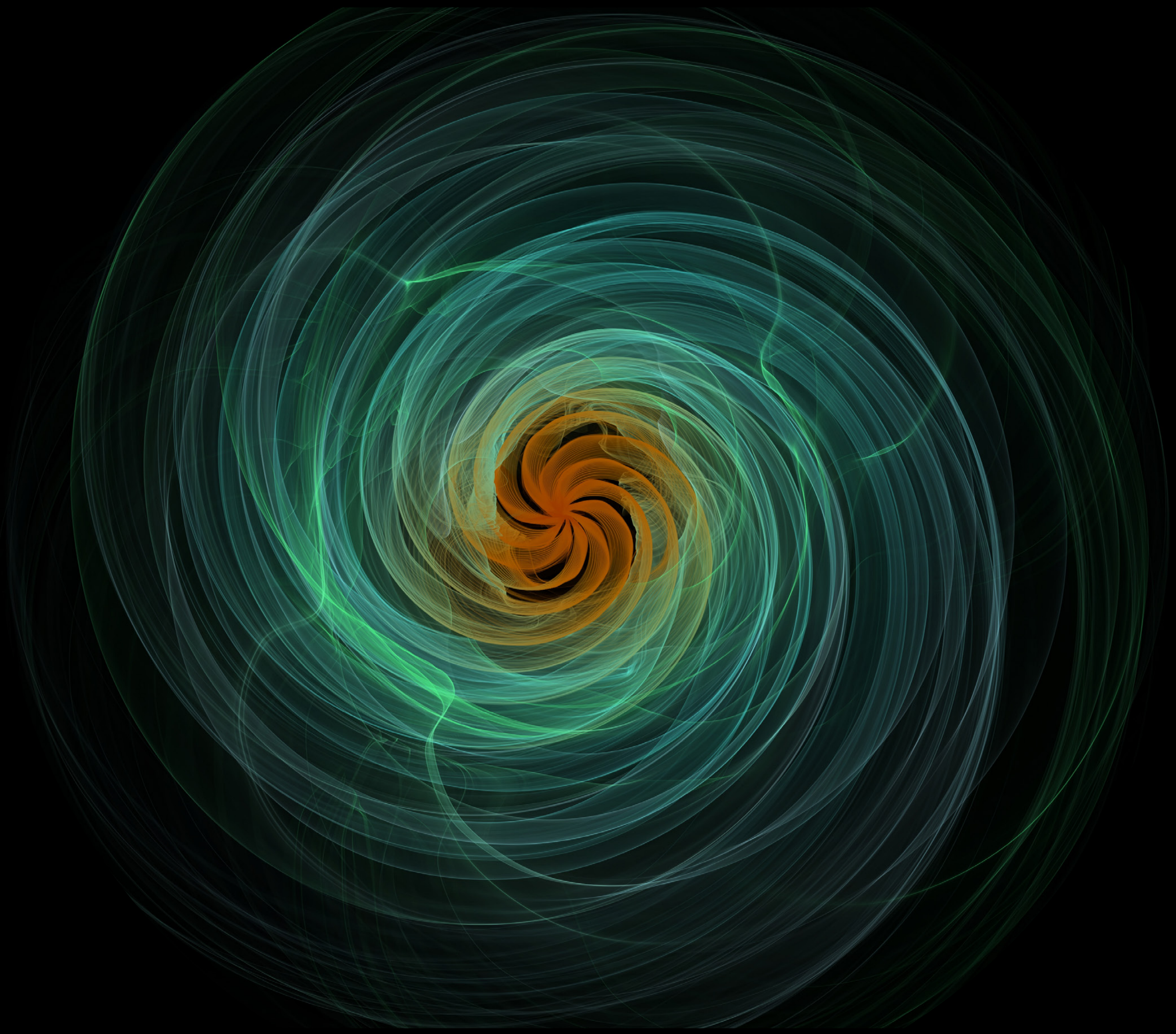

Keeping your head in the cloud

The vital role of CFOs in strategic cloud computing decisions

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For many companies, the cloud computing debate is over. They are no longer asking *if* they should move to the cloud; instead, they are asking *when* and *how*. And while the timing and degree of adoption may vary, many companies now recognize cloud's compelling capabilities and are making it an integral part of their technology infrastructure and business platform strategies.

According to a 2017 survey report, 93 percent of organizations already use cloud services in one way or another.[1] No wonder, since migrating to the cloud not only helps companies to reduce IT costs, it also enables new strategies and business models, new product and service offerings, and new forms of revenue generation that simply haven't been possible before.

