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# Cloud Computing

## A New Computing Paradigm



Infosys Unveils  
Finacle Direct Banking

Payment Summit 2009  
A Report

SunGard Expands  
Operations in India



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# EDITOR'S NOTE

A different financial services paradigm is in the process of getting evolved post global credit crisis. One of the key features of this change is cost-control, or tightening of the belt by financial services providers. Information technology, which was largely considered an enabler and also a competitive resource by financial services companies at times, has now to provide ways to bring down costs. The cover story of this issue delves in detail on the emerging cloud computing architectures distinguished by their autonomic characteristics and 'utility' based pricing model. In this model, infrastructure, platforms, and applications are available as a pay-per-use service, reducing thereby the technology costs of computation. As always, the cost-reduction and efficiency enhancement in this computing model comes at the cost of greater dependence on vendors, lack of flexibility, and security issues.

Security of online banking continues to evolve as it is in a state of unending battle with cyber fraudsters and criminals. This issue features yet another authentication mechanism in this area. Another key feature of the changing paradigm of financial services is that BRIC market has become the new focus for both technology and financial services providers. Companies like SunGard, which were quite focused on the developed markets, have begun to look seriously at this market. We also carry the gist of a recent research report by Celent which analyses the trends in enterprise risk and governance against the backdrop of the global crisis.

Established banking technology suppliers like Infosys and Fiserv are addressing the emerging needs of the banks by providing add-on solutions to their mainstream core banking suites. This issue features the recent initiatives by these two suppliers for alternate delivery channels. We also carry a brief report of Payments Summit 2009, organised jointly with IBA by us.



Hari Misra

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# INFOSYS UNVEILS FINACLE DIRECT BANKING

Infosys Technologies has launched Finacle Direct Banking solution which enables banks to drive customer acquisition and extend the branchless banks' reach thereby maximising their opportunities to growth. It aims at providing banks with a cost effective service that helps them to deliver varied services through channels like Internet, mobile and call centres. The solution is already available to banks across the globe. The solution supports multi-lingual call-centre operations and offers banks straight through processing (STP) capabilities for shortened processing cycles and self-service capabilities allowing customers to manage their banking activities. The solution is embedded with enhanced security features along with a framework for further integration with specialised security software. It also has an alerts feature that provides multi-channel notifications, ensuring that customers receive relevant information through their preferred channels. The service also provides complete operational partnership which includes consultation, implementation and business process outsourcing (BPO). The vendor claims that the solution has already been implemented by two financial services providers whose name it declines to disclose, citing confidentiality clauses.

M Haragopal, global head, Finacle, Infosys Technologies comments on the product features and shares his views on the growth of direct banking in India in an exclusive interview with Amita Tiwari, research editor, CRO. Here are the edited excerpts of the interview.



M Haragopal

**CRO:** What are the key features of your direct banking solution? How is it different from mainstream Finacle?

**Haragopal:** Direct banking is an alternate business model leveraging technology to provide banking services at significantly lower cost. It is often more suited for simple banking product offerings without many frills. Banks are able to pass the benefits of these low costs to the end customer, making it an attractive banking proposition to them. Since these products provide better interest rate, better deals for the customer, the rate of customer acquisition can be faster using the benefits which technology brings in STP with online acquisition capability. The key differentiator for direct banking from full service banking is in its emphasis on the use of low cost self-service channels in direct banking, whereas full service banking is available across multiple channels providing a much wider breadth of services. Today, banks are also seeking low-risk and cost-managed, ready entry strategies for expansion into

new markets. Since the direct banking operations can be set up much faster as compared to traditional banking it helps in faster expansion. Faster reach in turn enables faster customer acquisition. These factors have effectively paved the way for financial institutions to explore direct banking.

**CRO:** What are the key advantages to the banks adopting this solution?

**Haragopal:** It is a comprehensive solution that supports the full-fledged branchless delivery of relevant range of assets and liabilities solutions, through the Internet, mobile or calls centre channels. The solution is offered with preconfigured parameters and process maps that can be tweaked to include local flavours for rapid business rollout. Apart from supporting banks to achieve aggressive customer acquisition targets, direct banking lowers the total cost of ownership (TCO) and increases customer stickiness by offering multiple self-service channels through an integrated solution. To add to this, Infosys BPO capabilities further reduce capital expenditure and operational costs for set-up and running of direct banking operations for the bank.

**CRO:** How much time does it take to implement Finacle Direct Banking?

**Haragopal:** This depends on the specific requirements of banks. Typically, it takes between 6 to 10 months to go live on a greenfield direct banking project depending on the range of products and the level of customisation requirements of a bank.

**CRO:** Since it caters to delivery channels like Internet and mobile, what are the built-in security features to offer the comfort factor to banks?

**Haragopal:** The solution supports multi-factor authentication, risk profile based authentication, and rule-based digital signature verification. It also has comprehensive risk control mechanisms by way of one-time limits, consumption-based limits and comprehensive audit trail and reporting.

**CRO:** How does the solution cope with different operational requirements across varied geographies? Can it be easily customised to suit local requirements in different geographies?

**Haragopal:** Although the out-of-box solution meets all direct banking requirements of a bank,

banks want to deploy for a differentiated offering.

**CRO:** How do you view the growth of direct banking concept in India?

**Haragopal:** Direct banking can be an alternate line of business (often with separate branding) specifically targeted towards the digital generation in India who are extremely tech savvy, mobile and cost conscious. Here, direct banking with its unique branding, tied up with social community sites, and lower cost/higher benefits can provide a highly differentiated offering for the urban youth. This is especially true for banks with restrictions to expand branch network in India. Other cost/profit conscious customer segments can also be addressed with direct banking as banks can pass on the benefits to the end customer in terms of higher interest rates, lower transaction costs.

into full service customers if they continue to be satisfied with the products offered through direct banking. Often banks use direct banking to expand geographically where they want to test the market, and want to create a positive brand image before setting up full service offerings. This is a quick way to gain entry into new geographies at a lower cost, but this in no way means that such banks will not have ambitions of setting up full service branches.

**CRO:** Direct banking often comes with additional distribution costs. Do you think that it is beneficial only for the new entrants (banks trying to enter into new markets) and large size banks as the mid-tier banks might not like to absorb the extra costs attached to direct banking?

**Haragopal:** Actually, direct banking is a very cost effective model for mid-tier banks, as well as retail banks of all sizes. It takes away the cost of real-estate for branches and corresponding staffing requirements.

**CRO:** How do you view the IT spending by banking industry in these trying times, especially the Indian banks?

**Haragopal:** IT spending in Indian banks has become judicious, but in no way drying out. Banks are conscious that IT investment is a must in new channels, technologies and making offerings innovative and staying competitive in the market. On the other hand, increased regulatory needs have also driven banks to ramping up IT systems to meet the regulatory and compliance requirements, and mitigating the risks of business operations. ■

Actually, direct banking is a very cost effective model for mid-tier banks, as well as retail banks of all sizes.

it has built-in extensibility to satisfy specific and localised needs of banks to make changes suited to their business requirements. Requirements specific to banks in a region/country can be catered to using the localisation of infrastructure. Also, customisation of infrastructure can be done to meet a bank's specific needs. Best practices of direct banking are already encapsulated within the solution; customisation brings in specific business practices and branding which the bank/regional

**CRO:** Do you foresee direct banking eventually replacing brick-n-mortar branches, or will it complement them?

**Haragopal:** Direct banking is an additional line of business and not a replacement alternative to full service banking. This additional business model is aimed at expanding business at lower incremental cost. It can complement the full service line of business, and bring in additional customers or relationships. These customers can be converted later



# CLOUD COMPUTING

## A New Computing Paradigm

**Amita Tiwari**

Cloud computing has emerged as the recent buzzword around the globe. It is a new computing paradigm that brings in next wave of technology that would deliver faster and cost effective services to consumer and business needs. The business world which is accelerating fast to reach different geographies connecting especially through the Internet demands better and dynamic computing models that would enable it to deliver better and quicker services. Computing which once used to be just a technology to facilitate quicker results running on individual computers has now transformed into a service model that can commoditise and deliver services rapidly to millions of consumers on demand. Developed on a similar theme, cluster computing and grid computing have been in place for some years now, which is why many believe that cloud computing is just a hype as it uses the technologies that have long been established. Hype or no hype, the computing model does bring in some

potential benefits to its users including lower costs and higher efficiencies. Cloud computing denotes a robust computing infrastructure, 'a cloud' which enables the users to access applications from anywhere in the world. Though these cloud computing architectures have evolved from clusters and grids, they are distinguished by their autonomic characteristics and 'utility' based pricing model where customers are charged based on their utilisation of computational resources, storage and transfer of data. They offer subscription-based access to infrastructure, platforms, and applications that are popularly termed as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). While these emerging services have reduced the cost of computation, application hosting and content storage and delivery by several orders of magnitude, there is significant complexity involved in ensuring applications, services and data can scale when needed

to ensure consistent and reliable operation under peak loads.

