

**The Shaping Opportunity:
Uncovering the Emerging Logic of Deep Change**
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When things go bad in the economy, two things happen. First, our horizons tend to shorten – we scan the Internet and other news feeds searching for clues regarding what to expect in the near-term. Will the meltdown continue? Have we reached bottom? Are there green shoots appearing that might offer hope? Second, we begin to search for whom to blame. Somebody must have gotten us into this mess. Somebody must be made to pay.

While natural and perhaps inevitable, these two instincts can be very dangerous. They can obscure deeper, longer-lasting forces at work. They also distract us from the actions that we will need to take to build enduring businesses and institutions.

Let's be blunt. What made us so successful in the 20th century is killing us today. The game is fundamentally changing around us and, consumed by a losing quarter and the playbook in our heads, we have not yet realized that an entirely new set of rules have re-defined the game. Those who first begin to understand the new rules of the game will be in the best position to shape its evolution in ways that favor their particular goals.

Driven by a new set of communication and transportation infrastructures emerging in the early part of the 20th century, great entrepreneurs began to understand the new possibilities and constructed a new institutional architecture and set of practices tailored to the emerging opportunities. As Alfred Chandler and Ronald Coase later made clear, these companies discovered how to harness the capabilities of newly emerging energy, transportation, and communication infrastructures to generate efficiency at scale.

We are now in the midst of the emergence of a new digital infrastructure that not only creates new possibilities, it does it in a way that is unprecedented in modern history. We are in fact in the midst of a Big Shift that is redefining where and how we create value. Put simply, we are moving from a world where **scalable efficiency** generated the most value to one where **scalable peer learning** will be the key driver of value. We are not moving from a stable Point A to a stable Point B as in previous economic transitions. This time we are moving from a stable Point A to a rapidly changing Point B that will evolve even more rapidly as we master the techniques required to thrive in this new world.

Our challenge and opportunity is to generate new institutions and practices that can harness the new digital infrastructure evolving around us and create enormous value in

the process. As this opportunity begins to come into focus, it will provide a rich driver of the kinds of shaping strategies that we outlined at the recent FiRe Conference in San Diego.

But before we can effectively pursue these shaping strategies, we need to pull back and scan longer-term horizons, searching for the drivers of the deeper changes that have been playing out for decades. We must resist the temptation to become consumed in finding the guilty and instead realize that we are confronting systemic changes that will continue to unfold regardless of who is in charge of our institutions.

These are bold and provocative assertions. What evidence do we have to support the need for more fundamental change? For the past year, we have been engaged in constructing a Shift Index that, for the first time, seeks to quantify the longer term changes playing out on our business landscape. While the individual metrics in the Shift Index are revealing, the real power and insight will not register until we step back and explore the implications of the metrics in aggregate.

The Performance Challenge

Our release of [The 2009 Shift Index Report](#) highlights a core performance challenge for the firm that has been playing out for decades. Remarkably, the return on assets (ROA) for all public U.S. firms has steadily fallen to almost one-quarter of 1965 levels at the same time that we have seen continued, albeit much more modest, improvements in labor productivity. Additional findings include the following:

- The ROA performance gap between winners and losers has increased over time, with the “winners” barely maintaining previous performance levels, while the losers experience rapid deterioration in performance.
- The “topple rate,” at which big companies lose their leadership positions, has more than doubled, suggesting that “winners” have increasingly precarious positions.
- U.S. competitive intensity has more than doubled during the last 40 years.
- While the performance of U.S. firms is deteriorating, the benefits of productivity improvements appear to be captured in part by creative talent, which is experiencing greater growth in total compensation. Customers also appear to be gaining and using power as reflected in increasing customer disloyalty.
- The exponentially advancing price/performance capability of computing, storage, and bandwidth is driving an adoption rate for our new “digital infrastructure” that is two to five times faster than previous infrastructures, such as electricity and telephone networks.

Given these long-term trends, we cannot reasonably expect to see a significant easing of performance pressure as the current economic downturn begins to dissipate—on the contrary, all long-term trends point to a continued erosion of performance. Again, to put it bluntly, our existing institutions and practices are fundamentally broken – whatever we have been doing over the past four decades is simply not working. Despite all of our efforts, we are experiencing rapid and sustained deterioration in performance. We are running faster and faster but, unlike the Red Queen, we are not even able to stay in the same place.

