Digital finance: Avoiding the pitfalls of moving to the cloud
China CFO Insights

As cloud computing continues to come of age, it is playing a foundational role in the digital transformation efforts of many organizations. CFOs who still regard moving to the cloud as primarily an information technology (IT) opportunity, however, may miss out on the chance to help their companies leverage cloud's many advantages.

To some extent, senior financial executives understand that cloud has serious momentum: In the 2016 Q3 U.S. CFO Survey of 122 CFOs, cloud computing easily outpaced other emerging digital technologies in terms of its deployment, with

80% of respondents saying they use cloud in some form, and 30% saying they use it broadly (see Figure 1, "Embracing the cloud,").

But as cloud moves from the cutting edge to the mainstream, from applications that primarily augment core systems to cloud-based applications that replace core systems, it is important that CFOs move beyond a basic conceptual understanding and take a closer look at the cloud's nuances. One reason: financial applications—which, by and large, were not a major part of early cloud migration—are quickly becoming common. In fact, according to one

estimate, by 2025 cloud-based solutions will account for 65% of total market spend on financial management applications.

While cloud computing offers many advantages, it is not a panacea. Although large organizations may have had success in pilots and smaller scale adoption, they may nonetheless encounter both unpleasant surprises and missed opportunities if they do not proceed with adequate caution. In this issue of *China CFO Insights*, we will outline the potential opportunities presented by the cloud and pose a series of questions that CFOs should ask to avoid the pitfalls.

First, the upside

The basic concept behind cloud computing is not new. Cloud is essentially a form of outsourcing in which client organizations use the Internet to connect to a variety of applications, storage services, hardware resources, platforms, and other IT capabilities offered by cloud service providers. Companies can buy as much or as little as needed, typically in a per-user / per-month subscription model often dubbed software as a service (SaaS). The cloud service provider owns the required hardware and other resources needed to provide these services and employs the staff necessary to support them.

The potential advantages do not stop there. By subscribing to everything from basic e-mail to larger applications, such as customer relationship management (CRM) solutions, human resources (HR) suites, and enterprise resource management (ERP) systems, companies can avoid both the one-time expenses associated with buying such software outright and the cost (in staff and computing infrastructure) needed to maintain those applications.
In addition, by obtaining such services in a cloud model, companies do not have to worry about when and whether to upgrade to the latest version of the software; the cloud service provider takes care of that, as well as routine maintenance chores. Service-level agreements (SLAs) include pre-determined levels of uptime and responsiveness, may provide clients with recourse should the software not perform as intended.

Moreover, the time needed to implement new software is usually faster for a cloud model, because rather than requiring on-premise installation at each company site (and the possible accompanying need to buy hardware), a new client simply accesses the software over the Internet. That can reduce database migration, update and backup times, testing, and other installation tasks. (It should be noted, however, that the upfront work of determining application requirements, design, configuration, and other needs is no shorter for cloud than for on-premise software.)

Another major advantage of cloud-based applications and services is the flexibility to increase or decrease capacity as needed. This can be a boon, particularly at a time when companies anticipate increased M&A activity. In the past, companies often overinvested in IT infrastructure in the event they had to add hundreds or thousands of new users or a large number of legal entities following an acquisition. In the cloud model, an organization can add capacity relatively easily, and let the service provider worry about increasing the underlying resources to support them. On the flip side, a client can decrease capacity, say in the event of a divestiture, and see its associated IT costs decline, depending on the terms of the contract (many run one-to-three years, so instantaneous adding or dropping may not be an option).

Reality check

Combine these potential cost savings with flexibility, scalability, faster implementations, and simplified maintenance, and it might seem that moving as much of your technology infrastructure to the cloud as quickly as possible would be the proverbial no-brainer.

If only it were that simple.

To make the most of cloud computing, CFOs need to collaborate with CIOs and other senior leaders to ask plenty of questions—not only of cloud service providers, but internally as well, to assess whether and to what degree cloud is right for their company. Does cloud consistently save money? Are implementations always smooth? Will the company give up certain capabilities that make up its "secret sauce"? By addressing both near-term, tactical considerations and more strategic and structural issues, CFOs can help their organizations move more confidently into the new digital reality that is increasingly reliant on cloud-based services. Some of the specific issues to explore include:

Will cloud really cost less?

