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Patterns of disruption Impact on wholesale banking

We live in increasingly uncertain times, where even the most successful and well-entrenched leaders in a market or industry can become vulnerable to attack by new entrants. We see this phenomenon in the banking industry as well—think of all the attention bestowed on financial technology firms recently, for example.[1] Hundreds of fintech firms around the world are challenging incumbents in a number of businesses, including payments, lending, and securities trading.

In response, leaders tend to fall into one of two camps: complacent or overwhelmed. Either approach leaves the leaders even more vulnerable. In this kind of environment, leaders need to pull themselves out of the short-term time horizons that consume their attention and focus on the long-term forces that are reshaping the business landscape so that they can better anticipate, and then act upon, the changes that are ahead.

This paper will explore some of these longer-term forces, with particular attention to the patterns of disruption that are most likely to challenge leaders in wholesale banking.[2] Our hope is to help executives in these companies to focus their attention on some of the changes that have the greatest potential to undermine their current positions. We hope that, by anticipating these changes, executives will be able to avoid both complacency and a sense of helplessness. The best way to prepare for the future is to anticipate it.

The Big Shift

Deloitte's Center for the Edge has pursued research on what we call The Big Shift—a set of fundamental macroeconomic trends that are reshaping the global business landscape and unleashing flows of information, people, and capital.[3] Two primary forces are driving The Big Shift: exponential development of digital technology infrastructures and a long-term public policy shift globally in the direction of economic liberalization.[4] (While wholesale banking executives would likely not characterize the current policy environment as one of liberalization, the broader global business environment has witnessed significant liberalization since World War II.)

These two forces come together and reinforce each other in powerful ways, generating unprecedented opportunities for value creation and mounting performance pressure on all of us, as individuals and as institutions. The pressure comes in many forms—intense competition as barriers to entry fall, compression of product life cycles as the pace of innovation accelerates, and greater frequency of "black swans," disruptive events that may start small, but quickly develop into something larger.

Companies are facing increasing difficulty in responding to this mounting performance pressure because they tend to pursue traditional, linear approaches to an increasingly exponential world. For instance, companies typically tend to underestimate the time it takes for new disruptions to take hold. In this context, the Deloitte Center for the Edge has explored some higher-level universal disruptions that all companies will need to address as they make the transition required by The Big Shift.

While these universal disruptions take many forms, the one that is most relevant to the discussion here is the move from *push* to *pull*. Companies have traditionally organized around push-based approaches to resource mobilization—someone in the organization develops a demand forecast and then all the relevant people and resources are "pushed" into the right place at the right time to meet that demand. The banking industry is rife with such strategies; the impetus for pushing can be the urge to do another deal or meet sales targets, but irrespective of the underlying motivation, push strategies are quite common—whether it is selling interest rate derivatives or pitching new treasury management solutions.

These push-based approaches are remarkably efficient in stable environments. However, when the environment becomes more uncertain, forecasts are less reliable, and push-based approaches become highly ineffective. As a result, companies will increasingly shift to pull-based approaches that rely on scalable pull-platforms to draw out the right people and resources wherever they are needed and whenever they are needed. These pull platforms scale well beyond any individual enterprise and help companies to tap into a much broader array of deeply specialized resources in global ecosystems. We are beginning to see the emergence of these pull platforms in wholesale banking as well. (We will discuss this phenomenon in more detail in sections below.)

Defining disruption

Disruption is a term that is widely and loosely used, leading to disruption fatigue, not to mention skepticism, among growing numbers of executives. Before we go any further, let's define what we mean by disruption. We tend to favor a more rigorous definition than many of the discussions of disruption.

First, we focus on outcomes. Disruption requires the displacement of most incumbent leaders. It's not just something surprising, new, or innovative—it must challenge incumbent leaders so deeply that most of them will be likely to topple from their leadership positions as a result of the disruption.

Second, we define the disruptive approach in business terms rather than focusing narrowly on new technology. From a business perspective, what is the value that is being delivered that is so disruptive for incumbent leaders? Technology is often a significant enabler of disruption, but, unless it is coupled with a powerful business value proposition, it is unlikely to have a disruptive impact.

Third, we seek to determine why it is so challenging to respond to the disruptive business approach. In our work, we have identified three potential obstacles for incumbent leaders that can make disruption so damaging. Responding may require incumbents to:

1. Significantly cannibalize their current revenue/profit streams
2. Write-off major assets on their balance sheets
3. Challenge key assumptions about what is required for business success