### **Growth of cloud computing**

According to a report published by IDC, a global provider of advisory services for consumer technology markets, 'the global market for cloud would grow up to \$42 billion by the year 2012 from \$16 billion in 2008, thus growing at 27 percent.' Figure 1 shows the worldwide IT spending on cloud computing by product and services type in 2008 and as estimated till year 2012. The difficult economic situation has in fact worked in favour of the clouds as the organisations are now looking for innovative and economical methods to create competitive advantage and the year 2009 brings unprecedented financial limitations that demand new solutions. Amazon pioneered this service followed by few early players like Google, Microsoft and Salesforce and the number has been rapidly growing since then. According to a paper recently

published by SAP over a month ago, despite the fact that the cloud computing market is dominated by US vendors and the uptake of the technology has been faster in US, Asian markets have responded very positively towards the new computing model and the uptake in Asia has been dramatically faster than anywhere else in the world. Banks like ICICI Bank and YES Bank are the few early adopters of cloud computing in India that are using it to test their customer applications. Companies like TCS, Wipro and Infosys are said to be investing in the technology to explore opportunities for creating clouds for big organisations. Small and medium enterprises in India are also embracing the technology to easily enter and compete better in the market.

the Internet and cached temporarily on clients that include desktops, entertainment centres, table computers, notebooks, wall computers, handhelds, etc.’ In theory, cloud computing promises availability of all required hardware, software, platform, applications, infrastructure and storage with an ownership of just an Internet connection. From a user perspective, cloud computing provides a means of acquiring computing services without requiring understanding of the underlying technology. On a more technical note, a cloud is a type of parallel and distributed system consisting of a collection of interconnected and virtualised computers that are dynamically provisioned and presented as one or more unified computing resources.

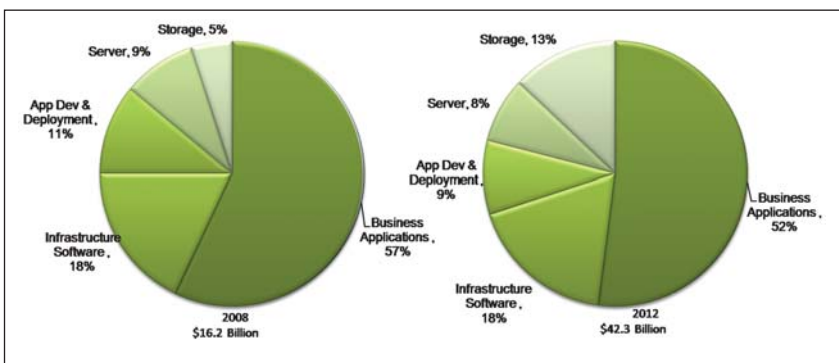
clouds have emerged as the logical endpoint for grid, an opportunity grid vendors have been struggling to find for some years now. In the past computers were clustered together to form a single large computer. This was a technique common to the industry called ‘cluster computing’. In the early 1990s Ian Foster and Carl Kesselman came up with a new concept of ‘The Grid’. Grid computing expands the techniques of clustering where multiple independent clusters act like a grid due to their nature of not being located in a single domain and it brought in the concept of ‘pay for what you use’ by plugging into a grid of computers.

While grid computing gained much popularity, the major setbacks of the technology were the storage management, security provisioning and data movement. The computational nodes could be situated anywhere in the world but with all the CPU power available, the data on which the CPU performed its operations which could be thousands of miles away, caused latency issues between data fetch and execution. This finally affected the economic viability of the grid model.

The other issue was that of data security and confidentiality. Although banks were happy to outsource part of their services, they wanted to be in control of the hardware and software. In recent years, as the market sector has consolidated and the banks have become more competitive, they are experimenting out with their usual lending practice.

The cloud technology takes the concept of grid computing and wraps it up in a service offered by

**Figure 1: Worldwide IT services spending for year 2008 and 2012**



Source: IDC October 2008

**What is cloud computing?**

The idea of cloud computing is based on a very fundamental principal of reusability of IT capabilities where cloud is a pool of scalable IT-enabled capabilities which can be utilised over the Internet as a service. According to the IEEE Computer Society cloud computing is defined as ‘a paradigm in which information is permanently stored in servers on

**Evolution of cloud computing**

Cloud computing is often mistaken for grid and cluster computing as clouds appear to be a combination of clusters and grids. Though clouds have naturally evolved from the same computing technologies, these are clearly next generation data centres with nodes ‘virtualised’ through hypervisor technologies. In fact, shared infrastructures or

data centres. The most high profile of the new 'cloud' services is Amazon's S3 (Simple Storage Service), a third party storage solution. They take the approach that no one can afford to place all their data in one place, so data is distributed around the globe. Their cloud will monitor data usage, and it automatically shunts data around to load-balance data requests and Internet traffic, being self-tuning to automatically react to surges in demand. Figure 2 exhibits that recently cloud computing is gaining more popularity as compared to previous computing paradigms, cluster and grid computing.

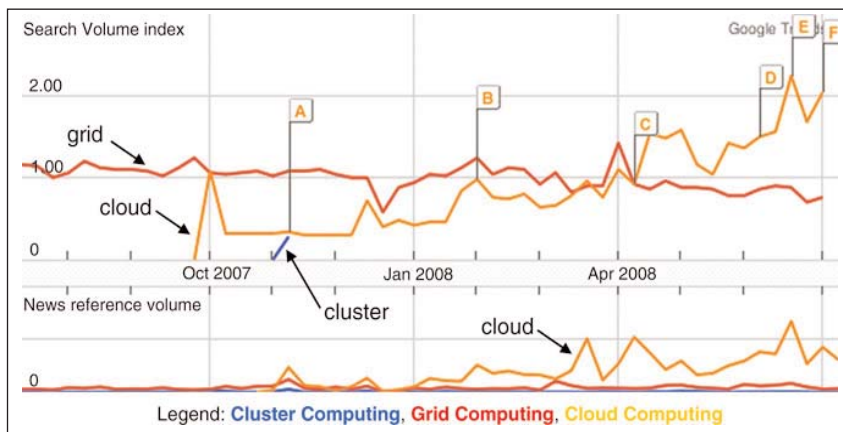
The client typically buys all these resources as a fully outsourced service and pays on a per-use basis. Amazon, VMware, Elastra, Xen and Engine Yard are a few vendors that offer IaaS cloud services. Security and privacy remain the biggest concerns in opting for IaaS cloud services as the entire control and management lies with the service provider. Lower investment costs and rapid provisioning are obvious benefits of it.

**PaaS** is the delivery of a computing platform and solution stack as a service that includes workflow facilities for application

into PaaS, the downside of choosing a PaaS cloud is that all such services come with various restrictions or tradeoffs that may be a non-starter for new project. This is especially true if the pre-existing application needs to be ported to the PaaS system.

**SaaS** is a model of software deployment where an application is hosted as a service provided to customers across the Internet. SaaS is generally used to refer to business software rather than consumer software, which falls under Web 2.0. By removing the need to install and run an application on a user's own computer it is seen as a way for businesses to get the same benefits as commercial software with smaller cost outlay. SaaS software vendors may host the application on their own web servers or download the application to the consumer device. This is one of the most popular models of cloud computing as the data security and privacy is much stronger in this delivery. A couple of well-known examples of SaaS are Gmail and Salesforce. In addition to these, cloud computing model also provides XaaS, cloud services based on 'everything as a service' concept. IaaS, PaaS, and SaaS are the three basic components of this complete cloud service model. Figure 3 clearly explains the evolution steps of cloud computing and its models.

**Figure 2: Web search popularity of cloud, grid and cluster computing measured by Google**



Source: <http://www.gridbus.org>

**Variation of clouds**

IaaS, SaaS and PaaS are the three major cloud systems available today.

**IaaS** is a provision model in which an organisation outsources the equipment used to support operations, including storage, hardware, servers and networking components. The service provider delivers the entire computer infrastructure and is responsible for housing, running and

design, application development, testing, deployment and hosting. It facilitates deployment of applications without the cost and complexity of buying and managing the underlying hardware and software layers. These services are provisioned as an integrated solution over the web. Google with its App Engine, Salesforce, Morph are well known cloud vendors in this area. Although launching an application requires least effort along with a large degree of scalability built