Cost has been a main driver of the cloud decision from the nascent days of the technology, when new vendors pitched niche applications to smaller companies with limited IT budgets, to the present, when virtually every technology provider offers a cloud option and companies of multiple sizes regard such solutions as viable. Cloud-based applications and services often do cost less, but it is important to do a careful analysis to be sure. Organizations that opt for on-premise software and don't spend significantly on upgrades over a 10-year period may find it less expensive to buy, although they may pay an opportunity cost in the sense that they are less nimble than organizations that rely on continually updated cloud-based applications. Similarly, some companies may find it advantageous to buy software outright and depreciate it rather than absorb the costs of cloud solutions as operating expenses (although implementation costs associated with cloud applications may still provide a depreciation opportunity). These are the kinds of analyses that finance departments are well-suited to provide.

Is it secure?

When cloud computing first came along, companies were concerned such solutions would make them more vulnerable to cyber threats than on-premise applications that are tucked behind firewalls and layers of security. Cloud vendors responded by devoting more resources to security, often positioning such investments as part of their value proposition.

Although companies have become more confident in cloud security, it remains an area that requires strong due diligence, particularly for companies in highly regulated industries. Thus, boards of directors may need to be convinced about the security measures put in place by the providers, and some companies may choose to be late adopters expressly because they want to see whether their earlier-adopting peers encounter security issues.

Will there be integration issues?

As sophisticated applications such as ERP migrate to the cloud, integration with other systems becomes a bigger concern. Will a cloud-based application from one vendor be able to work with an application from another provider? Is the company's IT infrastructure suited to share data with multiple cloud-based applications? Was the application designed as a cloud-based service from day one, or is it a modified version of software originally designed to operate in a traditional on-premise client-ownership model?

As companies turn to the cloud for ever more of their IT needs, questions regarding ease of integration become more important.

Some companies are finding that platform as a service (PaaS) cloud offerings provide simplified application interface options that enable them to be more future-facing. But for those organizations that require tighter point-to-point integration (often involving multiple homegrown systems), careful assessment of cloud capabilities is essential.

Will we miss the ability to customize?

The turnkey nature of cloud-based applications is one of their prime selling points, but it can also be a drawback. Companies that want or need customized applications (sometimes the case for customer-facing applications such as order management) may find that the provider cannot or will not accommodate those preferences; after all, the cloud model depends on providing essentially a standardized solution across the provider's client base. Many companies are happy to forego customization in return for the rapid implementation and other advantages that cloud-based applications offer. Some cloud vendors even provide "highly configurable" applications. But companies that need true customization will need to shop carefully since these capabilities vary across packages and bring considerations regarding the public cloud versus the private cloud into the frame.

Figure 1. Embracing the cloud
Percent of CFOs who report using the following digital technologies (n=122):
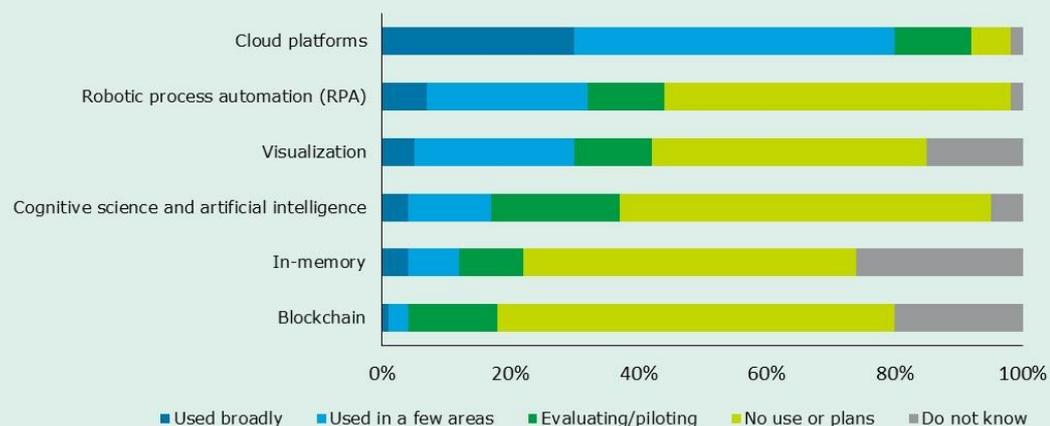
Source: 2016 Q3 U.S. CFO Survey, U.S. CFO Program, Deloitte LLP

After analysis, some companies may find that, at least for certain applications, cloud is not an option.

