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# Financial Services Extranets: Connecting a Fragmented Trading World



## Vision

It's well understood that the phenomena of automation, globalization and fragmentation are vastly altering today's capital markets infrastructure. Over the last 10 years, we have witnessed a revolution within the trading community, one in which firms of all sizes are actively involved in trading a wide range of instruments at a variety of execution venues all around the globe. The idea of a 24 hour-a-day market place is no longer a fantasy, but a reality, creating unparalleled opportunities.

With this new reality comes a new paradigm, one in which increased connectivity fosters increased competition. Taken together with regulatory reform, this has caused a general leveling of the playing field. This leveling is occurring both geographically and across instrument types.

Lowering barriers to entry also serves to minimize the influence of oversized players and reduce the inherent risks associated with "Too Big to Fail." Connectivity and technology allow new competing forces to "step up" and provide some of the services that have mainly been provided by a limited number of firms in a closed market environment.

However, with these new opportunities come new challenges. How can firms expand their presence into emerging or frontier markets, or new asset classes or services, without investing massive amounts of up-front capital into technically challenging communications infrastructures? After all, while the idea of trading equities on the Johannesburg Stock Exchange (JSE), or hedging US dollar interest rates in Singapore seems like a great idea, setting up the necessary infrastructure to do that can be overwhelming, even for the most sophisticated firms.

Likewise, for firms that have set up a global footprint, the complexity of global networks requires communications resilience and redundancy. Connectivity failure kills markets.

Furthermore, the universal imperatives of transparency and fragmentation make it nearly impossible for small- and medium-sized players in the industry to sustain connectivity programs on their own. Likewise, larger players need to balance their own desire for control with the realities of rising infrastructure costs and complicated global communications networks.

There is hope out there. Extranet service providers (ESPs) are scaling to match the market's complexity, allowing participants up and down the service stack to communicate with each other via a reliable, robust and secure infrastructure. ESPs are providing market participants with the unique ability to bridge the geographic divide that exists between the developed markets in North America, Europe and Asia, and the emerging and frontier markets that are attracting so much attention. ESPs are also forming the connective tissue for a whole new infrastructure to trade Over-the-Counter (OTC) derivatives in a centrally-cleared electronic marketplace.

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## Introduction

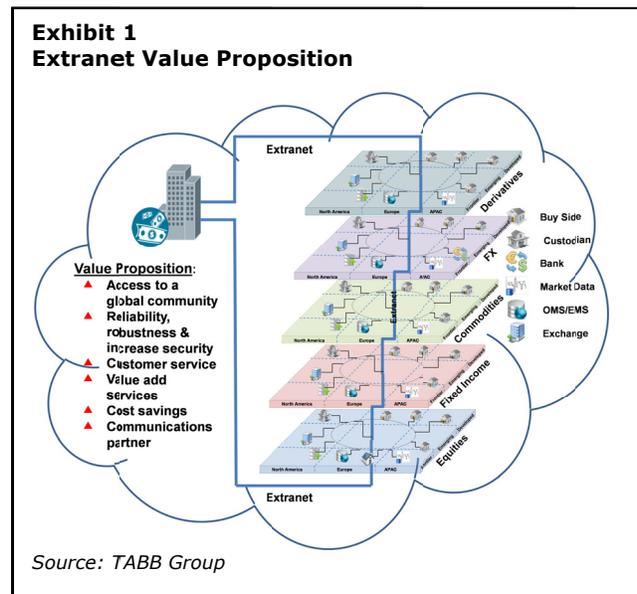
In today's global market place, we are dealing with two diametrically opposed forces: global connectivity and market fragmentation. Connectivity makes the puzzle smaller, but fragmentation creates more pieces. On one hand, when market forces pull together disparate markets, those markets become more accessible. On the other hand, market fragmentation takes larger pools of liquidity and breaks them into a number of smaller ones.

The investment community's quest to find new sources of alpha, and to seamlessly connect to those sources in a timely and cost effective manner, creates demand for more and better services throughout the trade life cycle in almost every type of asset class. Firms looking to trade in Russia, Brazil or Japan, need access to the same type of market infrastructure and trade support services as do firms trading in London. But that access needs to be cost effective, reliable and easily accessible. Two-hour outages in an era of volatility are not what Bill Gross means by "the new normal."

While market fragmentation is a well-understood phenomenon in the United States and Europe, its impact is just being processed elsewhere. The addition of Chi-X Australia is about to change the way folks trade 'down under'. Furthermore, connectivity in developed Europe and North America is relatively easy, given the geographic proximity of trading venues and mature telecommunications infrastructure. Connecting to emerging and frontier markets is fraught with unknowns. Distances are greater, infrastructure is less robust and financial connectivity is something new.

It is no longer feasible for most firms to manage their own networks of direct connections to all of these new locations and marketplaces. Participants need to find a scalable mechanism that allows them to manage their communications infrastructure as needed, without having to invest massive amounts of up-front resources into proprietary communications hubs.