Patterns of disruption

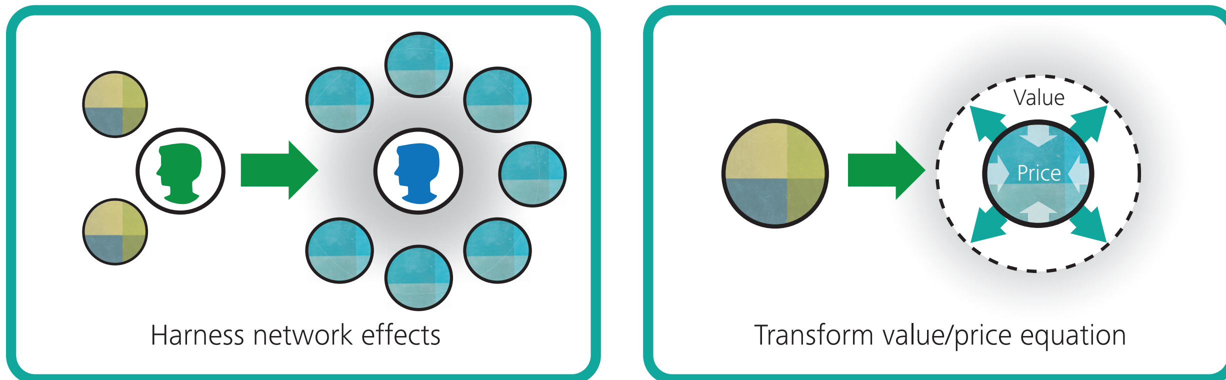
As already mentioned, The Big Shift is catalyzing a series of disruptions that will likely hit incumbent leaders across all major industries, including banking, and geographies over time. On the other side, we are all familiar with stories of one-off disruptions that challenged incumbent leaders in one specific market—for example, the advent of mini-mills in the steel industry. Regulatory initiatives can often have a significant disruptive impact, but these tend again to be one-off disruptions affecting the specific industry targeted by regulation.

Patterns of disruptions focus on a different form of disruption. These are disruptions that will hit more than one market or industry, but not all markets or industries. These become particularly interesting if we can identify the conditions of markets that would make them vulnerable to a specific pattern of disruption. This would help executives to focus on the patterns that are most likely to be relevant to them. Even better, what if we could identify catalysts that would help executives to assess the potential timing of a pattern of disruption in their specific market? How imminent is it?

The research conducted by the Deloitte Center for the Edge identified nine patterns of disruption that met their criteria for disruption (see figure 1).[5] One interesting observation was that these nine patterns of disruption broadly fell into two buckets. The first group of patterns drove disruption by transforming the value/price equation through a radical redefinition of product, pricing, and processes. The second group was disruptive because the patterns of disruption unleashed network effects. They did this by creating and deploying platforms where value creation accelerates as the number of participants grows. It turns out that the patterns in the first group were powerful in disrupting incumbent leaders, but the new entrants themselves proved to be vulnerable to later waves of disruption. In contrast, the second group of patterns seemed to be more enduring. Once the new entrants unseated incumbent leaders, it proved to be more difficult (but certainly not impossible) to disrupt the new entrants.

For this paper, we'll focus on the patterns of disruption that harness network effects and that appear most relevant to banking. We believe that these patterns are appropriate to consider within the part of the banking industry that provides products and services to corporations and other financial institutions.

Figure 1: Nine patterns of disruption



Expand marketplace reach
Connecting fragmented buyers and sellers — whenever, wherever

Unlock adjacent assets
Cultivating opportunities on the edge

Turn products into platforms
Providing a foundation for others to build upon

Connect peers
Fostering direct, peer-to-peer connections

Distribute product development
Mobilizing many to create one

Unbundle products and services
Giving you just what you want, nothing more

Shorten the value chain
Transforming fewer inputs into greater value outputs

Align price with use
Reducing upfront barriers to use

Converge products
Making 1 + 1 > 2

Graphic: Deloitte University Press | DUPress.com

Source: Deloitte Center for the Edge

Unique characteristics of wholesale banking

As the reader may be aware, there is no universal definition of wholesale banking; indeed, many large global banking institutions are rewriting the definition as they continue to adjust to the new market realities since the financial crisis. Wholesale banking is often used interchangeably with corporate banking or institutional banking, but, depending on the organization, it typically includes corporate lending, payments, treasury and cash management solutions, trade finance, prime brokerage, custody services, securities lending, and credit, equity, commodities, and foreign exchange trading.

Irrespective of what activities are deemed to be part of wholesale banking, there are some common characteristics among these businesses. Generally speaking, wholesale banking is a highly customized business, with bespoke products and services that are designed for the unique needs of individual clients. As such, success is highly dependent on strong client relationships and an in-depth familiarity with the complex needs of each individual client. Scale is less of a necessity due to the relatively low-volume and high-value nature of transactions. Also, some of the businesses, such as trade finance, tend to be more fragmented, with many competitors.

Wholesale banking also is an area where the pace of innovation has been painfully slow, at least until now. Historically, incumbents have dominated with little threat from smaller startups due to the dynamics described above, and the competitive balance has been relatively stable, except in the most recent period since the financial crisis. And, to be fair, innovation in banking has also not received the attention it deserves due to the focus on regulatory compliance.

Contrast this with retail banking, where the focus is more on driving standardization of products, processes, and pricing across mass markets. And despite the broad characteristics of wholesale banking described above, it is equally true that some wholesale businesses also embody these characteristics and thus are potentially vulnerable to disruptions aimed at greater transparency, connecting clients together, and displacement of more standardized and less value-added process elements.

It should also be noted that, unlike in retail banking, where customer demand is a primary driver of disruption, changes in wholesale banking are more often tied to either market infrastructure or regulation. Examples of the former include the emergence of central counterparty clearing and central securities depository consolidation. And, regulatory trends, of course, include new capital, liquidity, and coverage rules under Basel III and myriad other regulatory initiatives in various jurisdictions.

