-based platform to raise funds. Investors may piggyback on better known investors. For example, if a well-known venture capital firm invests in a startup, a consumer may be biased to follow along.

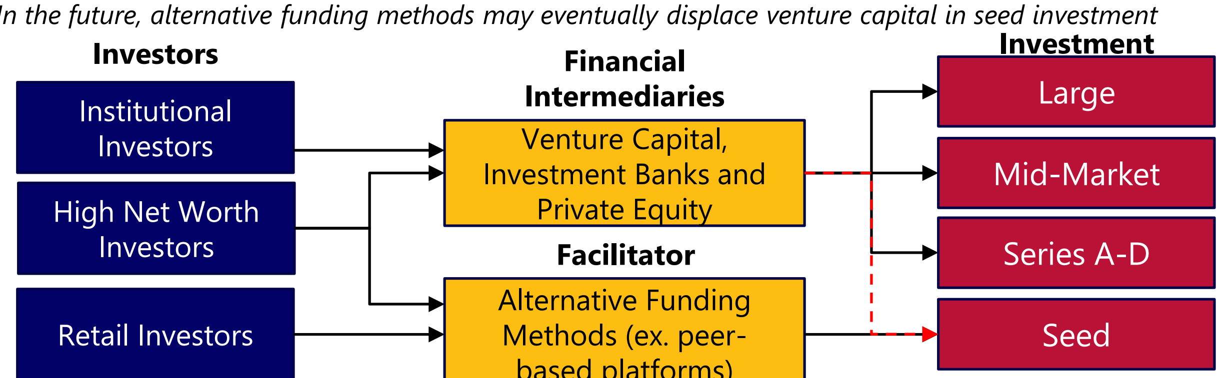
Outlook for Traditional Intermediaries

While there may be some trends that suggest disruption, ultimately traditional intermediaries are still well-positioned relative to alternative funding platforms through offering significant transactional expertise and scale advantage.

EXHIBIT 5

A Potential Function For Alternative Funding Methods

In the future, alternative funding methods may eventually displace venture capital in seed investment



Source: World Economic Forum

High Frequency Trading

Overview

While high frequency trading (HFT) was once all the rage in the investment management industry, profitability has slowly been sapped out of the operation over the past five years, due to lower volatility and increasing costs of trading infrastructure, as well as immense regulatory pressure. This has given way for the next wave of automated investing to be a combination of machine learning and investment philosophy.

Real Life Responsiveness

While HFT thrived by having the strongest price discovery and order execution abilities, the next generation of algorithmic trading machines will differentiate itself by being able to process news feeds in real time without human involvement. Artificial intelligence will allow machines to not only automate the trade execution processes, but also play a large role in the higher-level formulation of investment strategies. The ability of machines to make event-driven trades that are not strictly based on price movements will likely reduce the human involvement found in traditional sales and trading departments. Simultaneously, access to this privileged information will give institutional investors a distinct advantage over their retail counterparts, allowing quantitative hedge funds to gain an edge over their peers. Many fear that such intelligent machines will act as a converging mechanism that unifies the outlooks of all investors, making it increasingly difficult to find returns as an asset manager.

Connecting Buyers and Sellers

Since the 2008 financial crisis, financial institutions have seen capital requirements increase and appetite for risk decrease, leaving many institutions unwilling to act as a market maker for certain, relatively illiquid assets. This has led to the creation of several online platforms that aim to improve the connection between buyers and sellers. Whether one is seeking a fixed income, private equity/venture capital, real estate or other type of investment, private platforms have been able to increase the efficiency and transparency of previously illiquid markets

Portfolio Implications and Application to Investment Strategy

QUIC invests in liquid TSX-listed companies as well as companies within the S&P 100 index. In order to generate alpha in the long-run, one of the best ways to channel these industry trends is on a subsector weightings basis. By identifying which subsectors we believe will be most challenged or which will benefit the most, we can strategically position ourselves to outperform our benchmark.

In application, we believe our current portfolio represents our strategic outlook. While new P2P lending channels are neat, we believe that until retail or investment banks begin to lose material market share they will be a strong sector to invest in. For insurance and payments, we see less certainty about the future and remain close to market weight based on bottom-up calls. On the trading side, we believe that traditional S&T business lines in large investment banks may face serious disruption in the coming years.

Looking at classic asset management businesses, we see major disruption in the industry. A company in our investable universe that has channeled the changing industry is BlackRock, a company added to the S&P 100 in 2015. BlackRock may fare better than its peers fitting favourable with current consumer preferences.

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