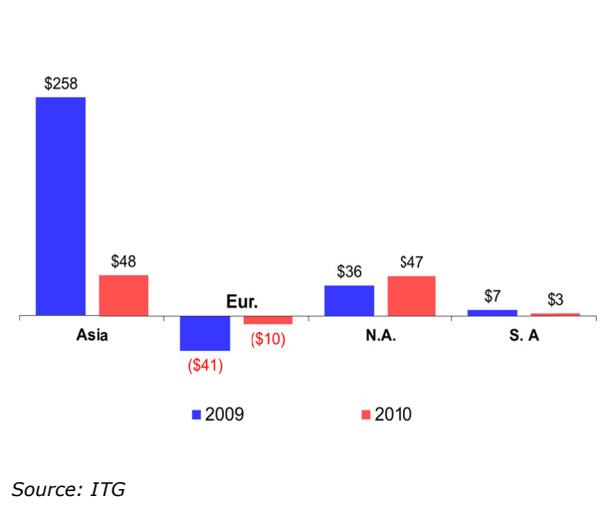
Extranets allow clients to connect to a global network of market participants, exchanges and independent service vendors (ISVs) within a tailored infrastructure. Extranets transcend geography, asset class and trade life cycle; they allow participants to connect in a three dimensional way to all aspects of the market (see Exhibit 1). When a buy-side firm wants to trade on the Bursa Efek Indonesia, it needs to be able to connect seamlessly with its broker; which, in turn, needs to be able to communicate electronically with its local Indonesian broker, which, in turn, will need to be able to communicate with its own counterparties.



Regulators are advancing reforms pushing for more transparency and competition, especially within the vendor and service-provider communities. Likewise, growing disenchantment with the current rates of return within the more mature markets of the US and Europe is causing more investors to look elsewhere, increasing reliance on global connectivity and robust communications.

Global capital flow says it all. Over the last three years, asset allocators have been directing money toward the emerging and frontier markets, at the expense of North American and developed European markets (see Exhibit 2). Global connectivity has not only enabled this paradigm shift—it is pushing the trend. Thanks to fast and easy communications, traders in New York or Paris can, with the push of a button, just as easily invest in almost any one of 100 markets across Europe, or in any one of the 22 different markets in Japan.

**Exhibit 2  
Capital In/Out Flows by Region (in Billions)**



The challenge for market participants is: How to harness the opportunity created by global connectivity, while effectively managing the challenge of market fragmentation?

To understand these challenges, TABB Group spoke with 13 institutions that are either directly or indirectly involved with trying to solve these problems or provide solutions that address the underlying issues. TABB Group interviewed both buy-side and sell-side institutions, all of whom have either national or global connectivity requirements within the financial services industry. Furthermore, we spoke with a number of telecommunications companies and communications technology vendors; all of whom provide connectivity services to the capital markets. All conversations focused on the challenges of connecting a fragmented trading world in today’s global trading environment.

## Market Fragmentation and Connectivity

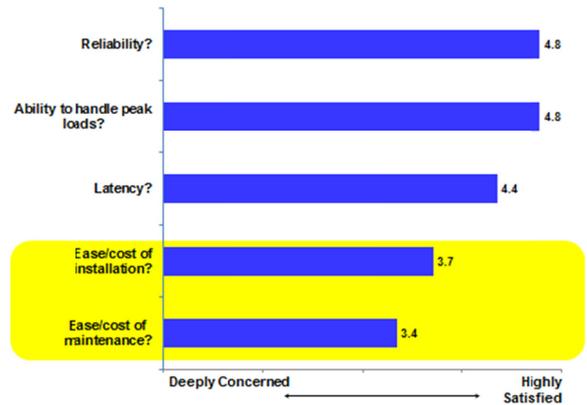
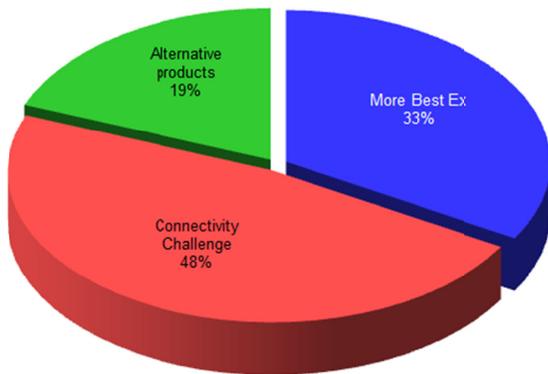
In the United States and Europe, the market fragmentation story is fairly well understood. In 1995, there were only two electronic execution venues in the US equities space, NASDAQ and NYSE. Today there are more than 71, when "lit" and "unlit" venues are considered. Likewise, similar trends have hit the US equity options markets, where there are now nine separate options markets, and soon to be 10. Meanwhile, in Europe it is the same story, but on a larger scale.

Fragmentation is now beginning to unfold in Asia. Over the last few years, selected markets have fragmented, following individual legislative efforts aimed at fostering competition within selected national boundaries. In both Japan and Australia, legislative and regulatory reforms have increased market competition, adding new order types and exchange venues in a relatively short amount of time.

Within the Asian market, with the exception of Japan, where there are currently 22 different electronic venues, fragmentation or "separation" tends to follow national boundaries. This challenges the existing connectivity models, as it requires individual solutions for individual national markets. While separation is today's challenge, we believe that as Asia becomes more automated and better integrated into the global trading community, internal and external pressure to increase competition and drive down costs will push individual nations, to fragment on a case-by-case basis, complicating an already difficult connectivity model even further.

What this means is that, while individual Asian markets remain separated, as we move forward, and these separated markets begin to fragment, it will become even more challenging for firms, especially smaller and mid-sized players, to maintain and sustain internally controlled and managed connectivity strategies they rely on for individual point-to-point connections.

**Exhibits 3 & 4**  
**Connectivity Challenges for the Future / User Satisfaction w/Point-to-Point Networks (1 – 5 scale)**



Source: TABB Group

While firms like the reliability, security and robust nature of their own internal connectivity networks, they are growing more concerned about the ease and cost of development of these networks, especially in light of what they see coming down the road (see Exhibits 3 & 4).