But the most notable characteristic of wholesale banking businesses is that inefficiencies abound in almost every stage of the life cycle, and, tradition has historically trumped innovation. This scenario makes it ripe for disruption, even though past experience might suggest complacency is not terribly problematic.

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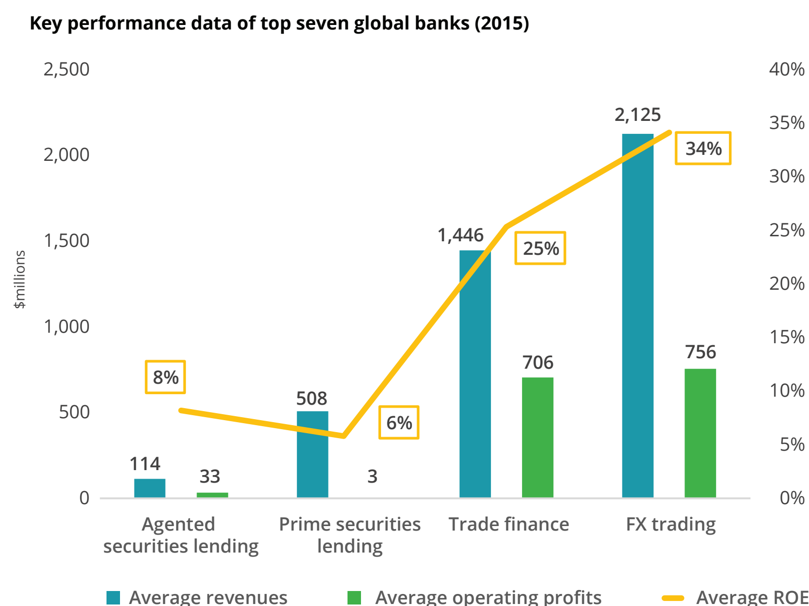
Three illustrative areas within wholesale banking

We have chosen to focus on three businesses within wholesale banking to illustrate how certain patterns of disruption may possibly emerge in the future: *trade finance, securities lending, and foreign exchange (FX) trading*. We selected these three based on the following criteria:

- Each of these businesses is quite large, accounting for meaningful size in revenues and profits. For example, total revenues in these three businesses for the seven leading global banks in 2015 was about $27 billion, and the operating profit was nearly $10 billion (see figure 2).
- These businesses exhibit certain key vulnerabilities that make them ripe for disruption. We will discuss these vulnerabilities in more detail below.

Before we do that, let's review a summary of the current market dynamics, the state of innovation, and the potential for disruption within each business.

Figure 2: Financial performance of trade finance, securities lending, and FX trading businesses



Source: Tricumen and Deloitte analysis

Trade finance

Trade finance has evolved over centuries to become an essential catalyst for trade across borders[6] to the point where, today, it contributes to a significant proportion of global trade.[7 8] There is no broadly accepted way to gauge the actual size of bank-intermediated trade financing; most sizing estimates are based on surveys, which may not always be reliable. With that said, the Bank for International Settlements puts the value of this market at anywhere from $6.5 to $8 trillion annually as of 2014. Estimates of total share range from 20 to 45 percent of global trade.[9] Whatever the number, without banks' intermediation through funding for working capital and mitigation of payment risk, international trade would not be what it is today.

Of course, there are other nonbank sources of funding for international trade, with open account trade financing (between exporters and importers) becoming an increasingly prominent option.

In terms of the attractiveness of this business to potential new entrants, trade finance typically has low default risk for both short- and medium-term finance instruments, as per the latest Trade Register from the International Chamber of Commerce (ICC).[10] It should be said, however, that in addition to credit risk, banks that provide trade financing must also manage operational, legal, compliance, liquidity, and reputational risks.

The trade finance business has been forced to change due to risk and compliance issues especially as they relate to Know Your Customer (KYC) mandates. Customer and counterparty risks are prominent in this business, and assessment of these risks is not straightforward. Risk models within banks are slow to assimilate new information related to these risks.

In recent years, banks have looked to expand beyond trade finance into other forms of supply chain financing, including the funding and collection of receivables. These additional services have the potential to expand revenues and profitability.[11]

Securities lending

Securities lending is vital to the orderly functioning of capital markets—it enhances liquidity, efficiency, and price discovery in the equity and bond markets.[12] It is also similar to repurchase agreements in that both are secured financing transactions involving securities of one kind or another. Indeed, there is significant interplay between the two.

The securities lending market today, as defined by the value of securities on loan, is roughly $2 trillion:[13] however, similar to trade finance, the true size of the business is not definitively known.[14] Overall volumes are down significantly since the global financial crisis. This is due to several factors of which perhaps the two most important are regulatory actions that limited short-selling activity and increased capital allocation requirements.

Most securities lending is conducted through the largest banks' custodian businesses, though recently some securities owners have sought to utilize other parties through which to lend their securities. This has led to a bifurcated market, where agency intermediaries (again, typically custodian banks) combine custodial and lending services, while principal intermediaries (often prime brokers, securities dealers, and others) take on more of the credit risk associated with securities borrowers.[15]

As mentioned previously, regulatory initiatives flowing from the Dodd-Frank Act and recommendations from the Financial Stability Board have affected the structure and profitability of the securities lending business. Increased capital allocations and liquidity requirements have caused incumbents to reevaluate the desirability of offering securities lending services, opening the door to new entrants to offer a more transparent solution. This is being accompanied by the increased interest in central counterparties (CCPs), which provide a central platform for aggregating lending transactions.