Cloud adoption traditionally has been driven by chief information officers (CIOs). But as companies explore cloud's various potential impacts and business uses, chief financial officers (CFOs) have an opportunity to help define and drive their company's cloud strategy. Specifically, CFOs are uniquely qualified to address two areas discussed in this paper:

- **Accounting and financial impacts** that should be considered, and how different cloud models may affect them
- **Making the case to Wall Street –** i.e., communicating those cloud impacts to analysts and investors

In subsequent papers, we will address ways CFOs can steer conversations and strategies around the potential implications of cloud migration for financial audits, tax, and new accounting standards.

Accounting and financial considerations

Cloud computing can have a variety of subtle impacts on a company's accounting and financials. Carefully considering these impacts can help CFOs understand and communicate the positive effects while addressing any negatives.

It is important to know that accounting for cloud computing service costs can be complex and challenging. The structure of the cloud and the cloud model selected by a cloud customer may significantly affect pricing, costs incurred, and the related accounting treatment for both the Cloud Service Provider (CSP) and the customer. In this paper, the discussion largely focuses on customers of the cloud, not CSPs.

Depending on the scope and duration of a customer's needs, cloud service arrangements may include fees for the cloud services themselves, the cost of purchased software applications deployed in the cloud, and various other costs – each of which is discussed in more detail below. Since each cloud arrangement can be unique, CFOs should carefully evaluate their organization's specific facts and circumstances, including the structure of the cloud, the terms of the arrangement, and the use of software, when determining and applying the related accounting guidance. Given the judgment necessary and complexities of these types of arrangements, CFOs should consider consulting a qualified adviser to help determine the proper accounting treatment for both book and tax purposes.

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Fees for cloud services

For use of the cloud services, a customer may pay a subscription fee based on a contractual rate in an arrangement with the CSP. Depending on the specific pricing terms of the arrangement, the fee may be:

- Billed periodically (e.g., monthly or annually);
- Fixed or variable; or,
- Based on some measure of actual usage (e.g., per user, per service, or per click).

Subscription-type fees are generally expensed in the period in which the customer receives the benefit of using the related services. Often the period in which the benefit is received is clear. However, in certain circumstances a customer may need to exercise judgment to determine the appropriate period in which to expense the cloud service fees in a manner consistent with accrual accounting.

For example, if a customer pays a fee for the use of a CSP's cloud services for a specified period, the customer would likely receive the benefit of the service throughout the specified period and therefore recognize the related expense ratably over this period, unless evidence suggests that the customer receives the benefit in a pattern other than ratably.

Depending on the timing of the payment of the fee, the customer would recognize a related asset or liability accordingly. For example, CSPs often provide a variety of payment options, as well as discounts on more upfront payments that can carry more attractive pricing than on-demand service. Such variations can complicate the expense timing determination process. Figure 1 demonstrates an example three-year term option by a CSP (per instance).[2]

Costs of purchased software applications

A customer that purchases a software application from a third-party provider may intend for the application to be kept, maintained, and accessed through a cloud network. This network could be within a private cloud setup inside of the customer's firewall or it could a public cloud setup in which the software resides on a CSP's servers and the customer only has access to use it. In such a scenario, an asset – the purchased software – would be recorded and amortized over its expected useful life even though it is deployed in a cloud environment.

Other costs

A customer may incur various other costs in a cloud arrangement, such as internal or external labor or consulting costs. These costs should be evaluated on the basis of the customer's specific facts and circumstances and recorded in accordance with the applicable guidance (See "Considerations for accounting treatment of different cloud structures"). Potential tax implications associated with cloud should be considered, including timing differences between book and tax bases resulting from a shift from a capital expenditure (CAPEX) model to an operating expense (OPEX) model, potential transfer pricing issues, and receipt of energy credits. These and other implications will be discussed in a subsequent Deloitte POV.

Figure 1. Example of a three-year term option

Payment Option	Upfront	Monthly	Effective Hourly	Savings over On-Demand	On-Demand Hourly
No Upfront	$0	$3.65	$0.005	57%	$0.0116
Partial Upfront	$66	$1.68	$0.005	61%	
All Upfront	$115	$0	$0.004	62%	

Source: AWS Website: https://aws.amazon.com/ec2/pricing/reserved-instances/pricing/

Making the case to Wall Street

CFOs may hesitate to champion the adoption of cloud computing because it often involves a shift from CAPEX to OPEX models. The perception is that this shift can have a negative impact on Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA), which in turn can be received negatively by analysts and investors.