These factors combine to make connectivity a significant priority. In a 2011 TABB Group study on Asian connectivity, we found that almost 50% of firms indicated that market fragmentation will challenge their existing connectivity strategy. Interestingly, most of the firms we spoke with about this topic indicated that they were using their own internal resources to develop and manage their connectivity strategy; however, given the challenges associated with expanding their activity in the region, they are now more amenable to working with an outsourced solution, such as extranets.

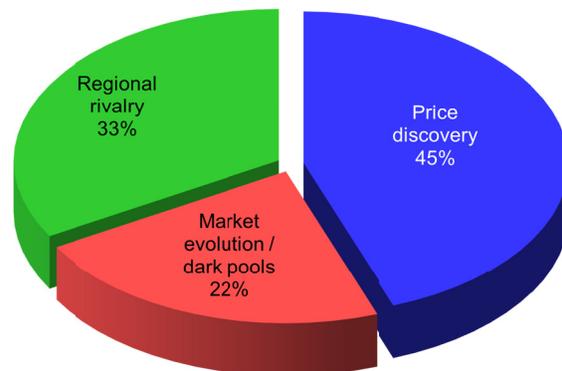
The value-add of partnering with third-party vendors with existing market experience in emerging and frontier markets is a powerful driver. As investment managers look further afield for new opportunities, barriers for entry become greater; including infrastructure barriers, regulatory barriers or just informational barriers. Having a partner who has “ground truth” about the realities within a new market can significantly reduce some of these barriers and provide competitive advantages against those who do not have access to this information and experience.

While no one expects Asian markets to resemble the US anytime soon, some of the national markets are moving in that direction. Some in the trading community believe that Singapore will be the next to fragment. They point to regional rivalries, demand for better price discovery, the rise of dark pools and market evolution as drivers of fragmentation (see Exhibit 5).

## The New Swaps Market

The same holds true for the US Swaps market. Thanks to Dodd-Frank, Swap Execution Facilities (SEFs) are popping up all over the place; each venue requires connectivity to not just the exchange itself, but also to trade lifecycle participants that add value and liquidity to the facility. Unlike the old bilateral market, where dealers were the primary venues for execution, and where the paradigm was one-to-one connectivity, the new model shifts the paradigm completely and moves it from a one-to-one relationship to a many-to-many relationship, where all activity occurs within the SEF. Under Dodd-Frank, the new model requires significantly more connectivity in order to make swaps trading more transparent. No longer will trades be bi-lateral, where quotes are issued in response to specific requests. Once implemented, the new model will provide for continuous two-sided quotes and time sensitive

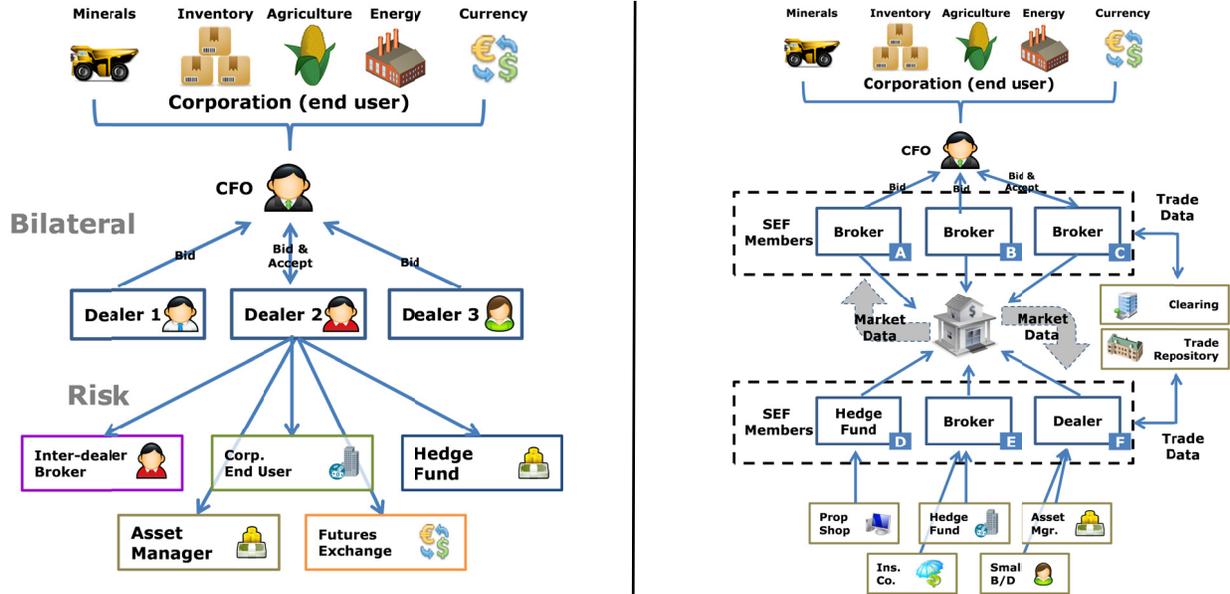
**Exhibit 5**  
**Fragmentation Drivers**



Source: TABB Group

trade reporting; complicating an already convoluted web of connectivity that already exists (see Exhibits 6 & 7).

**Exhibits 6 & 7**  
**Bilateral Swap Paradigm / SEF Paradigm**



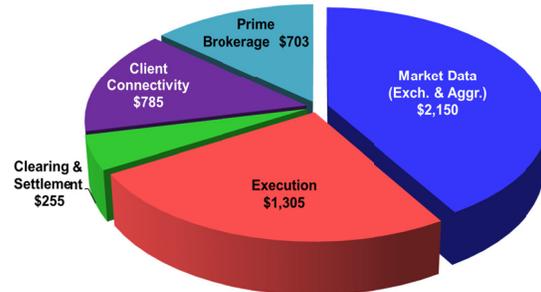
Source: TABB Group

Today, market participants around the globe are concerned about these issues and are trying to find a way to efficiently and effectively connect where needed, in a scalable fashion. According to European buy-side traders, two of the biggest concerns they face in today's market place are the need to find quality liquidity and market fragmentation. Both of these requirements center on the issue of connectivity. How firms connect to liquidity centers, and how they manage that infrastructure, speaks directly to their need to effectively develop a global strategy for connecting to a three-dimensional market place that includes geographic diversity, multiple asset classes and trade lifecycle services.