While securities lending is a relatively efficient means of financing securities portfolios by enabling market-makers and investors to take on short positions, it can also be said that the business is primarily characterized by fragmented, bilateral transactions rather than a true transparent, centralized, and competitive marketplace. The bilateral characteristic also means that the securities lending industry has not lent itself to much in the way of automation or standardization. In many ways, securities lending can be considered one of the most inefficient and arcane offerings within the wholesale banking portfolio.

Foreign exchange trading

The foreign exchange market is the largest and most liquid market in the world, with US dollar trades making up the majority of FX transactions. The size of the market and accompanying deep liquidity is advantageous to traders by allowing them to enter and exit the market instantaneously. That said, FX trading is largely confined to currencies of the 10 largest economies in the world.

According to the Bank for International Settlements, global FX trading in April 2016 dropped to an average of $5.1 trillion a day from $5.4 trillion in April 2013. Also, in 2016, the spot market, which now accounts for a third of the total FX market turnover, declined for the first time since 2001, by about 15 percent.[16] The foreign exchange market is largely made up of institutional investors, corporations, governments, banks, and currency speculators.

Unlike the stock and futures markets that are housed in central physical exchanges, the FX market is a decentralized, over-the-counter market, largely housed electronically. We say "largely" because while more standardized, round-lot transactions are already highly electronic and fully transparent, much of the profit in this business is still "over the counter" in nature, involving either odd-lot or large round-lot trades, where there are fewer clients and where it is harder to find counterparties.

As in other areas in banking, the economics of the FX trading business have also undergone significant change due to new regulations, opening the doors for nonbank liquidity providers to capture greater market share. According to a Greenwich Associates study, institutional investors who use nonbank liquidity providers direct 20 percent of their trading volume through these platforms.[17] Another notable trend is the steady migration from single-dealer, proprietary systems to multidealer platforms, with nearly half the largest users of electronic trading using these platforms.[18]

Patterns of disruption in wholesale banking

Now, let's elaborate on patterns of disruption based on our original research on the topic and explore how different patterns of disruption might unfold in wholesale banking. Specifically, we see the following three patterns of disruption as the most relevant to the three businesses we highlight in this paper (trade finance, securities lending, and FX trading):

- Expand market reach
- Turn products into product platforms
- Connect peers

Figure 3: Characteristics/vulnerabilities

Business	Key characteristics/vulnerabilities
Trade finance	• Model has changed because of risk and compliance issues • Profit comes from client knowledge sufficient to assess and price counterparty risk • This information is opaque and incumbents are slow to assimilate new information for counterparty risk analysis
Securities lending	• Opaque, bilateral business • Need to move to more democratized electronic and peer-to-peer • Incumbents looking to move out "non-core" activities to utility providers (e.g., counterparty credit or coporate actions)
Foreign exchange	• Slowly moving to more electronic platforms • Odd-lot, or large round-lot-trades have a lot of friction and thus profit • Buyers want transparency and best execution • Incumbents can partner or buy third parties to use or kill new capabilities

Relevant patterns of disruption

Expand marketplace reach:
Connecting fragmented buyers and sellers—wherever, whenever

Turn products into platforms:
Providing a foundation for others to build on

Connect peers:
Fostering direct, peer-to-peer connections

Source: Deloitte

Expand market reach pattern

This pattern of disruption typically involves the deployment of platforms to help connect fragmented buyers and sellers, wherever they are and whenever they need to connect.[19] We're all familiar with some of the early examples of this pattern of disruption. Amazon initially entered the book retailing business and created an online platform offering a much broader selection than even the largest brick–and-mortar retailers could muster on their shelves. One prominent incumbent, Borders, folded under the pressure, and booksellers in general are feeling growing competitive pressure. A similar story unfolded when Netflix entered the video rental business and Blockbuster filed for bankruptcy.

What would make a market vulnerable to the expand market reach pattern of disruption? Typically, the markets that are most vulnerable to this pattern have large numbers of underserved customers and a broad range of hard-to-find and differentiated products that might address the needs of those underserved customers. As we have seen, all three of the wholesale banking businesses we discuss in this paper are today wholly or in part bilateral and nontransparent in nature, and thus have "products" with both of these characteristics.

Not all vulnerable markets will be hit at the same time. To determine likely timing, it is helpful to look for the presence of certain catalysts that make it easier for this pattern of disruption to play out. In the case of the expand market reach pattern of disruption, one of the key catalysts to look for is the availability of digital infrastructure with rich connectivity that can be accessed by underserved customers. Because the FX trading business is already largely electronic in nature, a disruptor that can capitalize on this existing infrastructure to create a more open and transparent market for large or odd-lot trades could spur disruption in this business. Another potential area is in trade finance, where the Internet of Things (IoT) infrastructure to track the physical flow of goods can be used by disruptors to connect with systems that already exist for tracking financial flows. An even more imaginative solution is the blending of IoT technologies with blockchain infrastructure.[20] By leveraging different digital infrastructures—such as IoT, blockchain, and the cloud—new players may be able to expand market reach.[21]

Another catalyst is enhanced access by current and potential vendors to sophisticated and affordable means of production, creating the potential for a rapidly expanding array of products or services in the marketplace. If customers are beginning to express an increasing desire for highly personalized, tailored products or services, that could be another catalyst for this pattern of disruption. Finally, regulatory policy could be another catalyst if it reduces barriers to entry for vendors or barriers to access for potential customers. It's no secret that regulatory initiatives across the three wholesale businesses discussed here, and others, such as derivatives trading, have opened opportunities for nonbanks to enter these markets and serve existing customers. To a large extent, new regulations as a catalyst already exist for this pattern of disruption, thus making the timing of this disruption pattern imminent.