**Public, private and hybrid clouds**

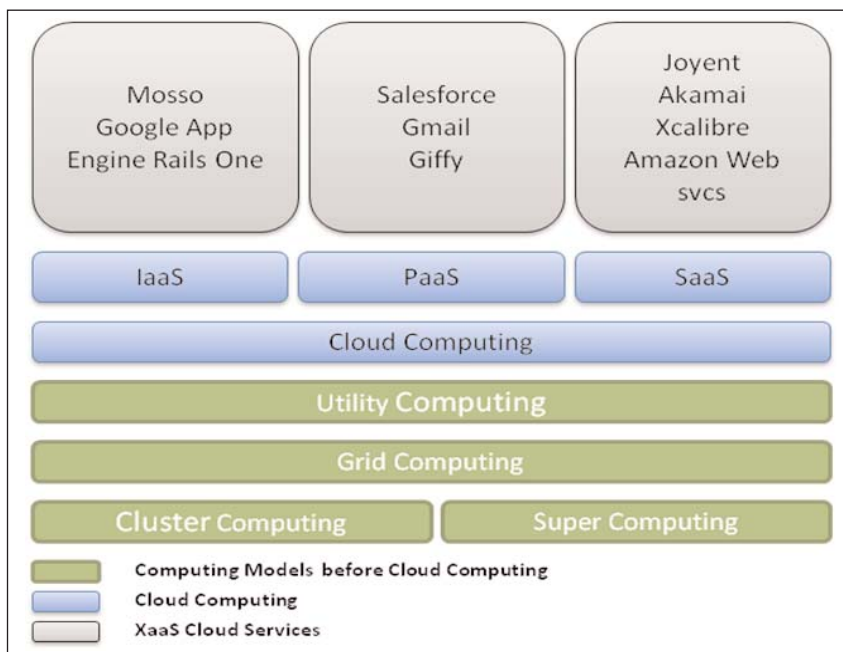
The major two environments of cloud computing present today are the public and the private clouds. While public cloud services are provided to clients from a third party service provider, via

the Internet, private clouds are deployed inside the firewall and managed by the user organisation. Since private clouds are managed by the enterprise itself, without the restrictions of network bandwidth, security exposures and legal requirements, these have become the favourable option for the enterprises that

would like to avail cloud benefits while managing their processes and data internally. The service providers for public clouds typically charge a monthly usage fee combined with bandwidth transfer charges where users can scale the storage on-demand without the need to purchase storage hardware. Service

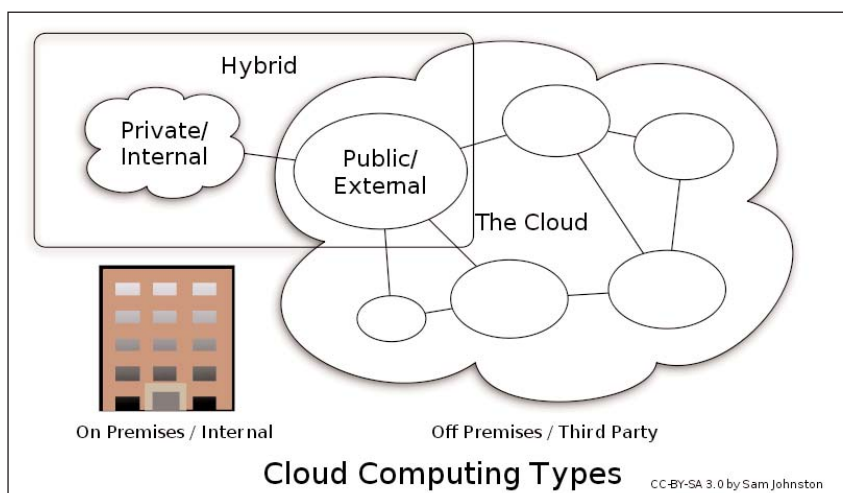
providers also manage the infrastructure and pool resources into capacity that any customer can claim. On the other hand, private clouds are built from software running on customer-supplied commodity hardware so that the storage is typically not shared outside the enterprise and full control is retained by the organisation. Scaling the cloud in private clouds can be simply done by adding another server to the pool and the self-managing architecture expands the cloud by adding performance and capacity. Another type of cloud services which is typically a combination of the private and public cloud services is known as the hybrid cloud. A hybrid cloud environment consisting of multiple internal and/or external providers will be typical for most enterprises. Figure 4 is a simple diagram exhibiting the data deployment in the three types of cloud computing environments available in the market today.

**Figure 3: Steps to cloud computing**



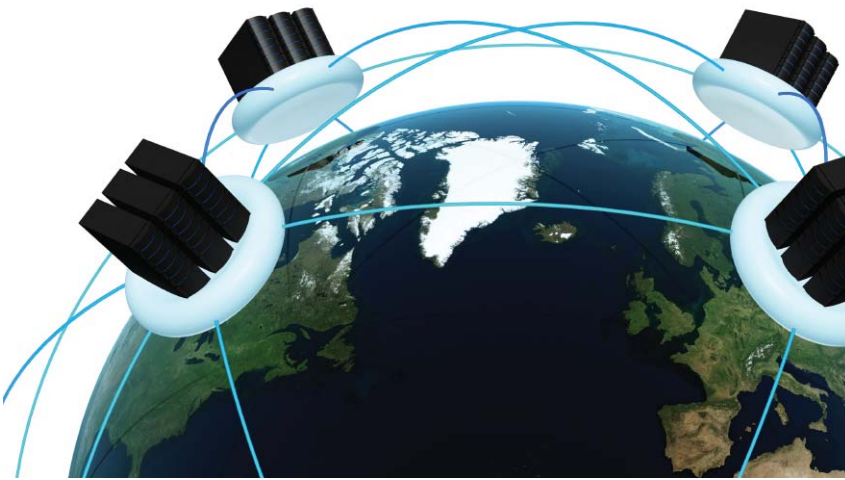
Source: <http://www.webguild.org>

**Figure 4: Types of cloud computing**



Source: <http://commons.wikimedia.org>

The right technology strategy would depend on how well the organisation evaluates the different type of cloud environments depending on their security and data storage requirements. Selecting the right use of cloud computing has obvious benefits of lower costs, in addition to the advantage of economies of scale, automated IT operations and optimising investment in the existing infrastructure. The right solution enables the cloud to rapidly adjust the volume of users as workload increases or decreases. Typically, opting for public clouds for web-based business and regulated industries like insurance and financial services is not advisable as the data that they deal with is very sensitive and cannot leave



the firewall. In such cases organisations might decide to start with the private cloud essentially as the private cloud services can offer the provider and the user greater control, improving security, corporate governance and resilience as user access and the networks are restricted and designated. Despite these advantages the private clouds have been criticised as the users will have to buy, build, and manage them in which case they will not benefit from lower upfront capital costs and less hands-on management which defeats the main concept of the economic model of cloud computing.

**Benefits and challenges of the cloud**

Every technology has its own share of pains and pleasures and cloud computing is no exception to this. In these trying times, cloud computing is riding on the back of an economic crisis where the firms are re-evaluating their IT systems and looking majorly at cost efficient solutions that will drive lower cost of ownership along with higher service quality. The timing is right for the clouds to capture the strained markets especially when it comes with

additional benefits like increasing business responsiveness and making IT management simpler. Although there is a genuine desire in the market to adopt the cloud infrastructure, security and privacy concerns attached with the technology are inevitable. The recent financial turbulence has made firms very specific about analysing the risk factors before opting for any new technology and with cloud computing being a shared infrastructure; this is surely not going to be easy.

**Benefits**

Following are the major benefits that cloud computing brings in for the corporate and private users, which is why many are betting that cloud computing will be the technology strategy for firms to adopt in 2009 and beyond.

*Faster time to market*

Cloud computing comes as a fully integrated development model where developers can get to work immediately on value-added activities such as defining the data model or business logic and creating the user experience. Since the system offers a pre-built application environment, the

initial set up time and costs are reduced. The rapid business innovation and faster time to value of cloud computing through its streamlined application lifecycle in all stages helps better business responsiveness delivering return on investments quickly.

During economic downturns, time to value becomes more critical than ever and with cloud computing companies can speed up time to value. Additional advantages include much faster and less expensive method of scaling up to multiple applications. All applications are built on the same platform and preexisting application services such as authentication, data objects, UI layouts, and logic can be reused across multiple applications.

*Cost effective technology*

As the cloud computing development platforms are based on subscription pricing, the requirement for upfront capital investment is nearly nil as compared to the traditional IT procurement process. There are no large upfront investments that lock a project into a specific technology which means that companies can account for the business value generated by the service during the same financial period as costs are incurred. The model offers the benefit of on-demand pricing and is therefore expensed as a service or operating expense rather than a capital expense. Also there are no additional costs to deploy additional applications to existing users. As cloud computing works using economies of scale, it is especially beneficial to the new entrants and startups for it

reduces the cost of entry and lowers their outlay expense since they would no longer need to buy their own software or servers.

*Ability to operate on encrypted data*

Sensitive data may be encrypted by firms before uploading it to the cloud. In order to prevent unauthorised access to the sensitive data, any application running in the cloud should not have the ability to directly decrypt the data before accessing it. The cloud has the ability of the data analysis system to operate directly on encrypted data so that a smaller amount of data needs to be ultimately shipped elsewhere to be decrypted which could significantly improve performance.

*Mobility, simplified integration usability*

automatically installed and integrated in customer environments and instantly deployed to users, either as part of a custom application or on their own. It enables services to be used without any understanding of their infrastructure and to be accessed by the consumers or employees from anywhere, anytime regardless of their location.

**Challenges**

Use of cloud computing means dependence on others limiting the flexibility and innovation capabilities of the consumers and that is possibly one of the major setbacks of the technology. Corporates fear that the bigger vendors may monopolise the market. While this might be one of the reasons why many are still wondering whether to adopt the

primary concern for any organisation. While many benefits of clouds are discussed it is still unclear how safe is the outsourced data. Since the technology is so new, it is still unclear how the responsibilities would be transferred to the cloud computing vendor, including privileged user access (the personnel in the vendor organisations who will have specialised access to data, and the hiring and management of such administrators), end user control over data location, data segregation, data recovery and disaster management (including 'intelligent' clouds that can automatically relocate computing resources), and investigative support for inappropriate or illegal activity. Enterprises fear losing their data to competition and the confidentiality of data of their consumers. In many instances, the actual storage location is not disclosed, adding onto the security concerns of enterprises.