## Extranet Models

Extranets fulfill a critical role within the communications infrastructure of the financial services community. They provide robust, scalable communications to members of the community, allowing them to communicate securely around the globe. Financial-services extranets cater specifically to the financial-services community, and allow participants the ability to connect to a pre-existing community of market participants. While their importance within the community is well understood, they are by no means the only way to communicate within the financial services arena. TABB Group calculates that the global sell-side spend on communications will be approximately \$5.2 billion in 2011, spread out across a number of important initiatives. TABB Group estimates that approximately 45% of that spend will go to extranet connectivity (see Exhibit 8).

**Exhibit 8**  
Global Sell Side Connectivity Spend ~\$5.2 Billion



Source: TABB Group

However, just because a firm is connected to an extranet, it is not automatically granted the ability to communicate with other on-network participants within that ESP's community. If Participant A wishes to communicate with Participant B, a logical connection has to be enabled by the ESP. The system is engineered this way for a number of reasons, specifically economics and security.

## Economics

The costs of an extranet are based on a number of factors, with each service provider developing its own costing/pricing strategy with the following components:

- The size of the connections, e.g., "thin-string" (or low-bandwidth) connections cost less than "fat-string" (or high-bandwidth) connections,
- The number of logical connections enabled, and
- The distance involved; shorter-distance connections cost less than longer-distance connections.

So, if Firm A is only going to connect to one or two counterparties, the costs of those limited numbers of connections will be less; while Firm B is looking to connect to a whole host of counterparties, then the cost of each individual logical connection will be less; however, the overall amount billed to the firm will be significantly more.

## Security

From a security perspective, extranets provide a level of security that enables enhanced reliability and mitigates many of the risks associated with unimpeded access to critical network resources. First, because extranets are physically separate from the internet, they limit the ability of hackers to gain access to the critical systems that are used within the trading environment. Second, because extranets use logical connections to link individual users within the network, it significantly diminishes the ability of malicious parties to shut down a given participant through the use of a distributed denial-of-service attack.

For these types of attacks to succeed, hackers require both access (whether direct or remote) to the targeted system, as well as an open network environment, such as exists within the internet, that will allow the hackers' computer systems to communicate freely with the target systems.

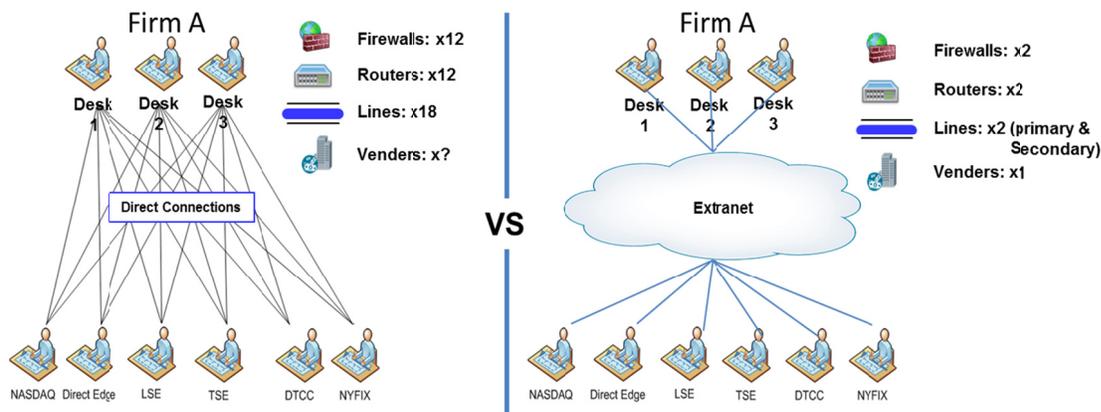
## Scalability

When discussing scalability and connectivity on demand, there are three distinct aspects that must be considered:

1. The ability of a firm to scale up or scale down the amount of connectivity needed, without massive up-front capital investments.
2. The ability to add bandwidth and counterparties without having to add costly equipment, and
3. The ability to eliminate indirect costs, through the reduction of engineering complexity and management overhead

Extranets allow companies to offload these responsibilities. For example, when a large broker/dealer (B/D) with multiple trading desks enables a point-to-point network, it creates a complicated communications environment that has to be actively managed. In the case below, there is an 84% reduction in the number of lines that have to be enabled, and a concurrent reduction in the amount of equipment and vendors that need to be overseen and the number of firewalls that need to be managed (see Exhibit 9).

**Exhibit 9**  
**Point to Point Versus Extranet Connection Complexity**



Source: IPC/TABB Group

While extranets play an important role within the financial services connectivity vertical, their role, while robust, does not obviate the need for other forms of connectivity. Often, firms will utilize multiple communications technologies to enable their business strategies, including the use of direct connections though dark and lit fiber connections, co-location efforts, as well as the internet. Likewise, firms often have multiple extranet providers, depending upon their own unique requirements.

However, for firms looking to bridge all of these options, and who require better security, low- and stable-latency characteristics, robust resilience and managed services, extranets provide the most cost-effective solution. While not the quickest or cheapest option out there, extranets provide significant value-add, including broad reach, ease of use, managed care and most of all, flexibility.