Why is the expand market reach pattern of disruption so difficult for leading incumbents to address successfully? It can significantly cannibalize current streams of revenue and profit if platforms make it far less expensive for more specialized vendors to access the underserved customers. The digital platforms that increasingly drive this pattern of disruption can also significantly reduce the value of major fixed assets of incumbents—think about the extensive investment of traditional brick and mortar retailers in large retail outlets that might diminish in value in the face of online retailers. Finally, this pattern of disruption can also challenge some of the core assumptions of leading incumbents regarding what customers want and what is required to be successful as a vendor.

Many traditional retailers were initially very skeptical about the willingness of customers to buy books or rent/buy videos from online platforms. Look what happened.

As performance pressure mounts on corporations and other institutions, they will become more demanding in terms of tailoring to their specific needs and pricing. FX buyers are looking for greater pricing transparency and the opportunity to identify a venue or venues for best execution on FX trades. Essentially, they are increasingly demanding to take control of these kinds of highly customized placements through a more open, shared platform. One example of this disruption pattern is the new FX multidealer platforms, such as TraderTools' Unique Liquidity Network, which offers liquidity from multiple providers and better price transparency, thus decreasing the information asymmetry for the small players, who hitherto were mainly dependent on their dealers for such information.[22]

On the supply side, there are growing opportunities for smaller niche providers of financial services to design and deliver tailored offerings. Market platforms will help to more effectively connect smaller providers of tailored financial products with the specific segments of customers that value these tailored products. A powerful cycle will likely emerge as these market platforms gain critical mass, drawing more specialized financial service providers into the market because of their increased ability to connect with relevant customers. This, in turn, will likely increase institutional customer expectations regarding customization and pricing.

Turn products into product platforms

This pattern of disruption involves shifting away from standalone, self-contained products or services. In this case, the disruptors define and deliver a foundation of core functionality that third parties can build upon to tailor products and services to meet the needs of smaller segments of customers or individual customers.[23]

As an early example of this pattern of disruption, one only has to go back to the early days of the personal computer industry. It's hard to remember now, but at the outset in this industry, early vendors offered personal computers that were self-contained, proprietary technology stacks—you bought everything you needed from a single vendor: the hardware, the operating system and all application software. Then something interesting happened: de facto standards emerged around both the operating system and the microprocessor that made them attractive product platforms, inviting a growing array of hardware and software vendors to develop more specialized and diverse hardware and software products that could be configured into personal computers tailored to the buyer's individual needs. The early pioneers of the personal computer business that held onto their proprietary integrated products fell by the wayside as the personal computer industry took off.

A similar pattern is playing out in the mobile phone business, as Android has emerged as a de facto operating system, inviting anyone who wanted to make a mobile phone to use their operating system. As part of the bargain, the device manufacturers could offer to their customers a rapidly expanding assortment of highly specialized mobile phone applications developed on this operating system.

Similarly, we see the emergence of such new platforms for FX trading. For example, Ripple provides a platform to connect ledgers of financial institutions through the Interledger Protocol (ILP) for real-time settlement of cross-border payments. Third-party liquidity providers could potentially develop new solutions on this platform and capture payment flows traditionally accessible only by banks, all without having to develop a payments processing capability themselves.

What would make a market vulnerable to this pattern of disruption? If the market today consists of tightly integrated and standardized products and the customers have very diverse use needs, this might increase vulnerability to new vendors who offer product platforms that could lead to a proliferation of much more specialized products and services.

Interestingly, the services that banks offer to corporate customers have traditionally followed this model, where products and services are offered and priced in a way that recognizes the overall value of the relationship. In this way, some products or services may be underpriced relative to the value offered, but the bank is willing to "horse trade" at that level of granularity to increase the relationship or as a give-back to sell a more profitable service alongside. More recently, the new capital, liquidity, and funding requirements discussed throughout this paper are changing that dynamic. These rules are in essence forcing banks to reinforce the siloed nature of products and services, as each product needs to stand on its own from a capital allocation and liquidity perspective.

What could accelerate the arrival of this pattern of disruption in vulnerable markets? Catalysts to look for include some of the same drivers described in the previous pattern of disruption. Digital infrastructures with rich connectivity can help product platform vendors make their product platforms more accessible to highly specialized vendors building off these platforms. If there is evidence that customers are expressing increasing desire for personalized, tailored products to meet their diverse use needs, this could be an early warning sign that new entrants could build markets rapidly for their product platforms addressing these diverse use needs. Also, the aggregation platforms discussed in the previous pattern of disruption could also become an important catalyst given their ability to connect specialized vendors with the specific customers having needs for those specialized products.