*Compliance and standards*

While the regulations and compliance standards are to become more strict post credit crisis, the standards for cloud computing services are still evolving. There could be offerings available that may not be fully compliant to the auditing and security needs of enterprises. There are also issues relating to policy and access. Questions are raised on the cloud regarding whose policy would a firm adhere to if its data is stored abroad and what would happen if the remote server goes down.

*Legal issues*

A host of new legal issues will

Use of cloud computing means dependence on others limiting the flexibility and innovation capabilities of the consumers and that is possibly one of the major setbacks of the technology. Corporates fear that the bigger vendors may monopolise the market. This might be one of the reasons why many are still wondering whether to adopt the technology or not.

Gartner estimates that up to 35 percent of the implementation costs associated with on-premises application development is for integration. In comparison, cloud computing makes integration faster, easier, and less risky than ever before. The applications are

technology or not, there are several others which we discuss below.

**Security parameters**

In today's economic scenario, security turns out to be the

have to be tackled if the consumers and organisations are dependent on cloud computing providers for all their computing needs. Contracts will need to specify the required standards for vendor availability. Cloud providers will also need to specify how they define concurrent use and the licensing which is typically a newer model of such IT services. The old models of licensing based on CPUs or named users simply do not work in the on-demand, virtualised world of cloud computing. Since the pathway is still unclear, companies are not very comfortable going for the clouds.

*Data ownership*

Many believe that data ownership concept is likely to become outdated, similar to the data ownership within a department in an organisation after the advent of the centralised database management systems. However, data authentication seems to be an important parameter with the clouds, as the business processes and technologies will need to be developed to assure end users that when they access data on the cloud, its integrity has not been compromised.

*Data privacy*

If confidential data is to be maintained on the cloud, users need to be aware as to how it might be shared. What will be the liability of the provider if data security is breached? If a consumer or a business closes its account with the provider, till what time would its data be still maintained on the provider's servers? Privacy and security are the primary reasons why many enterprises might opt for what are

being called 'private clouds', whereby users within the organisation share resources of a computing infrastructure that is maintained by and is under the control of the organisation.

An overlooked disadvantage of cloud computing is also that the vendors currently offering these services are very few and those few players are big companies like Google and IBM, which practically could force a 'vendor lock-in' situation. Enterprises are concerned about the vendor dependency and this creates a need to factor in risk mitigation. Also cloud services will eventually demand expertise in distributed services, procurement, risk assessment and service negotiation, areas that many service providers are only modestly equipped to handle.

solutions for them. As with any maturing computing style, cloud computing bears risk. Till the time the vendors resolve the hurdles of data security and privacy, the financial institutions especially the banks will not be seen going for the cloud. An important point to be noted here is that the role of the government agencies will be significant in bringing up and shaping the future of cloud computing services.

Big giants like Google, IBM, Microsoft, and Rackspace investing heavily in the technology proves that the cloud market is going to be huge in future. IBM has recently claimed to have invested \$100 million in cloud technology in its 13 global centres. Currently clouds have a \$14 billion market which is expected to grow to \$42 billion by

Big giants like Google, IBM, Microsoft, and Rackspace investing heavily in the technology proves that the cloud market is going to be huge in future. IBM has recently claimed to have invested \$100 million in cloud technology in its 13 global centres.

**Clouds are here to stay?**

It is clear that the technology holds lot of potential benefits for the small and medium enterprises but that eludes big businesses. As stated by McKinsey in their new report 'Clearing the Air on Cloud Computing', the cloud uptime guarantees lag behind what big businesses can achieve on their own making it actually more expensive than traditional IT

2012, out of which India has a potential market share of just over a \$1 billion. Though the technology has been developed with a business perspective only, the specific roadmap of the clouds seems to be still unclear, both for the providers and the consumers.

Whether cloud computing technology is an interim measure or it will be dominant in the long-term remains to be seen. ■

## SUNGARD EXPANDS OPERATIONS IN INDIA

SunGard is expanding its financial systems operations in India. In March 2009, the banking solutions superstore appointed Atul Sareen as its managing director, India sales. He will be driving sales and marketing efforts directed at the financial services industry in India from his office in Mumbai. He brings to SunGard over two decades of sales experience in India in enterprise applications and business solutions to business houses and financial institutions in India in banking, insurance, financial services, corporate, energy and government segments.



Atul Sareen

Founded in 1982, as a spin-off of computer services division of Sun Oil Company, SunGard went public in 1986 only to become a privately-held company in 2005 as a result of a leveraged buyout organised by Silver Lake. Since its inception, SunGard has completed 170 acquisitions since 1986, which allows it to offer a broad portfolio of best-of-breed technology solutions. It has four major business lines - Availability Services, Financial Systems, Higher Education and Public Sector. Having annual revenues exceeding \$5 billion, SunGard has more than 20,000 employees working in more than 200 cities and 30 countries. 'We have been able to maintain CAGR of 21 percent, though year-on-year (YoY) organic growth has been around 10 percent,' says Akila Krishnakumar, COO and country head for SunGard in India. Financial Systems business line accounts for 55 percent of its revenues. By region, Americas contribute 74 percent of its revenues, Europe 24 percent, and Asia Pacific a dismal 2 percent. The present expansion of its sales

team in India underlines the strategic importance of Asia Pacific in the growth plans of SunGard.

SunGard has operated in India since 1993. Its global delivery organisation in Bangalore and Pune, SunGard Technology Services, provides domain expertise, product knowledge and specialised technology services to support SunGard's solutions and customers worldwide. The expansion of SunGard's Mumbai office will help SunGard's Financial Systems business enhance its support and implementation services for its local Indian customer base. The supplier is adding new sales and business development staff in Mumbai, which comes on top of SunGard's existing 2,000-person global delivery organisation in Bangalore and Pune. 'We did an intensive survey last year to match the local needs to the products in our portfolio,' says Atul. 'We have decided to use all the delivery models: licensing, ASP, and SaaS to differentiate our offerings,' he adds.

While the initial focus would be on banking, the supplier has plans to reach out to insurance, capital market, and investment banking companies in future. Which specific areas have emerged after survey? 'Within banking we are focusing primarily on compliance and risk management, with our Ambit range of solutions,' informs Atul. 'Ambit can address the complete risk management gamut including Asset Liability Management (ALM), Funds Transfer Pricing (FTP), profitability management, market risk, credit risk etc,' he adds. 'We also have other solutions for banking which are around payments and reconciliation which are fairly successful solutions for SunGard worldwide. We would be focusing on these solutions also for banks in India. Insurance is another key area. We would also offer our solutions for trading, capital markets, wealth management etc. For corporates we have treasury operations, receivables and the like.'

Commenting on the existing installations of SunGard solutions in India, Atul says that 'we are in the process of getting acceptance, but we do have installations in India'. 'In the insurance area there are customers who are implementing our core life insurance products. We have customers who have implemented our solution called Prophet which is an actuarial solution for insurance companies. We have installations of trading solutions which are being used by companies in energy vertical. We have one or two customers in the banking area on risk.' 'There are about 20 installations of various SunGard solutions in India,' he declares. ■

## BANGKOK BANK IMPLEMENTS FISERV MOBILE MONEY

Bangkok Bank, a Thai commercial bank headquartered in Bangkok has rolled out the mobile banking services to its customers. The service is provided through Mobile Money solution from Fiserv, a global provider of financial services technology solutions. The solution allows the bank to offer its customers the facility to access bank's Internet banking platform dubbed as Bualuang iBanking on their handsets. Established in 1944, Bangkok Bank is one of the largest banks in Thailand with an extensive network in South East Asia. It has a network of 850 branches within the country and 19 overseas branches including US, UK and Japan. With over 50 years of operations in Hong Kong, the bank is now growing its presence in Chinese market. Fiserv's Mobile Money is an enterprise level solution that supports mobile banking and payment services via short messaging service (SMS), wireless application protocol (WAP), and downloaded mobile applications. It also offers online and offline enrollment capabilities and integrates with core banking, online banking and electronic payment systems. Through Mobile Money, the bank's customers will be able to view their account information, pay bills, transfer funds and top up their mobile phone account. The bank is providing the application in both English and Thai languages.

According to Bangkok Bank, a highly secure technology that could be seamlessly integrated into the bank's Internet banking system was the key parameter considered before deciding in favour of Fiserv's Mobile Money



Calvin Grimes

solution. 'Fiserv was already a strategic partner of Bangkok Bank for Internet banking. We had been in discussions on mobile banking with them for the last few years,' says Calvin Grimes, mobile solutions manager at Fiserv. Commenting on the win Grimes says, 'Bangkok Bank needed a strong solution that integrated the various modes of mobile banking delivery including SMS (text messaging), mobile browser, and downloadable applications. Fiserv was already a proven strategic partner, was able to meet all of Bangkok Bank's requirements, and was able to deliver the solution quickly.' The project is a multi-phase mobile plan for the bank. Enabling the bank to offer mobile banking via mobile browser was one of the project phases that have been completed by the vendor and the bank's customers have complete access to this service today.

