

## Monthly Research Commentary

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### The Global Recession and its Lasting Effects on IT

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As world stock markets recover and leading economists and government officials proclaim that the global recession is (at least technically) over, it's a good time to take stock of how the sudden and steep business downturn of the last 12 months has affected the information technology industry.

Of course, we can't relax yet, as there is the real risk of a second, 'double-dip' recession. Unemployment in many nations is still rising, and in the US, for example, wages are falling and mortgage foreclosures and consumer debt remain at frightening levels. But if it is true that the worst of the downturn is now (or soon will be) behind us, we think that the four observations below will set the tone for business/IT strategies over the next 24 months:

1. We have only just begun to get to grips with the recognition that information technologies substantially enabled and accelerated the global financial industry meltdown. This is leading to a major re-thinking of the whole idea of Enterprise Risk Management (ERM) systems.
2. In contrast to previous recessions, during this downturn the political position of Enterprise IT has strengthened in most large organisations, helping many companies push through important business/IT change initiatives.
3. The recession has given cloud computing a major boost, as firms have been forced to become more open to lower cost alternatives. Real-world use of 'The Cloud' appears to have been accelerated by as much as two years.
4. The relative priority of various 'Green IT' initiatives has fallen sharply, as companies focus on much more immediate concerns. Only a sustained recovery seems capable of restoring this issue to its 2007 level of urgency.

When the full force of this recession became clear in late 2008, we, like most of our clients, reshaped our agenda to focus on the new challenges at hand. In this memo, we will draw on our resulting Leading Edge Forum research to explore the four observations above and provide a high-level perspective on how the global downturn has affected our clients and our industry, and what this means for the journey ahead.

#### IT as a recession enabler

In our recent report on *The Global Recession*, we explored the role that IT played in accelerating and aggravating the current economic downturn. While the primary causes of the financial industry bubble were essentially the same societal excesses seen in previous bubbles – irrational exuberance, greed, speculation, wilful blindness, etc. – there is no doubt that IT made things significantly worse.

Computers greatly increased the speed, scale and complexity of the financial industry meltdown. More specifically, IT was essential to the rapid expansion and abuse of the three financial instruments most directly responsible for the collapse – derivatives, mortgage-backed securities and credit default swaps. Perhaps most troubling, powerful computers and the mathematical whizzes behind them were inseparable from the complex risk management models that provided executives, managers and regulators with such a false (and now laughable) sense of assurance.

In our research, we have described these developments as a case of “Product IT run amok”. Until recently, the integration of finance and technology was widely seen as emblematic of the power of fully integrated business and IT. Over the years, information technology has clearly done an enormous amount of good in enabling more efficient and transparent global financial markets. That’s why the ‘rocket scientists’ and their complex systems and applications were so often seen as the ‘crown jewels’ of the firms involved. But now organisations are going back to the drawing board, and the role of human judgment and oversight is again in ascendance.

We think these lessons have implications far beyond financial services. Finance is not the only industry dependent upon complex systems, models and assumptions that most managers and executives don’t really understand. Over the last decade, ERM systems based on principles similar to those used in financial services have been adopted by many large firms. In our forthcoming study, *Rethinking Risk*, we will examine the need for organisations to much more fully integrate their business and IT risk management processes, and more deeply understand the new forms of risk that this co-evolution entails. We encourage clients to participate in this project.

### **A silver lining for IT**

During previous recessions, Enterprise IT spending has been hit disproportionately hard, as companies chose to focus their resources on what were seen as more front line priorities – such as products, sales and services. In the 1970s, ‘80s and even ‘90s, IT was typically viewed as a lower-priority, back-office function, whose work could be safely postponed. It was a humbling and frustrating reality for the IT community.

This time around, things have been quite different. In the majority of clients we have talked with during this recession, IT has been disproportionately spared, as companies see technology as the best way to achieve their overall cost reduction requirements while still retaining needed business capabilities. Certainly IT budgets have been cut, sometimes severely, but on average they have suffered less than other company functions. We even know a few firms where IT budgets have actually increased, while corporate spending in other areas has been sharply curtailed.

This increased reliance upon IT to cope with the downturn has manifested itself in a number of ways. Companies have found it easier to centralise operations, consolidate systems, agree upon shared services and pool scarce human capital than was the case during more prosperous times. Thin clients/virtual desktops are an especially telling example of this change. When times are good, business units and employees can come up with any number of reasons why they need to keep their full-function desktop or laptop PCs. It is only when funding is truly scarce that the potential cost savings of thin clients for certain employees can carry the argument in many firms.

More broadly, we see this recession as having created a window of opportunity. Many Enterprise IT organisations have long talked about the potential efficiencies that could be gained if they could rein in business unit autonomy and deploy systems the way they thought best. Now that cost cutting is the primary goal in most firms, business management is essentially saying to IT: “OK, let’s see what you can do.” In this sense the next 12 to 24 months could prove critical in shaping business attitudes toward IT, especially if the economy recovers and more strategic and value-added business/IT initiatives return to the organisational agenda. Tracking these realities and perceptions is a key part of our ongoing Business/IT Relationship Management (BRM) research.