This pattern of disruption is challenging to leading incumbents for the same reasons identified in the previous pattern. Product platforms can significantly reduce the cost of producing a product or service because all participants can share some core functionality that they no longer have to develop themselves. Those who remain wedded to their tightly integrated proprietary products or services could find that they have a significant cost disadvantage and experience cannibalization of revenue and margins as they struggle to remain competitive. Similarly, their investment in dedicated production facilities for their integrated products might have to be written down as product platforms gain ground. Equally important, product platform entrants often challenge core assumptions of the existing industry leaders, who firmly believe that their success is due to the tight integration they have achieved in their products or services. It may be very hard to believe that customers will be willing to forego the convenience and security of a tightly integrated product or service and be willing to mix and match among diverse vendors.

In the case of wholesale banking, some institutions may create "core" financial service product offers (e.g., loans, trade financing, funds management) and invite more specialized providers to tailor these core offers to meet niche market needs. The potential development of this pattern of disruption could lead to a significant proliferation of smaller, more specialized financial service providers that leverage the scale product and service platforms of larger institutions. For example, several large global banks offer their online trade finance platform functionality on a white-

label basis to smaller institutions that have neither the customer scale nor the resources to build these tools themselves, but have enough customers that need the service. While this is not a disruptive threat in the way we define it, it is clearly a new revenue source for the global banks that offer these white-label services. But the existence of such platforms bodes well for new entrants who could create a similar infrastructure available to current or new customers. There is an interesting synergy between product platform and the expand market reach patterns the more fragmented providers created by the product platform disruption would be more likely to succeed if they had access to market platforms that could connect them to their more narrowly defined customer segments.

Connect peers

The connect peers pattern of disruption is more speculative given that it has yet to play out in any significant market or industry, but our analysis suggests that it has the potential to disrupt a broad range of wholesale banking markets. This pattern of disruption moves away from the hub-and-spoke platforms that characterize the expand market reach disruptors described earlier. Instead, the disruptors in connect peers focus on deploying distributed platforms that enable participants to connect directly with each other without the need for an intermediary. We have seen that in trade finance with the emergence of open account trading, which completely bypasses the traditional bank intermediation with letters of credit. In securities lending, regulatory drivers and the emergence of CCPs suggest a future where securities lending is akin to equities trading or other true electronic markets. Even as more transparent, centralized transaction infrastructures like CCPs emerge, some have speculated that the future of many wholesale banking businesses, including trade finance and securities lending, may lie with a more peer-to-peer (P2P) framework, possibly enabled by the development of distributed ledger/blockchain-based technologies.

P2P systems already exist in the retail sector, where investors and borrowers are connected through these platforms. Another example of a connecting peers solution in the trade finance area is a company called Trade Finance Market, which offers exporters a nonbank alternative financing mechanism. Investors pick what trade they want to finance based on their preferences, while exporters are able to receive funding quickly and possibly at lower cost.[24] There are similar P2P solutions in the FX marketplace as well, such as TransferWise and CurrencyFair, serving retail customers.[25] But other providers, such as Kantox, are offering P2P currency exchange services to small and medium enterprises.[26]

Most of the analyses of this pattern of disruption have tended to focus on the benefits of greater speed and lower cost in the transactions themselves. While this may drive early adoption, a potentially even greater benefit over time is increasing access to data about transactions by all participants. In wholesale payments, it has been said that the information about the payment can be as valuable as the payment itself.

This creates an opportunity to develop richer learning feedback loops for participants so that they can evolve their transaction activity in ways that create more value over time. Indeed, there is a lack of pricing transparency in many wholesale businesses, including trade finance, that connecting peers disruption could address. And the increased level of data access that comes with moving to more open markets, whether in securities lending or other areas, is the transparency such central aggregators provide for increased regulatory oversight.

A key early driver of this pattern of disruption could be blockchain technology, as cited above. That technology provides the foundation for a distributed, transparent, trusted ledger as a replacement for batch-based settlement processes organized around a centralized ledger. It's not enough for the distributed ledger to be cheaper to build and operate than the existing central ledger—it must be cheaper than the incremental cost of improving the existing ledger and/or offer far more benefits.

It turns out that connect peers may in many cases disrupt the disruptors—specifically, disrupting those that lead the expand market reach disruptions. Expand market reach disruptions are typically driven by hub-and-spoke platforms where the owner of the platform serves as a hub, requiring all other participants to go through it to execute their transactions and often imposing significant constraints on the kinds of transactions that will be allowed. These hub-and-spoke platforms can be very effective in connecting growing numbers of diverse participants, but the hubs over time can develop significant constraints that add significant expense and time to transactions. Hub owners can often become greedy, charging higher fees for transactions. Perhaps even more importantly, the data aggregated by the hub usually remains invisible to participants, blocking significant opportunities to improve performance by examining patterns of transactions. For all these reasons, the hub-and-spoke platforms can become vulnerable to connect peers platforms that have the potential to offer faster and cheaper transactions as well as more visibility into aggregate data that could drive learning and performance improvement.