Mobile Money solution was launched by Fiserv in September last year, powered by the technology from New Zealand

based Mobile Commerce Limited (M-Com), a provider of mobile banking and mobile payment solutions. The solution was built on existing Fiserv mobile banking options already in the market adding a strategic technology to help all segments of financial institutions. It is claimed to be the industry's most complete mobile banking and payments solution available in market today. Mobile Money was initially launched for US market but 'there was an almost simultaneous recognition of the opportunity in Asia when we announced availability in the US,' says Grimes. Who was the first customer to adopt the Mobile Money solution in Asia? 'Bangkok Bank is the first client in Asia Pacific to go live with Mobile Money,' informs Grimes.

The solution allows financial institutions and billing organisations to enroll customers via mobile device, at a branch, ATM or customer contact centre, as well as via the online channel. Apart from offering facilities to consumers to access their banking account information and perform various self-service functions and transactions, Mobile Money includes backend systems to provide customer care, reporting, security, and monitoring for the entire mobile channel.

In view of the current economic situation, mobile banking has experienced a slow growth worldwide. It is still at a very nascent stage, especially in the developing economies. Although the technology holds a lot of potential benefits the uptake has not been as wide as expected. 'As the global economy has continued

to face challenges, it's not enough to simply implement a mobile solution. There are many solutions in the market today but in most cases, these solutions focus only on providing a sufficient consumer experience on a few mobile devices, and ignore the opportunity to provide a real return on investment (ROI). Financial institutions must be able to show a clear ROI and a supporting business case for their mobile solution,' observes Grimes. 'The failure of some initiatives due to their lack of ROI could set back efforts to enable mobile banking as financial institutions will have to re-evaluate their choices and in some cases start over almost from the beginning,' he adds.

almost a year after its launch, has managed to acquire quite a few clients including Bangkok Bank on a global basis, and few financial institutions in the US. 'M-Com, has multiple implementations around the world including ANZ Group, Westpac, and The National Bank. M-Com is our preferred partner for mobile banking services in the US and we are currently assessing international opportunities together,' he adds.

On Fiserv's plans to expand its presence in the Asia Pacific (APAC) region, Grimes says 'APAC provides an interesting mix of both established and emerging markets in the mobile space. The proliferation of mobile devices and network capabilities in APAC

streamlined version of the flagship Mobile Money solution. The solution is created to meet the needs of financial institutions for a mobile banking solution which could be rapidly implemented and also has the facility to provide a platform that supports future mobile capabilities. 'The key element of Mobile Money FastTrack is the speed to market. With Mobile Money FastTrack, SMS and mobile browser banking capabilities can be live within 90 days,' says Grimes. The solution is pre-integrated into select Fiserv online banking and bill payment products, which streamlines the implementation process. It is a flexible solution that enables financial institutions to add new services, such as mobile payments, as the marketplace evolves. This helps the financial institution implement the service quickly while still providing a long-term solution for their mobile channel needs. The licensed solution is available in an in-house or hosted version targeted towards mid- to large-sized financial institutions.

Commenting on the future of the mobile banking services Grimes says, 'The future for things like mobile Near Field Communications (NFC) payments and mobile wallets remains murky, and that will continue to put pressure on mobile solutions. Many of the players in the mobile space that are now asserting they have a mobile solution for payments don't actually own a payment network. The real drivers of the mobile solution for payments will be the payment networks and processors, and the involvement of those groups will be critical to the successful rollout and of mobile payment solutions.'

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Currently Fiserv holds a strong presence in the US market and is aggressively selling mobile banking and payment solutions there. 'Beyond the US market, Fiserv is targeting regions where we have an existing presence with our account processing or online banking solutions, or where we are working with strategic partners that have a presence in a particular region,' informs Grimes. In these times of economic slowdown, Fiserv's Mobile Money,

will continue to provide a hotbed of mobile innovation and development for years to come. Fiserv sees the participation in these markets as critical to our success on a global level and we will continue to put effort on product development, sales, and support for mobile solutions in particular in the region.'

Last month, Fiserv launched its latest mobile banking solution, Mobile Money FastTrack, a

# B32TRUST LAUNCHES B-AUTHENTICATED Mutual Online Authentication System

France-headquartered online authentication and transaction security solutions provider, B32Trust has released B-Authenticated, which it claims to be the first multi-factor mutual online authentication and transaction validation system; which is compatible with any authentication device - smartcards, USB tokens, one-time pass codes (OTP) or biometric readers. Thus, it strengthens one way authentication methods currently in use, to prevent phishing and man-in-the-middle attacks. The solution incorporates anti-hacking, out-of-band channels and PC forensics technologies to provide a more secure environment for online transactions. It provides mutual authentication of the two entities involved in the transaction, both the customer and his bank regardless of the geographical location and the computer used. Smart E-Switch, B-Electronic Point of Sale (B-EPOS) and B-Notified are the other online security solutions offered by the vendor. The solutions are also offered through its strategic business partner, CardSwitch Technology, a UK based secured payment solutions provider for financial services companies. B32Trust's solutions are targeted to provide services to banks, merchants, payment service providers, governments and email providers.

Following are the edited excerpts of the interview of Cedric Pariente, CEO and president of B32Trust with Amita Tiwari, research editor, CRO; in which he explains the features of B-Authenticated solution and B32Trust's business plans.

**CRO:** What are the key features of B-Authenticated that sets it apart from the other industry competitors?

**Pariente:** Our authentication solution is the first in the market to offer mutual authentication, meaning that not only is the customer authenticated, but also the business to which he is connecting. The system is insensitive to phishing, man-in-the-middle and man-in-the-browser attacks.

The authentication model performs a positive check. As the blacklist checking can result in false-positive results that often lead to lost business or lost customers, we evaluate each new session on a dynamic basis unlike the blacklist models. Our positive checks eliminate the occurrence of false-positive results.

We also integrate an anti-hacking environment with a 'resident protection' (intrusion prevention system) using a sandbox model.

**CRO:** And what is a sandbox model?

**Pariente:** The sandbox model is a nightmare for hackers. It refers to the way the software code is structured, especially the architecture of the modules.

Basically, when a hacker attacks a program, he tries to force this program to execute a code in one of its modules. If the rights of this module are not handled properly, the hack is successful. A 'sandbox' is a program architecture in which the execution and the rights of a

module are separated where each module has limited rights and the overall impact of a hack on a module is limited.

I quote Charlie Miller here, a renowned security expert who won the Pwn2Own (international hacking contest). He says about sandbox architecture that even if you can find a bug in the code that you might exploit at a module level, the task is not over as you have to get out of the box. Each hack requires two exploits, one to take advantage of a bug to take control of the program and the other to get out of the box.

**CRO:** What are the expected timelines for implementing the solution at a bank?

**Pariente:** B32Trust relies on very strong skills brought by a team with a lot of experience; 20 years in banks' mainframe systems, 20 years in software and almost 10 years in technical and production support. We can implement our systems in a month's time, regardless of the system used by the bank.

**CRO:** How does the B-Authenticated system work?

**Pariente:** For the end-user it's a walk in the park. The user starts the B-Authenticated software. Once the correct login/password is entered, a pop-up will show asking the user to enter the one-time-password that he will receive in real-time on his registered mobile. Once this one-time password is entered and validated by B-Authenticated, the system makes a note of the presence of the legitimate user and also notes

other PC forensics such as IP address/geolocation.

The participating business entity, perhaps an online banking website, uses B32Trust's software to also extract key PC forensics from the user that has entered a valid login/password combination as well as to use a non-replayable token to authenticate its query with B32Trust. B32Trust then validates the business entity's token prior to checking the online status of the legitimate user. If the legitimate user is flagged as being online by B-Authenticated, B32Trust then compares the PC forensics gathered by the business entity to the PC forensics that B-Authenticated had previously gathered when the legitimate user logged-in. If the legitimate user is flagged as being online and the PC forensics match, B32Trust sends a signal to the validated business entity that the login with the business entity is indeed coming from the same legitimate user.

Once the login is accepted by the business entity, it can opt to request B32Trust to send another one-time-password to the B-Authenticated user for subsequent transactions within the same session, for example, wire transfers, online payments, etc. Note that a one-time-password is sent to the legitimate user only if user's B-Authenticated application is active. This subsequent one-time-password will be sent to the B-Authenticated user together with the transaction details.

The software installed on the end-user's computer is seamless. It resides in the notification tray and only shows up when needed and guides the end-user through the proprietary authentication

process. It allows the end-users to signal to their bank when they are connected to the Internet. If they are not, no transaction or access is allowed.

**CRO:** Is the solution launched only for the French market currently?

**Pariente:** B-Authenticated is already available across different geographies and we are discussing it with banks right now in India, Asia, Gulf Corporation Council (GCC) and Europe.

**CRO:** Could you give us some details of B32Trust's other security products?

**Pariente:** We offer the B-EPOS system that allows cardholders to perform transactions with online merchants. The cardholders can signal to online merchants if they are actually logged onto the Internet.