All of the participants in this study relied on multiple technology types to power their connectivity strategies. Smaller firms tended to rely on extranets and the internet for their communications strategies. Larger firms employed multiple strategies to connect numerous counterparties, and tended to rely on a mixture of extranet services, direct connections and co-location strategies (see Exhibit 10).

**Exhibit 10  
Connectivity Options**

Type	Description	Pros	Cons
<b>Internet</b>	A shared public network that allows for electronic communications in an open and unsecured environment.	<ul style="list-style-type: none"> <li>• Inexpensive</li> <li>• Ubiquitous</li> <li>• Robust backbone</li> <li>• Easily maintained</li> </ul>	<ul style="list-style-type: none"> <li>• Not secure</li> <li>• High dynamic latency levels</li> <li>• Publicly accessible</li> </ul>
<b>Direct Connections (Dark &amp; Lit Fiber)</b>	Ultra-low latency connections used in high frequency trading. Often combined with co-location strategies and DMA.	<ul style="list-style-type: none"> <li>• Set latency levels</li> <li>• Very fast</li> <li>• Very secure</li> <li>• Internally managed</li> </ul>	<ul style="list-style-type: none"> <li>• Very Expensive</li> <li>• Difficult to manage</li> <li>• Difficult to maintain</li> <li>• Complicated</li> <li>• Limited use/not scalable</li> </ul>
<b>Point to Point</b>	Private communication framework that connects one network directly to another network, primarily used in ultra-secure environments or when latency concerns may be an issue	<ul style="list-style-type: none"> <li>• Set latency levels</li> <li>• Fast</li> <li>• Secure</li> <li>• Internally managed</li> </ul>	<ul style="list-style-type: none"> <li>• Expensive</li> <li>• Difficult to manage large networks of connections</li> <li>• Not scalable</li> </ul>
<b>Extranets</b>	Extranets are private, centrally managed networks that connect like-minded professionals in an on-network community	<ul style="list-style-type: none"> <li>• Fixed latency levels</li> <li>• Fast, secure &amp; flexible</li> <li>• Scalable</li> <li>• Low 'Lead Time to Connect'</li> </ul>	<ul style="list-style-type: none"> <li>• Not used in high frequency trading scenarios</li> <li>• Multiple providers</li> <li>• Customer service issues</li> </ul>

Source: TABB Group

## High Level Drivers

Based on our conversations with various market participants, we uncovered six specific issues or drivers that market participants are concerned about (see Exhibits 11 & 12).

**Exhibits 11 & 12**  
**Components of a Top Tier Connectivity Offering & Component Value Proposition**



Source: TABB Group

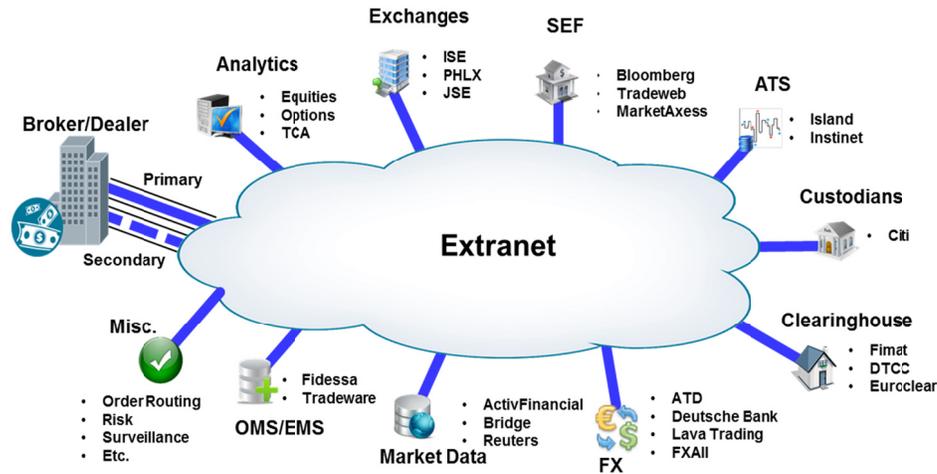
On Network Participants	A global footprint that is vendor neutral and enables global connectivity between the buy side, sell side, independent service vendors and a large selection of exchanges. Access to clients & potential future clients
Reliability, Performance & Security	A track record of five 9 performance with strong SLAs that ensure performance, security and fixed latency levels as well as, speak to the robust nature of the platform. Enhanced performance with reductions in cost and complexity
Capital Markets Experience	A long history of work within the capital markets environment and a strong understanding of market structures and regulator requirements within the markets where they operate and the markets their clients want to trade in. Market Intelligence and enhanced understanding
Customer Service	A track record of five 9 performance with strong SLAs that ensure performance, security and fixed latency levels as well as, speak to the robust nature of the platform. Improved efficiency & improved customer relationships
Value Added Services	A wide variety of ISVs and trading venues, across all asset classes and throughout the trading life cycle stack. Well defined ESP services such as voice services & low latency connectivity, as well as, a strong commitment to business continuity. Improved value proposition
Cost Competitive	A fully scalable solution that reduces communications complexity and both direct and indirect connectivity costs. Improved value proposition

## Global Community

When a firm decides to enter a new marketplace; whether through geographic expansion or through asset class diversification, connectivity is the keystone that enables that expansion to occur. The connectivity “evolution” that has overtaken the global financial community has lowered the overall cost of global trading and has allowed countless new players access to markets that were either too opaque to operate in, such as the bilateral swaps market, or too “off the beaten track” to invest in. Extranets have enabled this “evolution” and have offered on-network participants the opportunity to connect to the expanding frontiers of the capital markets, and to connect to countless other market participants all over the globe, with minimal up-front capital expenditure and even less management heartache.