To better understand this dynamic, Deloitte identified a group of public companies that have invested in the cloud. We studied how they communicated and positioned those investments to Wall Street and, in turn, how the Street reacted to and valued the investments. Specifically, we looked carefully at whether analysts were interested in the increase in operating expenditures due to cloud adoption.

Our research revealed interesting insights:

- The CAPEX/OPEX issue did not appear to be a significant consideration in filings, commentary, and analyst discussions.
- Companies may be underselling and underutilizing their cloud investments – messaging to Wall Street appears to be focused too much on quantifying cost-reduction opportunities.
- Instead, analysts appear to show greater interest in how cloud adoption can lead to potential new revenue streams or revenue enhancement opportunities, of course with appropriate specificity.

These insights hint strongly at the vital role CFOs can play in communicating to Wall Street the potential strategic benefits of cloud adoption for their company. This might entail moving a specific area of operations to the cloud or creating new business units or revenue streams altogether based on cloud operating models. For example, by moving its after-sale customer service operations to the cloud and using more advanced technology than that area of the business previously had, one major manufacturer was able to improve its customer service results by contacting customers proactively to address equipment maintenance items before they became problems.

Deloitte studied how a set of public companies communicated their cloud investments to Wall Street and how analysts responded. The CAPEX/OPEX issue did not appear to be a significant consideration in filings, commentary, and analyst discussions. In fact, companies may be underselling and underutilizing their cloud investments. Analysts appear to be more interested in how cloud adoption can lead to potential new revenue streams or revenue enhancement than in its potential for cost-reduction.

Time for CFOs to weigh in

Clearly, cloud computing's demonstrated benefits are compelling in many situations. Its cost-reduction potential and perhaps its ability to give organizations access to greater IT capabilities than they could justify maintaining on their own are compelling parts of a business case for cloud. Cloud adoption enables organizations to focus more time and resources on their core business activities outside than IT while providing the flexibility to scale computing resources up or down in response to changing market needs.

At the same time, it is also clear that other factors should be considered as part of the cloud equation. EBITDA and other key performance indicators may be affected, potentially impacting company performance significantly. Opportunities to consider new business and operating models, new revenue streams, and ways to enhance existing revenue sources may arise from cloud adoption.

CFOs should be key players in conversations about cloud. They have the opportunity to garner support from stakeholders both within and outside of their organization by articulating the anticipated financial impacts of cloud adoption and how cloud might enable the business to deliver services with greater efficiency and speed. The move to the cloud is in full swing. There is no better time than now for CFOs to become catalysts behind cloud adoption and help define and drive toward resulting benefits

Appendix – Considerations for accounting treatment of different cloud structures

Considerations for accounting treatment of different cloud structures

Cloud implementations can take many different forms, from providing access to a single software application (software-as-a-service, or SaaS) to outsourcing an entity's entire IT infrastructure (platform-and-infrastructure-as-a-service – PaaS or IaaS). Each type has different capabilities, and is applicable to different situations and company requirements.

Of course, the cloud environment itself can also be implemented in different ways based on the needs of an organization. Common variations include public, private, virtual private, community, and hybrid clouds. It is important to understand the difference between these types of clouds, the demonstrated benefits of each, and their potential tax and accounting implications. Following are high-level accounting considerations for the various cloud types:

Cloud parameters	Guidance/Consideration	Applicability for cloud arrangement types			
		Public cloud, vitual private cloud	Private cloud	Community cloud	Hybrid cloud
Infrastructure	Equipment is generally a CSP's property and would be recognized as such and depreciated over its useful life	✓	✓		
	Consider whether service is delivered on premise or hosted by third-party provider			✓	✓
Hosting arrangement	Subscription-fees is to be generally expensed in period the entity receives the benefit of using the related services	✓	✓		
	Consider service arrangement (access to particular software application on demand via the internet)			✓	✓
Software	Consider who produces/maintains software, and whether access is allowed without incurring significant penalty	✓	✓		✓
	Consider whether software is developed or obtained for “internal use”			✓	
Lease arrangement	Consider leasing arrangements, who has right to control the use of the underlying assets, any transfer agreement	✓	✓	✓	✓

Source: Deloitte Consulting LLP, 2018

Endnotes

1 “Building Trust in a Cloudy Sky: The state of cloud adoption and security,” McAfee, January 2017, https://www.mcafee.com/us/solutions/lp/cloud-security-report.html.

2 https://aws.amazon.com/ec2/pricing/reserved-instances/pricing/

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