Can you imagine an online merchant rejecting the use of your card number, even if the fraudster enters your correct card number, expiration date and CVV? B-EPOS can tell the online merchant that you are not even near a computer, or you are not even connected to the Internet. With B-EPOS, online merchants are ensured that they are accepting card details only from the legitimate cardholders. The B-EPOS software also uses B-Authenticated.

We also offer Smart E-Switch, a system that allows cardholders to lock/unlock their cards (credit, debit, prepaid cards) and setup their own limits for out-of-country, local and card-not-present spending.

**CRO:** What are the major

differences between B32Trust's B-Authenticated and Smart E-Switch system?

**Pariente:** While B-Authenticated offers the mutual authentication of the entities engaged in an online transaction, Smart E-Switch is a security system for card accounts based on giving control to the cardholders or the issuing banks in order to set different card usage parameters.

Smart E-Switch enables the turning on and off of card accounts. It includes multi-channel interfaces by which cardholders or the issuing banks can set these card account limits. Our business partners, CardSwitch, realised the importance of securing these interfaces, thus B-Authenticated is the ideal system that can secure the setting of these card account limits.

**CRO:** What are the major geographies that you are currently focused on?

**Pariente:** We target innovative companies that are intent on offering effective and preventive fraud solution. Companies in India, Asia and GCC are very interested in our solutions. They are proactive and want to bring the best protection to their end-users. Since we are a French company, we also work with European companies and we shall soon start our sales and marketing in North America.

**CRO:** How do you view the market for security solutions and products for financial sector in future?

**Pariente:** The market is definitely becoming more customer-centric. In these times of crisis, the quality

of the customer service and protection offered to end-users is crucial. The real purpose of a product is to be used and if it is not usable, then it does not answer the consumers' needs. Currently the market is inundated with fraud detection solutions. The demand will obviously shift to real-time fraud prevention solutions as well as positive verification in lieu of blacklist checking.

**CRO:** What are your future plans

for expansion and growth of B32Trust?

**Pariante:** In terms of product development we will be very wise and follow the customers' needs. Mobile banking is booming right now and in the coming years I see a strong evolution of the mobile world. I don't think it's going to replace the classical banking as people are not ready to have a complete virtual interaction with their bank, but it will be a part of the picture. I am also expecting to

see the web evolve a lot more, the Web 3.0 (Semantic web) and even 4.0 (Symbiotic web) are already on their way. The software industry has also learnt lessons from Google and Apple. Software applications have to be discrete and do what the users want, not what 'techie' people think they would like them to do. At B32Trust, we envision the protection of all electronic identities including consumers and businesses by offering real-time fraud prevention solutions. ■

## NEW ACCESS LAUNCHES LOGICAL ACCESS 7

Switzerland-based banking software provider New Access has upgraded its Logical Access solution, a suite of electronic document management modules developed for the banking sector. The software provides for administration, acquisition, workflow, distribution, classification, and archiving of documents in a variety of formats. Logical Access 7, the latest version of the software has been released with a number of additional features taking into account various suggestions of their customers. Meeting their existing banking clients' needs and to make the software strong enough to meet the increasing banking industry demands were the key driving factors for this new release. Commenting on the development timeline for the product David Sikorsky, chief operating officer, New Access says, 'Logical Access 7 was developed in 6 months, after analysis of clients' requests and input given from our internal business analysts, who evaluated carefully the banking industry

needs.' The new version will be available worldwide from September 15<sup>th</sup> this year. The new release provides better timelines and simplifies implementation requirements at banks. 'Logical Access can be deployed very quickly and a typical migration can be done in a matter of days. We expect most of our clients to start migrating to the new version by the end of the year 2009,' adds Sikorsky.

Developed on the .NET platform, the new version can be customised depending on the banks' work processes and requirements and helps the users to collaborate and share information quickly. Other features of the solution include simplified filing plan process, generation of unlimited number of tasks through a dynamic workflow, fast and sophisticated cross-searching of documents, creation of virtual documents and assembling different parts pertaining to the document (for example a signature card with the client's signature copied from

different documents signed by the client) and optimum management of the bank's different environments allowing the users to work simultaneously in several operating environments. The software claims to increase the productivity in the banks with these added features. It is also embedded with security features such as the possibility to blur two-thirds of an on-screen document to avoid data breach along with strong access rights through the granular access rights control on the user profiles and passwords.

The software was originally developed in the year 1988, and has installation in banks across almost 19 countries. Many of its clients are Swiss banks. 'The breakdown of our clients is 40 percent in Switzerland, 46 percent in Europe, 7 percent in Asia, 4 percent in America and 3 percent in the Middle East. In Switzerland, six out of ten of the biggest private banks have implemented New Access products and solutions,' informs Sikorsky. New Access was founded in 2000 in

Geneva, Switzerland. Logical Access Suite was acquired by New Access in year 2003 with the company purchasing the worldwide rights for the software. The first version of the software came a year later and the vendor has upgraded the software by adding new features continuously since then. 'Most of the clients are continuing to use Logical Access today as the software has been conceived by experts in banking and provides exactly what the banking industry is looking for in terms of electronic archiving processes and secure its clients' information,' asserts Sikorsky. A modular and scalable solution, Logical Access is marketed with four main modules, Administration (filing plan reflecting the banking business rules), Access Rights (to manage users or group of users' profile), Audit (to record all users' and documents' activity within the system database), and Management (to manage the licences control, connected users, archive test etc). The software suite is organised around the Logical Access Suite server which is the core of the solution. New Access also offers a number of complementary modules in addition to the above four.

The major financial market regions on which New Access is currently focused on include Geneva, Luxembourg, Monaco and Asia Pacific (APAC). 'Middle East and Africa are also considered as markets of high interest, especially with regard to our electronic and archiving banking document management and workflow system,' adds Sikorsky. Recently Kuwait and Middle East Financial Investment Company (KMEFIC) selected New Access' Document Life Cycle for T24 (DLC

T24) solution. The solution is enabled with the capability to connect to Temenos T24 core banking software. This marks a major step for New Access towards expanding its geographical footprint in the region since the launch of its Middle East operations last year. 'We won the contract through invitation, thanks to our local partners. The key parameter was our ability to quickly and reliably connect to the T24 environment,' informs Sikorsky. 'It has been designed specifically for T24 and can handle all types of financial documents, such as portfolio estimations and performance reports, dispatch of documents to clients, document flow between the financial investment company's departments and automated generation of accounts documents. The connection is made possible through a specific connector developed by New Access, thus ensuring the transfer and compatibility of data between Temenos T24 and New Access DLC T24 solution,' he explains.

In 2008, New Access opened up two new international offices in Singapore and Luxembourg. The new branches are involved in New Access' business marketing and sales activities in the respective markets. On company's future expansion and growth plans in the APAC region Sikorsky comments, 'Although we are not currently focusing on India as a potential market for our solutions, South Asian countries like Singapore, Hong Kong, Thailand and Malaysia are key countries for our APAC development. The two new branches are the key to the international expansion New Access undertook since 2008. These will also be incremental for the implementation process. ■



**Biography**

*David Sikorsky is the chief operating officer of New Access. He has worked for several years as a financial analyst at Morgan Stanley in New York. Back in Europe, he took the responsibility of Funds investment strategy and participated in US equity stock selection at CCF Private Bank in Geneva. In 2001, David joined Quest Partners, specialized in private equity, where he managed merging and acquisition projects and followed several ventures and start-up operations. In 2003, he became Chief Operating Officer at New Access. David holds a degree in Economy and Literature from Brown University in Rhode Island.*

# ENTERPRISE RISK AND GOVERNANCE

## Embracing the Art and Science of Convergence

**Cubillas Ding & Ranjit Behera**

Celent, a member of Oliver Wyman Group, has brought out a research report titled 'Enterprise Risk and Governance: Trends, Vendors, and Market Outlook-Embracing the Art and Science of Convergence' in June 2009 by the above named authors. The 40-page report contains 19 figures and tables. This is a heavily abridged version of the report. Interested readers may find more details at [http://www.celent.com/124\\_1939.htm](http://www.celent.com/124_1939.htm), and may also like to see the companion report from Celent on technology solutions, 'Operational Risk Management and Governance: Will Next-Generation Solutions Fit the Bill?'-Ed.

Leading up to the credit crisis, the financial services sector was at the mercy of a myriad number of risks. Risk managers were able to recognise established risks, but not necessarily emerging risks or risks in tandem, because risk management frameworks evolved either to mitigate each risk separately or to handle risk in business silos. At the same time, although operational risk management, in theory, connects three dimensions on which businesses run (ie, people, process, and technology), it was too loosely intertwined with transactional, control, and other risk management mechanisms to be effective. This resulted in a gross oversight of enterprise-wide risk, which failed to take into account the relationship between different risks and risks associated with various lines of business (LOBs).