### **Fast-moving clouds**

In the summer of 2008, we conducted a major research project that we called *Organising IT for the Future*. One of the main purposes of the project was to gauge client attitudes towards the various types of IT sourcing, as firms tried to find the right balance between internal, outsourced, offshore, business unit and self-service Internet/cloud alternatives. Our research interviews were completed several months before the recession took hold or was even visible to most organisations.

At that time, the term ‘cloud computing’ was already in wide industry use, and many of our clients felt they understood the basic idea of virtual and on-demand hardware, software and application resources. But during the course of interviewing CIOs and other IT leaders at more than 40 large organisations, it became clear that relatively few firms were taking cloud computing seriously, with most believing that it would at best be a long-term alternative.

Over the last year, this view has changed dramatically, and cloud computing has become both a pre-eminent IT industry concept and a high-priority area for many of our clients. In our recent report, *Doing Business in the Cloud*, we identified a wide range of cloud usage in applications as diverse as testing and development, peak load support, streaming media, email, collaboration and many forms of social networking. That this usage included many firms with strong security requirements was especially impressive.

We believe that the global recession has been the single largest reason for this sudden change in attitude. When the required IT cost reductions cannot be realised by doing business as usual, it's only natural that CIOs will become more willing to consider alternatives that previously seemed too radical. We have also observed that once organisations start to use the cloud, they often discover new and important advantages, well beyond mere cost containment. This provides further grounds for optimism.

While we have always forecast that cloud computing and public infrastructure would eventually become important components of Enterprise IT, we believe that the recession has accelerated this change by as much as two years. In this sense, the current period reminds us of the IT market in the US in the second half of the 1980s, when a sluggish economy helped fuel the rapid transition away from the older, more expensive minicomputer paradigm to the nascent personal computer industry.

### **Whither Green IT?**

From an IT industry perspective, the most obvious casualty of the global recession has been Green IT. During the 18 months from the beginning of 2007 until mid-2008, Green IT was the single most requested topic for LEF presentations in both the US and Europe. Frequent international conferences and extensive exposure in the business, trade and popular press helped create strong worldwide momentum.

But as we noted in our March 2008 report, *Green IT - Moving Beyond the 2% Solution*, business interest in Green IT is inseparable from the wider economy, especially the price of energy. IT accounts for less than 2 percent of global energy usage, and energy costs are a similarly small fraction of total Enterprise IT spending. Thus, from a pure economic point of view, Green IT has always been a relatively low business and CIO priority. Not surprisingly, when the global economy started contracting and the price of oil fell by more than half, interest in reducing energy consumption dropped substantially in many firms.

Barring a big jump in energy prices, it appears that only a strong political/regulatory push can sustain this issue as a top business priority. Before the recession took hold, it seemed that the combination of the election of Barack Obama and the United Nations' *Framework for Climate Change Conference* in December 2009 in Copenhagen might well provide the necessary political consensus for dramatically reducing greenhouse gas emissions in both the developed and underdeveloped worlds.

But while progress is still possible, major near-term changes now seem less likely. Job creation/protection is now the top government priority, and this makes it hard to enact policies that can be seen as making economic recovery less likely. Similarly, the once heavily promoted idea of subsidising the use of new greener technologies in the developing world has become much harder for politicians to support now that most developed world governments face severe fiscal deficits. But while these and other political/economic developments have provided fresh ammunition to climate change sceptics, they haven't changed the scientific consensus at the heart of the global environmental community, which is why the Copenhagen conference will surely generate strong passions on all sides.

From our perspective, we think we made the right decision late in 2008 when we decided to postpone our planned 2009 sustainability research until 2010. Information technology will eventually play a major role in helping to build a more environmentally friendly - and much more energy-efficient - global economy, but the real push may not begin until either more stable economic times return or more serious human consequences become obvious to all. Our research into the advanced environmental applications of IT is scheduled for completion in the summer of 2010. If the experts are right, the economic recovery should by then be well under way.

## Conclusion

These are, of course, just four examples of the many forces shaping the world of IT. But they are the four that seem to us to have been the most directly affected by the current recession. Two of these – Enterprise IT's improved political position and its rising interest in the cloud – are essentially positive in nature. The other two – IT's role in enabling the recession, and the recession's adverse effect on Green IT – sound more cautionary notes.

Students of economic history have long observed that recessions and even depressions help clear the way for new business landscapes to come, and the current downturn seems likely to repeat this pattern. Just as a rising tide lifts all but the leakiest of boats, so will a sustained global recovery set the stage for significant progress on at least three of these fronts. If Enterprise IT is seen to have delivered the necessary business efficiencies, it will be well positioned to add value during the next upturn. Once firms experience first-hand the advantages of cloud computing, they are unlikely to instinctively revert to older computing paradigms. Finally, more prosperous times will no doubt move sustainability and Green IT higher up the business and societal agenda.

In contrast, the dangers of "Product IT run amok" and the need for fresh thinking in regards to risk management are long-term challenges that will require ongoing improvements in management, motivations and metrics. Progress in these areas will be slower and is by no means assured. The Japanese bubble of the 1980s, the dot.com bubble of the 1990s, and the giant financial bubble of the current decade are evidence that market instability is increasing. And as IT makes business and society ever more inter-related and complex, this tendency toward booms and busts may be difficult to reverse. Society is now starting to change at a rate closer to that of information technology itself, suggesting an extended period of business/IT co-evolution whose full shape and scope won't be clear until long after better times return.

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