The connect peers pattern of disruption is likely to be most relevant to markets that are currently driven by centralized intermediaries, especially if these intermediaries frustrate participants with high fees, significant delays in settlement, or perceived high risk associated with the transactions. While it may not be true that these frustrations exist in securities lending, the structure of the business, where a small number of custodial banks and principal lenders sit between securities owners and borrowers, fits this pattern. Also, the more fragmented the market is in terms of participants that must use these centralized intermediaries, the more vulnerable it might be to this pattern of disruption.

As we discussed with the other two patterns of disruption, the spread of more and more cost effective digital infrastructures providing rich connectivity is likely to be a significant catalyst for the connect peers pattern as well. These infrastructures make it easier for new entrants to develop and deploy P2P platforms that can execute and record transactions far more cost-effectively, quickly, and reliably than centralized intermediaries. More and more powerful digital infrastructures also increase the opportunity to aggregate data about highly distributed transactions and apply sophisticated analytical software to identify and understand patterns emerging from these transactions. By creating rich feedback loops to participants, these P2P networks could offer much more opportunity for participants to learn faster and improve their performance more rapidly as they begin not only to see patterns from existing transactions, but also to anticipate likely trends over time.

Another catalyst to look for would be the erosion of trust in the existing centralized intermediaries. If the participants in these platforms do not trust the centralized intermediary, they are likely to be much more willing to try a new P2P platform with different trust mechanisms built into the platform. In securities lending, clients are increasingly looking for their bank providers to raise the level of automation and harness network effects to make the ecosystem more democratized and peer-like in nature.

If participants are facing increasing pressure in their own lives and businesses, this could be another catalyst, making participants more willing to migrate to a platform that could help them to execute and record transactions at much lower cost, much faster, and with greater reliability.

This pattern of disruption can be challenging to leading incumbents for the same three reasons highlighted in the patterns above. To the extent that P2P platforms can significantly reduce the cost associated with executing and recording transactions while at the same time increasing performance on dimensions like speed and reliability, centralized intermediaries would be faced with the prospect of having to cannibalize existing revenue and profit streams. Similarly, these new P2P platforms may force leading incumbents to write off extensive investments in earlier generations of hub-and-spoke platform technology. Perhaps the biggest hurdle would be for leading incumbents to acknowledge that many of the services they provided in the hub of their networks can be better performed when participants connect directly with each other. Some incumbent banks are looking to automation as well, especially in areas that are considered noncore to the business and potentially more able to be standardized, such as KYC, corporate actions, or counterparty credit data.

As with the two previous patterns of disruption, the connect peers pattern would be driven in part by institutional customers that are under increasing pressure to deliver more value to their customers and to do it faster and cheaper. The learning potential of P2P networks has often been underestimated but, in a more rapidly changing world, this may ultimately be the key driver of their adoption as participants seek to gain greater insight on how to create more value for their trading partners/customers.

Responding to the risk of disruption in wholesale banking

In this paper, we have illustrated how different patterns of disruption are likely to manifest in trade finance, securities lending, and FX trading (see figure 4).

The patterns of disruption analysis can help executives focus on where their companies might be most vulnerable to certain types of disruption, and anticipating the future is the first step to preparing for that analysis. But what could incumbent leaders do to address the risk of specific patterns of disruption once they have them on their radar screen?

The first piece of advice is to move quickly and aggressively. The patterns reviewed above are driven by network effects and, once a critical mass of participants has been mobilized, it becomes increasingly difficult to challenge early players and unseat them. These are not situations where it is possible to be a fast follower—once critical mass has been achieved by others, it is generally "game over." So, incumbent leaders must find ways to create a sense of urgency within their leadership groups.

The second suggestion is to focus on parts of the marketplace that are likely to concentrate and consolidate, so that large incumbent leaders can target arenas that will not only support existing scale, but also offer the potential for significant growth. This is clearly happening in wholesale banking, as over the past eight years, banks have been focusing on businesses and geographies where they think they can win, and divesting the rest. This is becoming increasingly important since, as we have seen in the discussion above, one of the trends in The Big Shift is the increasing potential for fragmentation in products and services as more powerful customers demand more tailored offerings and as the means of production become more widely accessible to potential providers.

Figure 4: Likely patterns of disruption in select areas of wholesale banking

Business	Relevant pattern of disruption
Trade finance	• Expand market reach • Turn products into product platforms • Connect peers
Securities lending	• Connect peers
Fx trading	• Expand market reach • Connect peers

While products and services businesses may fragment, there are parts of the economy that will likely continue to concentrate and consolidate. Specifically, we would highlight three potential areas to target: infrastructure services, platform businesses, and trusted advisor businesses.

Infrastructure services involve scale-intensive, high-volume, routine processing activities, e.g., running data centers or call centers. In the wholesale banking business, global custody services could be an example of infrastructure services. The key is that the economics of these businesses are driven by powerful economies of scale, which preclude smaller players from being viable over time.

Platform businesses focus on connecting larger and larger numbers of participants. The value to participants increases as more join, and there are powerful network effects that make it difficult for smaller players to remain viable over time. While there may be some economies of scale in effect for platform businesses in terms of lower cost of operations, the real driver of success for platform businesses involves the ability to deliver more value to each participant as the number of participants grows. These kinds of businesses can take many different forms, including simple aggregation of transactions or product features (for example, the platforms that are the basis for the three patterns of disruptions discussed above). They might also involve platforms to help people connect and build relationships with each other (social platforms like Facebook or LinkedIn) and, over time, platforms that help participants learn faster and improve their performance more rapidly (learning platforms).[27] We highlighted the potential of P2P platforms to accelerate learning of participants, but all kinds of aggregation and social platforms have the potential to evolve into learning platforms if they focus on aggregating data about activities of participants and providing rich feedback loops to those participants to help them learn faster.

