

# Into the Future



The past 15 years highlight plenty of clues of the next decade and a half to come. *By Mark Minevich*

**T**oday's business challenges and shifts are giving us the baseline for years to come.

Specifically, the shifts that businesses will need to adjust to include better risk management, increased regulations, the complexity of structured products that span several lines of business, and innovative valued-added services. Furthermore, blurry lines between sell/buy and the future of trading create shifts as well. The business challenges are also occurring in the world of regional vs. global markets, microfinance, personal data and privacy, intense global competition, reliable digital identity verification, personalization of services, new markets, cross border innovation and customer technology readiness.

Let's take a sneak preview of key IT and Emerging Technology Initiatives that will have an impact on the business world and create challenges and shifts in the Financial Services sector.

**Social Networking.** Social Networking could offer a way to manage personal finances as easily as it links people and networks. Customers want useful, interactive collaboration with Financial Services companies that collect reams of personal data about them. In the future, eBay, Amazon or WalMart could offer financial services communities.

**Intelligent Plastic Cards.** These smart cards will contain a computer chip to store electronic "money" and provide a way for digital cash or e-currency payments for goods or services. The Electronic Wallet could provide the necessary information for e-commerce transactions.

**Converged Payment.** There will be a converged payment execution, clearing and

settlement system as well as merging and rationalization of clearing and settlement systems into a gateway of centralized, single process management using common information standards and systems irrespective of payment type. Pricing models would have advanced dynamic relationship and integrated platforms enabling unified consumer and business payments processing across geographies.

**Business Process Management (BPM) and Automation.** BPM includes business rules engines that would record, track, manage and revise enterprise business processes based on their set of financial rules for options or underwriting. BPM would be supported by Middleware infrastructure, enterprise service bus, and

BPM tools to automate key processes such as trading automation to enable STP and exception and event-driven management.

**Risk Management/Compliance.** Any technology initiatives related to addressing financial market legislation such as RegNMS, MiFID, NMS and corporate legislation such as Sarbanes Oxley and anti-money laundering.

**Information Technology Infrastructure Library.** This is a complete end-to-end management lifecycle system with business process management, capacity management, availability management, service level management and more. It will include incident and problem management, change management and IT financial management tools.

## **High-Intensity Low-Latency Analytical and Computing Platform.**

This will support asset management and investment banking modeling such as Monte Carlo and others. It will also include next generation algorithmic tools for visualization and high intensity compute products. This will aid in setting up enterprise grid computing solutions across the organization.

**Global sourcing.** Optimized global multi-sourcing such as offshoring, near-sourcing, homeshoring of IT will help financial institutions reduce costs by moving operations offshore.

**Human Capital.** Focus on attracting and retaining talent for emerging technology, innovation programs, talent driven

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mindset, and knowledge sharing. Mobilizing billions of minds of the knowledge workforce and tapping into its underutilized talents, knowledge, relationship, and skills will be vital. Workforces will become virtual and mobile.

**Intelligent Agents.** Sophisticated intelligent agents enable and provide insightful and highly personalized financial advice. Complex search using semantic language and intelligent networks provide real time analytics, profiling and detection.

**Virtual Worlds.** Spatial tracking and video systems will increase customer service and branch efficiency by tracking movements of customers and employees. The use of Virtual Experts such as Second Life and Virtual Reality will increase.

**Transactions Trading Platform.**

Complex trading or clearing platforms support real-time data analytics, support explosion of market data volumes and message rate. They will process efficiency with STP, cross business platform sharing and seamless connectivity between trading environments.

**Utility.** The establishment of utilities in virtualization, server consolidation, grid and high performance computing platforms, increased capacity and other key supporting operational processes will be vital. Remote hosting and super-computing will also take the lead.

**Market Data.** Along with connectivity to multiple market data sources from exchanges, data vendors or brokers, new distribution technologies will feed enhanced data and support automated trading, analytics, back-office and more. Clear ownership of fragmented data will grow, along with aggregation of credit scoring and identity data.

**Modular Core Banking Systems**

**Architecture.** Modular blocks offering greater flexibility and scalability than traditional architecture will be enabled by SOA technology and product customization. Future State Architecture, event driven/reference architecture, back office consolidation, front office to back office integration will also thrive.

**New Innovation Products.** Emerging innovative platforms for supporting complex products, including hedge funds, exotic products, and quantum computing.

**Identify management.** Clients will have access to all their services using the same identity credentials and effective security/identity crisis management. User-centric Identity Systems will allow users to choose which identity credentials to present in response to each request. A multi-factor authentication will involve biometrics, video and voice with advanced security solutions such as quantum cryptography and advanced fraud detection.

Now, here are some predictions and glimpses of the future from 2008 to 2030.

**PHASE I**

Knowledge-driven governments will become increasingly open, encourage competition and comply with complex

international regulations. More traditional governments, such as the US and parts of Western Europe, will react by putting protectionist controls and local ownership rules in place due to the rise of India, China and Russia.

The competitive landscape and higher cost of regulatory compliance will put pressure on smaller financial institutions and will lead to consolidations, acquisitions and mergers. Regulatory measures to protect customer information from various security threats will put pressure on the financial industry. The high tech and savvy generation insists on high personalization

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and customization of financial products. The power of social networks and peer-to-peer systems become more apparent and available to compete with established institutional brands. Innovation enables the emergence of modular operating models.

Global Exchanges will expand service offerings at both ends of the value chain—clearance and settlement, as well as public offerings. The external forces will reduce the number of business models and blur the line between buy side, sell side and market infrastructure. Buy-side firms will encroach on the product innovation space formerly occupied by sell-side firms and demand assistance in distribution. Private equity and hedge funds start to offer services to each other. Liquidity access will be commoditized and client service will remain as a key differentiator. Sell-side firms will create stand-alone hedge fund platforms for both internal and external use.

**PHASE II**

Powered by the ever expanding middle classes in emerging markets and by continued cooperation on world trade, the global economy continues to grow strongly. Russia, China and India now start to limit foreign competition and encourage domestic market players and telcos to compete in financial services. Global players in the EU and US continue to focus on core business while intensifying local competition. Large

international banking institutions will feel the threat from agile new market entrants and realize the disruptive power of technology and innovation. Social networking through Amazon and eBay and peer-to-peer lending becomes increasingly prevalent.

**PHASE III**

Mergers and acquisitions in the financial sector will create an environment where a handful of global bank brands are present in almost every country. Global financial service providers will concentrate on integrating products and adopting the best practices of new market entrants. Western

governments maintain an open attitude to new business models and support the industry's self-regulation efforts. Indian and Chinese financial services companies develop into powerful innovative players.

Consumers will be empowered by "Intelligent Agent" software that helps them identify products and services from a great variety of providers. A single-world global market will be possible for six billion minds; individuals and communities will come to trust the multiple ecosystems involved in the process of carrying out long-range and peer-to-peer transactions. With the semantic web and intelligent agents, clients and individuals gain access to highly specialized financial modeling that was once only the realm of big corporations and institutional investors. Financial services now offer sophisticated, proactive and reactive assistance to clients and individuals through trusted agents.

Although we don't know what the future will hold for us, we can be sure that change will continue at a rapid pace and make the future interesting for all of us. ■

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