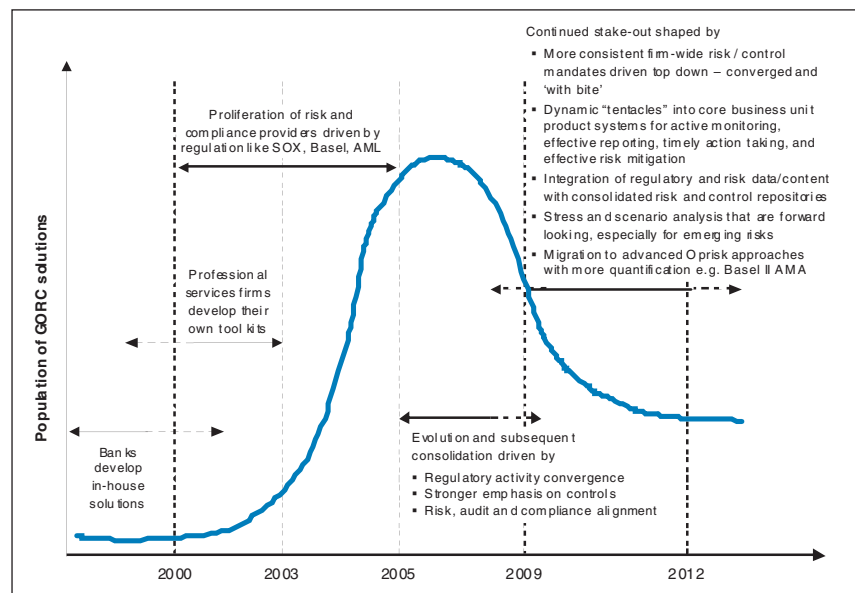
Recent G20 developments called for greater accountability and transparency in transactions associated with financial institutions. Hence, the tightening of regulations is seen as inevitable. However, the degree to which the firms will pursue internal, sustainable efforts to make risk management processes and systems more robust-as opposed to merely playing catch

up with evolving regulations-remains to be seen. Nevertheless, a recent CEO survey of 2009 priorities done by Oliver Wyman shows that 80 percent of corporations are planning to increase spending in risk management. For a larger proportion of firms, there are clear changes in senior management attitudes towards risk management treated as strategic pillar.

The drive to upgrade risk management systems started a couple of years ago, and the emphasis in most financial firms

grew rapidly, with most efforts centered on harmonisation and standardisation of risk assessment and operating frameworks, regulatory compliance, and related enabling technologies. Sadly, the current crisis has ripped open the shortcomings of most risk management paradigms and solutions. The wide gap between the assumed reality and the actual reality can be attributed at a fundamental level to the disconnect between paying lip service to managing risks and employing risk management competencies as a key tool to manage business performance

### Evolution of operational risk and governance solutions



and sidestep ‘drag factors’ associated with market, competition, operational factors, and especially emerging risks associated with a combination of these factors.

Coordinated approaches to governance, risk and compliance (GRC), enterprise risk management (ERM) and operational risk management (ORM) practices-termed governance, operational risk, and compliance (GORC) in the report-are now mandated to help companies manage their risk exposure, while the availability of mature and flexible next-generation third party vendor solutions are now being positioned to enable firms to adopt an ‘out of the box’ approach in replacing/consolidating in-house tools. At the same time, the high degree of configuration and single ‘risk and compliance’ approaches associated with these solutions

**Risk-taking aligned with stakeholder expectations and business strategy.**

Despite risk appetite alignment being a soft and rudimentary point, the magnitude of losses associated with the recent credit crisis mandates that firms adopt a back to basics view of top-level risk oversight activities and processes before moving to lower levels.

**Management of risks operationalised across a cohesive lifecycle.**

Cohesive ERM/ORM implementations should target multiple levels of integration and tight alignment across the risk management lifecycle:

- Integration of firm-wide risks across business group silos.
- Integrating effects of various kinds of risks and capturing the

**Functional and technology requirements-the ‘bare essentials’.**

The imperatives that should undergird institutions’ business requirements are:

- Flexible architectures
- Combined quantitative and qualitative approaches
- Stronger emphasis on control effectiveness
- Focus on usability and effective delivery of information
- Convergence of requirements across multiple regulations

**Operational risk assessments linked up with performance and operational control data/metrics from multiple front line processing and control systems.**

GORC applications should constitute and be positioned as a ‘dynamic ecosystem’ that taps into the pulse of the organisation from a risk, performance, and compliance perspective. Over time, the value of this ecosystem increases as it becomes embedded in day-to-day decision-making, delivering intelligence about operating exposures nearer to real-time.

**Clearly established functional applications architecture.**

Firms must establish clear boundaries and get specific about functional capabilities associated with GORC investments to facilitate a cohesive upstream/downstream integration with core processing systems, as well as to prioritise what is core and non-core from a cost/benefit perspective. From a supplier perspective, the forces of

*(Continued on page 26)*

GORC applications should constitute and be positioned as a ‘dynamic ecosystem’ that taps into the pulse of the organisation from a risk, performance, and compliance perspective.

help reduce technology customisation and control the costs associated with risk review, audit, and risk management operations. However, before proceeding with any GRC, ORM, or ERM ‘solution’ implementations, firms should consider or work towards the following underpinnings and guidelines for success in order to achieve positive outcomes:

- effects of risks on one another.
- Integrated approach to complying with different regulations (SOX, Basel-II, local versions of legislation, etc).
- Alignment of quality and performance metrics with risk and control performance indicators to drive business process improvements.

## PAYMENTS SUMMIT 2009



(L-R) - A P Hota, B Sambamurthy, Hari Misra, Sanjay Sharma

Indian Banks' Association (IBA) and Finsight Media jointly organised Payments Summit 2009 on June 5, 2009 at Hotel Taj President, Mumbai as a commitment to provide an exclusive annual forum for payment systems for banks, financial services and corporates.

In his opening remarks, K Unnikrishnan, deputy chief executive, IBA welcomed the delegates and the keynote speaker G Padmanabhan, chief general manager in-charge, department of payment and settlement systems, Reserve Bank of India (RBI). 'Payment systems occupy an important place not only in the banking system alone but in the entire financial system, and it forms the backbone of any economy,' observed Unnikrishnan. 'An efficient payment system is essential to cover three main areas viz business to business payments (B2B), transactions by individuals (P2P or P2B) and transactions by all the players in financial sector.' 'How best the technology can be used for creating a win-win situation for all stakeholders of the payment

system will be deliberated upon during this summit,' said Unnikrishnan outlining the agenda. Compliance with the regulatory requirements is another important aspect of the payment systems, he noted. 'In India,' said Unnikrishnan, 'the regulator wants to gradually pull out of its role as operator of the retail payments system resulting in the establishment of the National Payment Corporation of India (NPCI)'. Unnikrishnan concluded his remarks with the observation that in payment systems, 'banking and technology players have to co-exist.'

In his keynote address, G Padmanabhan outlined the importance of a well regulated and smooth running payment system which is critical for economy. 'The risks, concerns and the policy focus of payment systems are the same for developing as well as advanced countries,' observed Padmanabhan. He announced that an analysis of the RBI's Real Time Gross Settlement (RTGS) system by external experts revealed that the system is fully compliant with international core principles of systemically important payment systems except in one area - it is

being offered free of cost to member banks. He informed that RBI has set up a state-of-art data centre with backup infrastructure and sufficient redundancies for uninterrupted availability to handle critical payment systems. He expected that the banks would rationalise their service charges so as to pass on the benefits of technology to customers. He predicted that 'the mobile phones and prepaid cards are expected to be the frontiers of developments in technology in general, and payment systems in particular, in the years to come.'

Speaking on 'STP in Financial Supply Chain: Emerging Standards, Technologies and Practices' Ravi Shankar, group executive vice president (EVP) and country head (cash management and direct banking) of YES Bank appreciated that the regulator - RBI has invested incredibly in terms of systems, technologies, regulations, policies, processes and knowledge to help the country to reach out to millions on all kinds of payments. However, we are lagging behind in having standards for financial intermediation and messaging systems, lamented Ravi Shankar. 'Banks spend large amounts on



G Padmanabhan

integrating different messaging systems,' he observed and affirmed that the country needs standardisation in these areas to bring down the per transaction cost of financial inclusion. According to him, banks in India need to move towards globally emerging ISO 20022 standard in the area of messaging for controlling costs in electronic fund transfers. 'If you want to make India a global hub and be a bigger player in forex market, you need to have an ambition to leapfrog in terms of standards in payment systems.'

The panel for discussion on 'IndiaPay: Issues, Challenges and Opportunities' comprised of A P Hota, chief executive officer, NPCI; B Sambamurthy, director, Institute for Development and Research in Banking Technology (IDRBT); and Sanjay Sharma, managing director and CEO of IDBI Intech; and was moderated by Hari Misra, editor-in-chief of Finsight Media. NPCI was conceptualised to avoid the conflict of interest that arises when RBI is both the operator and the regulator, said Hota. 'The other aim is to reduce the transaction cost in usage of cards

on points of sale (POS) and mobile payment transactions as has been successfully achieved in case of ATMs by reducing the switching cost,' declared Hota. To start with, it will serve as a utility in payment services and hence it is registered as 'Not for Profit Company.' NPCI will partner with IDRBT for switching services and it will eventually build a switch to cover ATM, EFT and POS transactions, informed Hota. It has plans to bring retail payments on RTGS platform.