Trusted advisor businesses take the trusted advisor business model that today only exists for the very affluent (e.g., financial advisor) or the very largest companies and leverage digital technology to make this a much broader offering that benefits from economies of scope (the more you know about an individual or institution, the more helpful you can be to them, and the more individuals and institutions you know, the more helpful you can be to each individual or institution). A key challenge and opportunity for the trusted advisor is the willingness to move beyond one's own

product or service offerings (would you be willing to recommend to your client your competitor's product or service if in fact that would be best suited to the client's needs?). Trust is likely to be much deeper if you are truly representing the needs of your clients and connecting them to the most relevant and valuable services, regardless of who provides them. Successful trusted advisors will need to cultivate a very broad and diverse ecosystem of providers that can more effectively address the needs of specific individuals or institutions.

In the United States, the recent rule on the Department of Labor's (DOL) fiduciary standard for retirement investment advice is a good example of how the trusted advisor model is being altered by regulations, where the clients' interest are expected to take precedence over any profits investment advisors may receive by offering the advice, and conflict of interest is to be avoided.[28]

In wholesale banking, the trusted advisor model has long been at the core of the value proposition. Relationship bankers and their knowledge of their clients have been a key component of banks' ability to customize solutions and pricing across a wide range of products and services. With regulatory changes, however, come impacts to the profitability of some products, as well as an increased cost to support them. As a result, there are often too many relationship bankers per account, many of whom are really not needed given the relative simplicity and low profitability of the products they support.

There's also the question of whether trusted advisors will ever really be trusted if they are only recommending their own products and services, even if someone else's products or services may be more relevant and valuable to an individual client's needs. Existing trusted advisors may ultimately be displaced by a new generation of trusted advisors that have no products or services of their own to sell and who are truly representing the clients' interests, connecting them with whatever products and services are most useful to their specific context. Given the spread of ever more powerful digital technology infrastructures that make data aggregation and analytics more economically feasible, this kind of trusted advisor role could also become economically feasible for a much broader range of clients, creating significant growth opportunities.

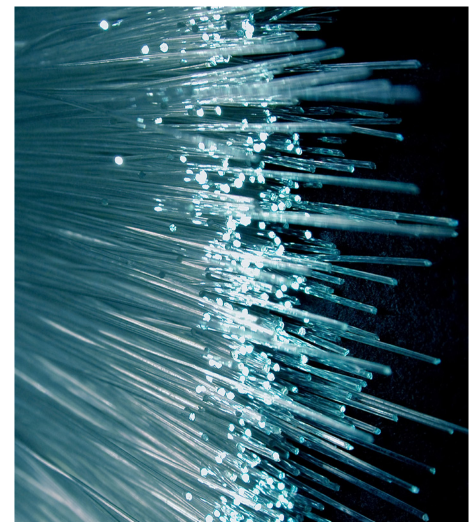
With this in mind, incumbent leaders need to determine whether they would be better served by targeting the platform opportunities embedded in each of the three patterns of disruption or by targeting other scale and scope opportunities that would provide them a safe haven as the disruption plays out in certain parts of their business.

In either case, incumbent leaders would be well advised to pursue a "scaling edges" response to disruption, rather than trying to transform their core business. One of the reasons that the core business is so vulnerable to disruption is that it has a powerful immune system and antibodies that are focused on crushing any effort to drive significant change. The scaling edges approach recognizes the robustness of this immune system and, as a result, focuses on identifying an "edge" to the current business that today has modest revenue and profitability, but, because of the exponential forces playing out in The Big Shift, has the potential to scale to such a degree that it could actually become the new core of the business, generating the vast bulk of the company's revenue and profitability.

One example of a company that has successfully scaled edges several times and become one of the most highly valued companies in the world is Apple. Apple started in the personal computer business, but then focused on scaling an edge in the digital music player business, then the mobile phone business, and then the tablet computer business. Each time, Apple was able to scale a promising edge to build an entirely new business, leveraging its core expertise in product design.

Rather than trying to push the edge back into the core as a catalyst for change once it gains steam, this approach focuses on continuing to scale the edge at an accelerating rate and, over time, pulling more people and resources from the core out to the edge. The scaling edges approach can be designed in such a way that it can minimize the risk that the immune system and antibodies of the core will be mobilized.

As the edge becomes the core, the incumbent leader is transformed in ways that help it to overcome the challenge of disruption. There's a paradox here—if an incumbent leader can successfully address disruption, was it a disruption? While it would not fit our tight definition of disruption we might be inclined to create this exception—if the prospect of disruption made the incumbent leader completely reinvent itself from the ground up, then perhaps it is still a disruption. We suspect that most incumbent leaders will not anticipate or act upon the disruption in such a radical way and that the disruption will still displace most of the incumbent leaders. For those few who are able to respond in an appropriate manner, they will discover that they have tapped into much more powerful and effective ways to create value in an increasingly challenging world.



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