For today’s investors, there are more markets to connect to, in more locations, in more asset classes than ever before. Extranets bring together all of the elements that go into making these markets functional. They enable buyers and sellers to communicate freely; they enable the flow of market data and reference data. Extranets afford ISVs the opportunity to access clients, and provide services globally within a cost structure that fosters broad competition while ensuring certainty and safety. Extranets are the glue that keeps everything functioning (see Exhibit 13).

### Exhibit 13 Extranet Global Connectivity Model



Source: IPC/TABB Group

Thanks to extranets, and their ability to connect hundreds of participants together in a secure environment, investors across the globe are seeking out new products and services to help manage the challenges of trading globally in a transparent manner. Thanks to efforts such as Dodd-Frank and MiFID II, we are seeing an explosion of new data providers, aggregators and analytics products that will hit the market. TABB Group estimates that just within the swaps industry alone, there will be 300% to 400% increases in the amount of data that will need to be generated. This means that, in order to survive, more participants are going to have to be connected into this data and these services.

The faster you can connect to a new counterparty, the quicker you can trade. Participants looking to expand their business and identify new opportunities want to be tied into as many global markets, players and services as possible. The broader the community of on-network participants, the more value an individual participant can gain.

Both geographic expansion and asset-class expansion require connectivity. Extranets allow on-network participants to expand incrementally, ensuring they get timely access to valuable counterparties throughout the trading lifecycle, such as:

- **Pre-Trade Services** - Market data providers, data aggregation services and risk analytic providers.
- **Trade Execution Services** - New execution venues require greater global connectivity. Likewise, regulatory risk analysis requirements mandate real-time monitoring of trading activity; often this is enabled through the use of outsourced risk modeling and market surveillance services.
- **Post-Trade Execution Services** - Similarly, post-trade activity will increase as new execution venues are developed and exploited. For each asset type traded within a particular geographic region, clearing, post-trade allocation services, settlement and custodian organizations need to be incorporated into the communications network.

With each new geographic location or new execution venue that is developed and brought into the global electronic trading community, a whole new series of market participants need to be “brought online.” ESPs that can demonstrate capabilities in these areas will fare better and attract more customers. It is a self-fulfilling prophecy: the more on-network participants you have, the more you will get.

## Reliable, High-Performance, Secure Networks

Performance, reliability and security continue to be the primary drivers when it comes to financial-services connectivity. Market participants continue to be concerned about these three issues, especially when it comes to connecting to new marketplaces and globally-distributed execution venues. With everyone looking to find the next “big thing,” nobody has any time for unreliable communications infrastructures that do not meet their low tolerance for service interruptions or security breaches. Extranets provide for better performance, while reducing overhead costs and complexity.

Managing global connectivity is a time-consuming and resource-intensive task. ESPs that can effectively and reliably manage network connectivity across the globe remove that challenge from the table. And while it is true that some of the larger sell-side firms are looking to replace extranet connectivity with internet-based connectivity, the vast majority of firms interviewed for this paper indicated that they were too concerned about the overall vulnerability of the internet. This concern has been accentuated by the hacker group Anonymous’ recent threat to “take down the New York Stock Exchange,” and by Western governments’ allegations that China has been sponsoring organized cyber-attacks on western financial institutions. According to one participant, “nobody wants to be on the internet now, it is just too dangerous.”

As markets become more interconnected, and cloud environments, like NYSE’s Financial Services Cloud or Reuters’ Elecktron become more integrated into the sector, reliability and security will be even more pressing concerns. Reliably connecting geographically disparate trading environments, such as New York and Istanbul, is going to be a typical objective. Participants who can guarantee this connectivity, through wise choices of extranet partners, will survive and prosper; firms that cannot, will not.

## Customer Service

The value associated with customer service within the extranet community cannot be understated. In today’s nearly-24/7, electronically-driven trading environment, customer service becomes exceptionally important. Users of extranet services are looking for real-time customer service that can operate around the clock; they must be able to work with clients and interlocutors to resolve complex issues that often interrupt trading activity.

According to our survey, all but the largest users of extranets are somewhat unsatisfied with their extranet customer service experiences. Complaints ranged from a general sense that the bigger ESPs are not focused on the day-to-day concerns of the individual participants, to concerns that the providers are not releasing enough information on the status of their networks.

Many of our interview participants aired the concern that some of the ESPs have integrated the financial-service customer service programs into the organizations' overall customer service programs. This means that when a problem does occur, participants' calls for assistance queue up in general customer-service call centers. While the actual impact of having financial-services' calls routed through a general customer-service help desk infrastructure may be minimal, the perception among some of the participants we interviewed was that it took too long to get their issues resolved.

## Value-Add Services

Extranet users are also looking to extranet service providers to provide access to value-added services as part of the overall user experience. Specifically, there are two types of services that users seek. First, there are value-added services provided directly by the service providers themselves. Second, there are services provided by on-network ISVs. The number of services provided directly by the ESP or through the ISVs varies, depending on the specific extranet and its individual strategy.

Access to any of these services depends on the service provider chosen, however, vendor-neutral network providers, such as IPC, BTRadianz, Savvis and TNS tend to be viewed as more open to ISVs. Extranet environments aligned with financial-service providers tend to be viewed as less accommodating to certain types of ISVs that may compete with the extranets' intrinsic value propositions. While network-neutral offerings will provide easy access to any and all market data providers interested in joining their network, service-provider aligned networks will tend to try to accentuate the bundled services.

