Cisco IBSG Predicts Emergence of Global Connected Marketplaces

How Companies Can Use the Cloud To Adapt and Thrive in a Rapidly Shifting Financial Marketplace

By Sherwin Uretsky, Aron Dutta, and Jim Cooke

Lower margins resulting from both the commoditization of transaction economics and the high-cost of supporting IT-intensive infrastructures are putting tremendous pressure on financial-market companies. This is causing many firms to rethink their business models to create new revenue streams, reduce costs, and differentiate their brands.

These new models are also reshaping the way firms approach traditional functions such as pre-trade analytics, risk management, and post-trade reconciliation that were previously handled with front-, middle-, and back-office operations. These functions are now seen as critical business processes that can be "shifted and lifted" into a cloud-enabled operating model.

Further, the economics of transaction management and the cost of trade execution are driving the differentiation of financial-market services, both physically and digitally, through new platforms that enable network-based service delivery. Transaction unit costs and OpEx-based pricing structures and models will determine the way these services are designed and consumed, effectively shedding capital-intensive assets from the balance sheets of financial-market firms and providing a positive effect on company valuations.

Winning participants will successfully reassess and redefine their relationships with existing service providers, both internally and externally, in the broader context of their business strategies and the structural shift now taking place in financial markets. Key enablers of success include the development of cloud-based operating models and strategic sourcing of capabilities delivered via networked services. These factors will provide financial-market companies with the agility and free capital needed to invest in new products and services that are core to their business strategies.

IT Challenges: Barrier to Financial Market Innovation and Prosperity

The financial services industry historically spends more on information technology (IT) than any other industry. This remains true even as companies emerge from the global financial crisis. This is largely due to increased demand for:

- Creating new, innovative trading infrastructures to provide low-latency performance, support for new asset classes, and global access to an increasing number of secure endpoints with exchanges, brokers, investors, and service providers.

- Managing an increasing volume of transactions and data to ensure profits, risk management, and response to new regulatory requirements.
- Developing new revenue sources (products and services) across pre-trade, trade, and post-trade processes.

At the same time, many operating budgets are still being cut while a growing percentage of IT spending is used simply to "keep the lights on," thereby severely restricting investments toward new strategic initiatives (such as those listed above) needed to drive revenue growth. This situation has led to an accelerated adoption of cloud computing, economic resource-sharing models, and a new ecosystem of cloud service providers catering to these needs.

Cloud Computing: The Key Enabler for Business Agility

Cloud operating models, which include technology, economics, and governance, are rapidly maturing. Consequently, they are serving not only to enable the business-model shifts and new economics just discussed, but also to accelerate them. An on-demand, shared infrastructure—combining in-house virtual private clouds with an emerging set of financial-market utilities—will foster development of seamless, transparent, and highly cost-effective information and transaction management platforms.

According to the Yankee Group, enterprise cloud services generated US$9.2 billion in worldwide revenue in 2010. This number is expected to grow to $22.3 billion in 2014, a compound annual growth rate (CAGR) of 30 percent.[1] It is clear the stage is set for long-term growth for cloud service providers. Within the timeframe of this forecast, the skills, capabilities, and value propositions of cloud service providers will surpass those of internal enterprise IT departments.

New Opportunities for Financial-Market Companies

Given these challenges and trends, the Cisco Internet Business Solutions Group (IBSG) worked with leading financial-market companies and emerging cloud service providers to identify how participants can benefit from the dramatic shift to cloud-based business models.

Cisco IBSG observed five key opportunities with from shifting to cloud:

1. **Incumbent players will continue to unbundle services and reconfigure their businesses** to be both a consumer and provider of cloud services.
2. **New industry-specific financial-market utilities will emerge** to provide services across all aspects of the pre-trade, trade, and post-trade processes.
3. **Federated models will become increasingly common,** providing definitions of common and core business processes and associated IT services. These services will be made available for consumption in the future "financial app store."
4. **New, transparent economics, such as service-level agreement (SLA) types and cloud service provider metrics, will be key elements of the new marketplace.**
5. **A connected marketplace will provide global access and secure platform reliability** for new, real-time, multi-asset, and multi-lateral trading platforms, as well as entirely new dynamic marketplaces (liquidity venues).

[1] Yankee Group, Jan. 10, 2011.

Next-Generation Liquidity Centers Trigger Financial-Market Transformation

Previous market structures were organized around geographies, asset classes, and instrument types—all tied to a specific trading venue. For example, each commodity traded at its own physical or digital exchange. The proliferation of new asset classes and complex trading strategies has led to a lack of transparency and increasingly expensive and inefficient transaction flows.

Next-generation liquidity centers will become the point of entry for "asset communities" linked to networked services for many common financial-market functions such as pricing, OM / EM, risk management, analytics, security, and reference management.

These centers will consist of three key "players":

1. **Market participants** that create and provide liquidity, including buy- and sell-side firms, exchanges, and liquidity venues
2. **New service providers,** including access providers, platform providers, and transaction management providers
3. **Marketplace enablers,** such as app store builders for the financial-markets community (e.g., risk analytics, market data, trade algorithms, matching engines)

The way in which these players are connected and provide services as part of a cloud-based infrastructure is referred to as the *high-performance trading fabric,* a phrase coined by Cisco IBSG.

5-Step Roadmap for Gaining Advantage from the Cloud

From its work with the most innovative and advanced enterprises that are implementing cloud operating models, Cisco IBSG has identified five steps that financial-market companies can emulate to achieve success in their rapidly shifting industry:

1. **Determine which of your company's processes are "core" (i.e., create a competitive advantage) and "context" (i.e., necessary to run the business, but don't create a competitive advantage).** Human Resources and Accounts Payable departments fit into this category. Make every effort to standardize *context* processes using open or industry-standard process models. This will improve your choices for automation solutions.
2. **Determine which applications are used to automate context processes.** Next, rationalize these into a standard set of capabilities that can then be mapped to standardized application offerings.
3. **Map the application capabilities to standardized infrastructure templates** so that a common technical reference architecture can be constructed in an optimal way (best-service-level-to-cost ratio). The reference architecture can then be used as a basis for determining the true cost of delivering the individual application services, such that a proper SLA-to-cost evaluation can be completed regarding the appropriate cloud operating model to implement (i.e., private, hybrid, public, SaaS, PaaS, Iaas, etc.).
4. **Prioritize the applications (workloads) based on their affinity to be delivered in a cloud operating model.** It is important to note that prioritization criteria will vary by industry, but key considerations are risk, SLA requirements, ease of migration, and economic benefit. The typical inclination is to begin with the item that has the

greatest economic benefit. However, in Cisco IBSG's experience, it is typically best to pick the "low hanging fruit" first. Applications that are easily migrated, have little interdependency on other applications, and require less-rigorous SLAs are good first candidates.

5. **Baseline the performance characteristics, both economic and technical, before and after the migration** so that you can evaluate whether expectations for the desired benefits have been achieved.

As global financial markets continue to shift, challenges with complex, aging technology platforms and reduced IT budgets will accelerate adoption of cloud-based capabilities. Given this situation, cloud-based operating models will quickly become the basis for competition and fundamentally change the economic landscape and business models of financial-market participants.

Cisco IBSG will provide more details about the implications of cloud computing for financial markets in a paper that will be published during fall 2011. The paper will include details, benefits, deployment examples, and next steps for financial-market companies.

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