Referring to the recent RBI initiative of allowing customers to withdraw from any bank ATM without any charge as an 'unsung revolution', Hari Misra requested Sambamurthy to explain how the reduction in switching costs to facilitate this was achieved. He informed that ATM transactions' volume on IDRBT switch during the first quarter of 2009-10 (in which free withdrawal facility from any bank ATM became operational) has already surpassed the volume of transactions in the entire year 2008-09 and it is expected to reach 5 billion per year in next 2 to 3 years. 'Saving of INR 1 in switching cost per transaction means saving INR 5 billion per year,' he emphasised.

What was the key driver for IndiaPay? Sanjay Sharma explained that a shared infrastructure like IndiaPay will bring down the costs and make ATM and POS cost effective delivery channels. 'In addition to providing ATM and POS transaction switching, the proposed system can also handle any electronic transaction as an aggregator including mobile payments,' informed Sharma. IndiaPay proposes to provide a powerful platform for aggregating transactions between different

mobile operators and different banks, he said. 'The main challenge is to provide a robust and scalable infrastructure with near 100 percent uptime since flow of all electronic transactions of a huge magnitude will be depending on the system,' clarified Sharma. The system has also to handle security related challenges, he said.

The panel discussion was followed by a brief presentation on 'Cheque Truncation: Value Added Services' by Murthy Veeraghanta, CEO and president of VSoft Corporation. He explained various benefits of their tailor-made system which one of the Indian commercial banks is using at present.

In the first post-lunch session, the panel chaired by B Sambamurthy, and consisting of Ram Rastogi, deputy general manager, payments solutions group, State Bank of India and Nitin Chittal, vice president, Axis Bank discussed the topic 'Mobile Payments: Hope or Hype.' Initiating the discussion, Sambamurthy observed that 'mobile payment is presently neither a hype nor reality.' Business in mobile payment is insignificant as of now but a huge potential for it exists. To achieve interoperability as specified by the RBI, there is need for 'horizontal and vertical' collaborations, he stated. Ram Rastogi felt that the first mover in the area of mobile banking has many advantages over others. He felt that taking mobile payments to non-java enabled handsets was a major challenge. According to Nitin Chittal collaboration and cooperation between various banks and operators was a key to the success of mobile payments.

Rastogi emphasised that if banks provide proper and affordable service to customers, the number of active mobile banking customers would grow like it grew in case of card based business. Commenting on security features, Nitin Chittal said: 'I do not see security as a major concern, but proof of payment by customer is a major concern'.

Shekhar Kirani, vice president of VeriSign India spoke on 'What

needs to be done to make the customer feel secure in online payments?' He observed that the usage of Internet for business has been relatively slow in India. He mentioned example of eBay and E\*TRADE which have been doing business on a large scale only in virtual space on the strength of trust created in the market. Transparent execution, visible security for protection of customers and insider security are the three major factors that help

in creating the market trust, he stated. The online threats include phishing, malware on the end device, social engineering and theft from insiders against which security policy has to be evolved. The last presentation of the Summit was on 'Opportunities in Payments' by Hema Shivnani, manager, Ernst & Young.

The Summit concluded with a vote of thanks by Rema Menon, senior vice president, IBA. ■

*(Continued from page 23)*

consolidation are by no means relenting, and the market will consolidate further. There is now a 'get big or get out' theme at play. Hence, firms and vendors alike need to position themselves in terms of purchasing or developing solutions. Significant investments are required in an end user market which is increasingly sophisticated in its demands. At the same time, requirements are broad and somewhat diverse depending on the flavour of regulation, industry standards, and an organisation's degree of balance between risk and controls.

### Looking forward

Celent expects that global IT spending associated with GORC activities will increase from \$1.4 billion in 2008 to \$1.7 billion in 2011, a compound annual growth rate (CAGR) of 6.6 percent. The financial crisis, which presented a massive blow to the banking and capital markets sector, now presents an opportunity for a profound change. As we step into a new phase of industry reforms, we expect governance and

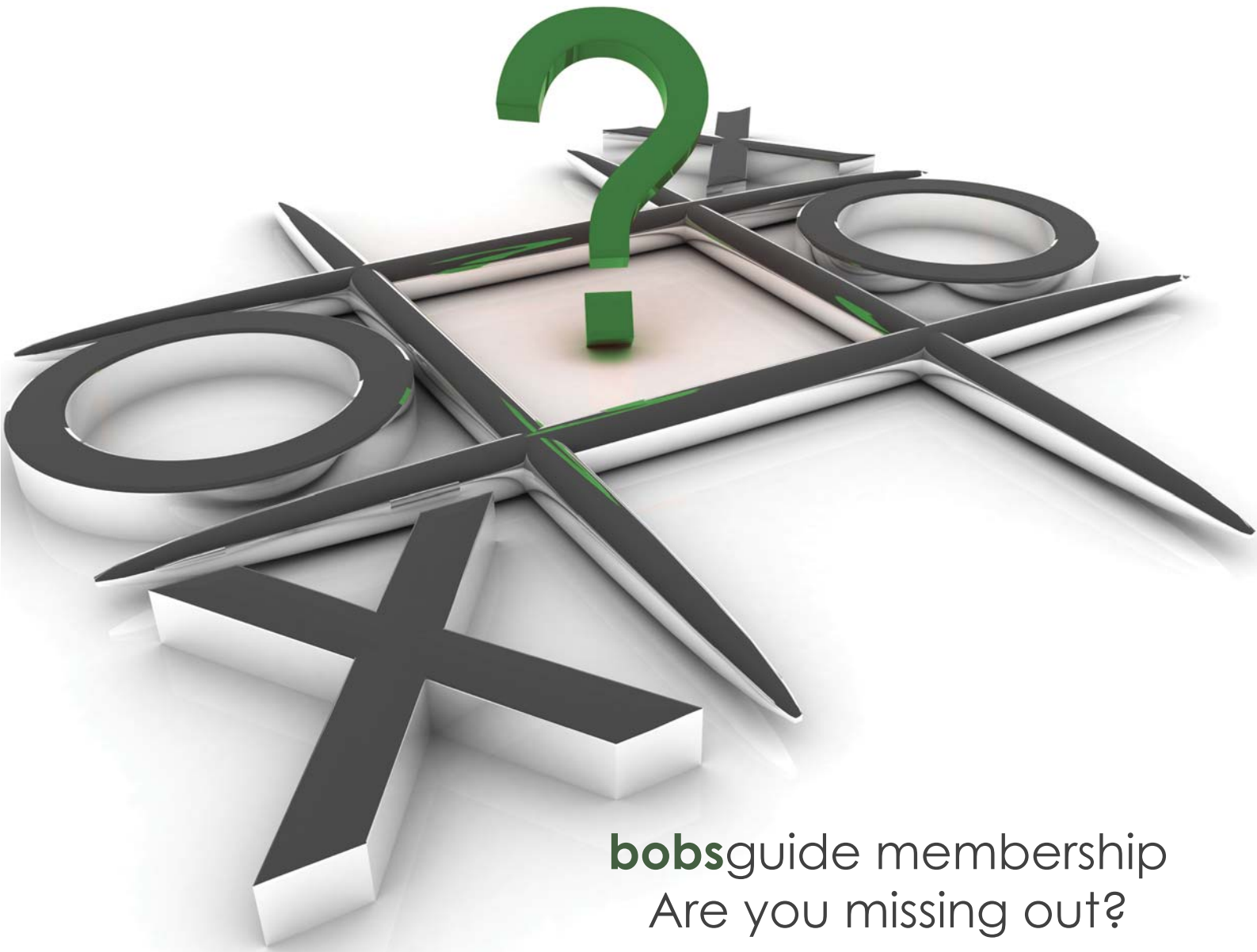
operational risk issues to take their seat at the table in terms of senior management scrutiny. In this regard, as long as 'enterprise' efforts or operational risk management activities remain compartmentalised and a formality, the dangers of emerging and systemic risks will lurk around the corner. Looking forward, firms need to:

- Institute a firm-wide operational risk and governance framework, but, at the same time, facilitate the provision of specific and customised operational intelligence with a strong line of business flavour.
- Infuse 'big picture' elements of strategy and industry analysis as part of a firm-wide risk management process.
- Proactively coordinate efforts to manage operational risk, aligning with other risk groups, as well as audit and compliance functions.
- Incorporate systemic execution of operational risk management activities in tandem with core operational functions in order to help drive process improvements.

- As an end goal, measure the effectiveness of ERM/ORM efforts in terms of better governance and performance at all levels and business units. The orientation of an organisation should ultimately be towards incorporating risk intelligence into day-to-day decision-making to become smarter about the way the business is run.

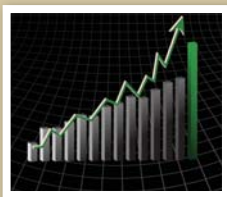
At this point, firms stand at the crossroads facing two choices: react to put in place short-term fixes pertaining to matters of risk, or look towards sustainable change. More and more, it seems like the former is becoming less of an option as market reforms unfold in earnest. As new realities start to kick in, firms need to take heed-investors, regulators, and customers are standing ready to reward firms that not only say what they do, but also can show they can practice what they preach. At the same time, the converse is true: the penalties for failure become higher and more costly. In the end, whether by carrot or stick, firms are now standing on the verge of change in the way enterprise risk and governance practices are executed. ■

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