In the first instance, service provider-backed extranets tend to be offered as either part of the basic service level agreements, such as business continuity planning, disaster recovery assistance, deterministic latency levels, or as service layers that can be added as needed. These services depend on the individual provider being used, but tend to include features like voice connectivity, low-latency connectivity, message management services and encryption services.

In the second instance, on-network participants are looking to see a wide variety of providers whenever possible. As more and more market places become automated, more and more service providers will be looking to extranets to connect them and their products to potential customers. This is especially true when one considers the "trade lifecycle" types of services currently being offered.

From our perspective, service providers in the trade lifecycle services business cover pre-trade, trade and post-trade services. These include, but are not limited to:

- Pre-trade services – Market data providers, reference data providers, pre-trade risk analytics.
- Trade services – execution venues, exchanges, SEFs, OMS/EMS providers, etc. FIX messaging/protocol services
- Post-trade services – allocation, clearing, settlement and custodial services

In addition to the types of services being offered, extranet service providers are looking to expand the number and range of services being offered throughout all asset classes. Whereas most services were offered mainly to the equities market place, now service providers are looking to expand into new market places, including but not limited to equities, futures, derivatives, options, swaps, foreign exchange (FX) and others.

## Cost

When ESPs first started popping up, one of the primary value drivers for this type of service offering was the ability of extranets to drastically reduce the costs associated with financial-services connectivity. Back then, bandwidth was relatively expensive, and the costs associated with managing one's own network were becoming prohibitively expensive. Now, however, the overall cost of bandwidth has dropped significantly. Extranet service providers can no longer rely upon up-front cost reductions to sell their services.

However, while the actual cost of bandwidth has drastically been reduced, the overall cost of running an independent, point-to-point network has not. All but the largest buy-side and sell-side firms no longer maintain the necessary in-house expertise to sustain large point-to-point networks; nor do they maintain the necessary in-house staff to manage the minutiae that comes with running a directly-owned global network. This includes managing all of the independent vendor relationships that go into keeping a network running, managing failovers and network engineering. It also includes things like managing the logistics of all of the equipment that needs to be constantly checked, monitored and updated every time a change to the network is made, or an on-network participant changes location.

From the perspective of firms that have already invested in extranet service partnerships, extranets no longer have to demonstrate on a dollar-for-dollar basis that they are cheaper than other competing technologies. They must, however, provide cost-competitive services. As one participant noted, "Extranets do not need to be less expensive than everyone else, they just need to demonstrate that they are easier to use, and just as cost-effective."

## Capital Markets Background

Firms looking to connect within the capital markets arena want to do so with a partner who is fully engaged with and focused on the financial services community. Thanks to the ever-changing regulatory and technological landscape, firms look to extranet providers as outsourced partners who can assist them in navigating the often complex world of regulatory, cultural and operational landscapes that exist both globally and vertically within the capital-markets sector. This is especially true when it comes to expanding into new geographic environments.

Both buy-side and sell-side participants want knowledgeable interlocutors who not only understand the challenges associated with connecting various market participants together; they are looking for partners who can provide valuable insight into how local markets operate. Firms expect, whether justly or unjustly, that their service provider is well-positioned to assist them in their efforts to expand into new markets. They rely on their ESPs to assist them in

navigating the regulatory and cultural frameworks that may exist in far-flung geographic locales.

Furthermore, participants do not want to “hand-hold” their service providers on topics with which they believe the provider should already be familiar. More than one participant indicated that they were generally dissatisfied by their ESP’s ability to understand the nuances of their business. According to our research, many of today’s market participants believe that too many of today’s extranet service providers have lost focus on the financial services vertical.

## Extranet Basics

Extranets are private internets that link multiple users together into a community of 'like-minded professionals'. Financial services extranets cater specifically to the financial services vertical. They are privately owned and operated networks that oftentimes cater to a specific market segment; in this case the financial services sector (see Exhibit 14).

**Exhibits 14**  
**Extranet Players**

	Name (Parent Co.)	Geographic Footprint	On-Network Participants	Market Differentiator	Focus
Open Network	<b>BTRadianz</b> (BT Group)	63 Countries 184 PoPs	15,000 +	<ul style="list-style-type: none"> <li>• Largest extranet in the financial services space</li> <li>• Purchased by British Telecom – strong telco relationships</li> </ul>	A global telecommunications powerhouse; largest telecommunications company in the UK
	<b>IPC</b>	Global	Growing service by leveraging existing voice & data clients	<ul style="list-style-type: none"> <li>• Exclusively focused on the capital markets</li> <li>• Long history within financial services community</li> <li>• Hiring lots of talent from existing participants</li> </ul>	Voice & Data Networks / Turrets / Financial Services Data Networks 4,000+ Voice Network users in the financial services sector
	<b>Reliance Globalcom</b> (Reliance)	US & UK	50 clients 80 + locations	<ul style="list-style-type: none"> <li>• Relatively small player in the extranet space. US focus on equities &amp; FX; UK focus on equities</li> </ul>	World's largest undersea cable provider offering connectivity, WAN, business and wholesale solutions globally
	<b>Savvis</b> (Century Link)	45 Countries	2,500 +	<ul style="list-style-type: none"> <li>• Very strong in the datacenter &amp; interconnect business / connecting data center networks</li> <li>• Acquired by Century Link</li> </ul>	3 <sup>rd</sup> Largest telco in the US
	<b>SFTI/NYFIX</b> (NYSE)	N. America Europe & Asia	1,600 +	<ul style="list-style-type: none"> <li>• Exchange network, specializing in connecting participants to exchanges</li> <li>• Expanding into other markets, leveraging NYFIX network</li> </ul>	Financial Svcs technology provider
	<b>TNS</b>	70+ Countries	1,700 +	<ul style="list-style-type: none"> <li>• Very strong in the payments industry w/a point of sale network.</li> <li>• TNS also offers a FIX order routing network</li> </ul>	Heavy focus on the financial services industry as a whole
Proprietary Network	<b>Bloomberg</b>	Global	300,000 +	<ul style="list-style-type: none"> <li>• Ubiquitous player within the sector industry supporting over 300,000 users in the industry</li> <li>• Large extranet service provider though the Bloomberg terminal business</li> </ul>	Not a classic extranet; however, provides extranet like services, community connectivity through its Bloomberg Terminal platform.