Will we be giving up any strategic advantage?

Closely related to the standardize-versus customize decision is the issue of strategic advantage. The cloud model essentially positions applications and cloud-based services as utilities available to anyone who signs on. While this is often a fast and cost-efficient way to acquire a given capability, for companies that have invested heavily in IT systems that set them apart from their competitors, moving to the cloud can mean walking away from an important point of differentiation. Retailers who have invested in sophisticated supply chain capabilities, for example, may find that there is no cloud-based system that allows them to interface effectively with dozens of different suppliers, each of whom requires a customized connection into the retailer's system. As companies move more applications to the cloud, they should take a long view on whether they want to retain certain in-house applications and what that may mean for their increasingly virtual IT infrastructure.

What are the implications for IT?

Cloud vendors do not just provide software, they also provide the staff to implement and maintain it. Moreover, they often do not pitch their services to the CIO, but directly to whichever department their particular offering pertains to, potentially disintermediating IT. At the same time, the rise of the "superuser," who can generate reports or handle other data-intensive tasks that once required IT assistance, is impacting roles traditionally played by IT. But even as old IT roles fade, new ones emerge: integration across cloud applications and between core system and cloud applications, data integrity, managing new vendor relationships, and more suggest that in-house IT is not going away, but will need to shift to its originally intended role in the organization—a strategic business partner.

There is no doubt that companies are feeling more bullish than ever about moving to the cloud. The confidence gained from early pilots and the adoption of less-than-critical cloud-based applications is now prompting companies to "lift and shift" core systems to the cloud, including finance systems that were once widely seen as too mission-critical to move outside the organization. But as the movement toward cloud gains ever more momentum, now is the time for finance, IT, and other departments to do a reality check on the issues listed in this article. By ensuring that the move to the cloud makes economic sense, that systems integration will not pose a major roadblock, that the systems are secure, and that no competitive advantage is sacrificed, companies can position themselves to re-architect around cloud-based systems without worrying (too much) about any unpleasant surprises lurking down the road.

Preventing the disaggregation of IT

For many years, companies have sought to centralize systems and impose master-data management and other policies so that IT services are provided efficiently and deliver "one version of the truth." A rush to the cloud threatens to undermine such efforts as different departments autonomously adopt cloud-based solutions that meet their individual needs.

The result? Data could be spread across multiple cloud-based systems that do not play well together. For example, consider if FP&A, tax, pricing, supply chain, and other finance functions each go their own way with various cloud solutions. The ability to analyse relevant data for a big-picture view of performance may be impacted as that data is fragmented across many domains. This risk is only magnified when companies grow by acquisition.

Not only can data be fragmented, but so too can investments in processing power, training budgets, and other IT expenses. While each cloud-based migration may look advantageous in isolation, taken together they may raise operating expenses to a degree that undercuts the anticipated savings. Therefore, IT and finance should not only focus on the discrete projects that increased cloud adoption entails, but also on the core issues of application selection, data standardization, and other strategic decisions to ensure that a large-scale migration to the cloud does not result in death by a thousand cuts.

Companies, by and large, are designed for centralized, organized activity. Some cloud decisions break that model, but also provide a foundation for new models. The key is to engage in plenty of deliberation to ensure the new surpasses the old.

Contacts

William Chou
National Managing Partner
China CFO Program
Deloitte China
Tel: +86 10 8520 7102
Email: wilchou@deloitte.com.cn

Emily Leung
National Program Manager
China CFO Program
Deloitte China
Tel: +852 2852 1686
Email: emleung@deloitte.com.hk

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