Source: TABB Group

Unlike the internet, extranets use a logical connection methodology that manages communications rights within the network. Also unlike the internet, which allows for open communication; on-network participants must have specific "logical connections" enabled with their counterparties to communicate.

### Extranets provide for:

- Scalable connectivity – Connectivity-on-demand model allows users to increase connectivity without up-front capital investment.
- Secure communications – Closed community limited to financial-services companies.
- Deterministic latencies – Fixed latency levels, oftentimes guaranteed through stringent service level agreements (SLAs).
- Robust infrastructure – Allows for primary and alternate communications routes, managed to ensure that paths are not "groomed" together.

## Conclusion

Extranets within the financial-services community are here to stay. Their role within the community is not only widely understood, it is thoroughly accepted. Whether it is the small buy-side firm looking to connect to its broker, the large sell-side bank that wants to reduce the operational complexity of its communications infrastructure and connect to the broader financial services community, or the new upstart ISV looking to gain access to new potential clients, extranets enable all of this to occur with minimal up-front investment, and the option to add capabilities on demand.

While extranets are here to stay, it does not mean that they are going to remain static as the environment evolves around them. As the markets evolve, so too will extranets and extranet service providers. With the globalization of institutional capital markets and the additional complexity that comes with automated trading, extranets will continue to provide unrivaled value when it comes to connecting individual market participants to the community as a whole. This could mean connecting clients in North America to newly emerging markets in Vietnam or Malaysia or enabling new micro-communities to evolve around new market structures and exchange venues, such as SEFs.

Likewise, as cloud environments begin to take hold within the community as a whole, extranets will not only allow participants to connect to these community infrastructure environments, they may well begin to take on some of their form and structure. Just as clouds represent the ultimate form of scalable, on-demand computing resources, extranets represent the ultimate form of scalable, on-demand connectivity resources. Just as a car has become the ubiquitous form of individual transport within the United States that does not mean that the car is right for every type of individual transport requirement. Similarly, just like cloud environments, the extranet value proposition only extends so far. While we believe extranets will continue to see positive growth over the next few years, as new frontiers are incorporated into their networks, they will not totally eliminate the need for other forms of connectivity.

In the end, what will separate the individual extranet service providers from each other will be their own individual offerings. These offerings will continue to focus on the six elements of the value chain that will remain a constant concern for all parties interested in connecting to the FS community. These include: the size and scope of the on-network community, the reliability and performance of the extranet infrastructure, the level of customer service, the value-add services that are available through the extranet, the cost of the service and the ability of the service provider to act as a knowledgeable partner within the community. No matter what happens within the sector, these factors will determine the successful providers.

## About

### **TABB Group**

TABB Group is a financial markets research and strategic advisory firm focused exclusively on capital markets. Founded in 2003 and based on the methodology of “first-person knowledge,” TABB Group analyzes and quantifies the investing value chain from the fiduciary, investment manager, broker, exchange and custodian. Our goal is to help senior business leaders gain a truer understanding of financial markets issues and trends so they can grow their businesses. TABB Group members are regularly cited in the press and speak at industry conferences. For more information about TABB Group, go to [www.tabbgroup.com](http://www.tabbgroup.com).

### **The Author**

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Alexander Tabb is a Partner at TABB Group and runs TABB Group’s Operational consulting services that focus on providing pragmatic solutions to operational challenges within the financial services vertical. Alex joined TABB in May 2004 from Kroll Inc. where he served as an Associate Managing Director. Prior to joining Kroll, Alex served as a Foreign Service Officer with the US Department of State. Alex served as an Economics and Commercial Officer in Lusaka, Zambia and Dar es Salaam, Tanzania reporting on economic and commercial issues of importance to the United States government. Subsequent to Alex’s assignments in Dar es Salaam, he served in Tuzla, Bosnia & Herzegovina and at the US Mission to the United Nations.

### **Research Sponsor**

#### **About IPC**

IPC Systems offers high and low touch trading communications solutions to the global financial trading community including the top investment banks, hedge funds and investment managers in established and emerging markets. With 100% focus on this sector and nearly 40 years of expertise and an unrivaled record of innovation, IPC provides customers with unified solutions that support collaborative voice trading and real-time electronic trading and market data connectivity. IPC’s market-leading offerings include the first unified communications/application platform, award-winning hard and soft turrets, electronic connectivity services including enhanced voice services, business continuity solutions, and follow-the-sun service and support. IPC’s global reach extends to more than 58 countries – including a Financial Extranet of 5,000 on-net locations in over 700 cities and more than 130,000 turrets deployed worldwide.

Recently, IPC formally introduced its flagship managed network services offering – CONNEXUS™ – an extranet service for the financial markets. CONNEXUS enables the global community of capital market participants to access cloud-based trade lifecycle services. Through a single connection, application providers and capital market participants in the IPC community can link to one another and seamlessly receive and distribute market data and applications in a secure trading ecosystem.

Headquartered in Jersey City, New Jersey, IPC has approximately 1,000 employees located throughout the Americas and the EMEA and Asia-Pacific regions. For more information, visit [www.ipc.com](http://www.ipc.com).



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