Even as competition continues to intensify, we need to find creative ways to generate substantially greater rewards, rather than focusing on how to split up the shrinking pie. By finding ways to create significant new economic value, it will be easier for companies and their shareholders to capture their fair share of these growing rewards. Only then will the Shift Index turn from an indicator of corporate decline to one reflecting powerful new modes of economic growth.

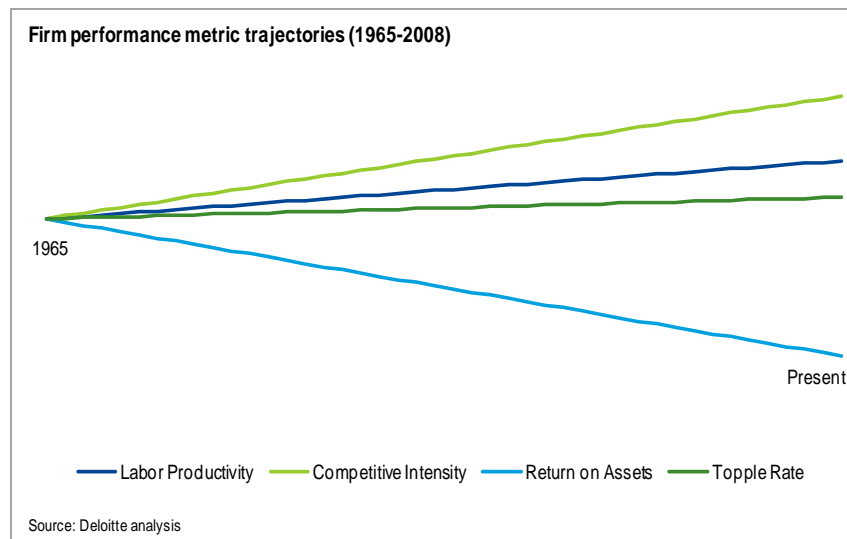


Exhibit 1: While U.S. workers' productivity has grown, ROA has dropped

These conclusions can be framed in terms of a performance challenge on two levels for our institutions. At the first level, our productivity is improving at a rate far slower than the underlying increase in performance of our digital infrastructures. The gap between potential and realized performance is steadily widening.

At a second level, firm performance continues to deteriorate as competition intensifies, driven by the spread of digital infrastructures and public policy initiatives that reduce barriers to entry and barriers to movement. In other words, firms are failing to capture the benefits for themselves or for their shareholders of even the modest productivity

improvements achieved. These benefits instead appear to be captured increasingly by creative talent and customers, who are gaining more market power as competition intensifies.

Simply put, the performance challenge is that firms are failing on two levels. First, they are failing to harness the full potential of digital infrastructures in terms of productivity improvement. Second, the benefits from the modest improvements in productivity are being sucked out of the firm and captured by increasingly powerful constituencies – talent and customers. To understand why, we need to probe deeper into the long-term changes playing out around us.

The Deep Dynamics of the Big Shift

The Shift Index consists of three indices designed to capture three waves of long-term, deep change. By quantifying these forces we seek to help institutional leaders steer a course for “true north,” while helping minimize distraction from the short-term events that compete for their daily attention. Rather than simply reacting to events, institutional leaders will be better positioned to anticipate the changes that will make the greatest difference in terms of success or failure.

Wave One – Building the Foundations

The first wave of change involves the rapid, unflagging evolution of a new digital infrastructure and parallel, magnifying shifts in global public policy that have systematically and significantly reduced barriers to entry and movement. These foundational forces, playing out over the last five decades, catalyze and contextualize the many other changes occurring in nearly every domain of contemporary life. As a result, the changes in these foundational forces provide powerful leading indicators of the deep changes that will be playing out over time in other waves of the Big Shift.

Carlotta Perez, the economic historian, outlined in her book *Technology Revolutions and Financial Capital*, a common pattern of technology adoption and diffusion. Whether we are talking about the development of the steam engine, electricity or the telephone, this pattern is well-established. First, there is a burst of technology innovation that brings a powerful new technology into the market. The pace of performance improvement for the core technology rapidly flattens out however. This stabilization of the core technology unleashes a wave of further innovation in defining the appropriate infrastructure required to most effectively deliver the capabilities of the new technology to the broader marketplace. By infrastructure, she means the broader institutions, practices and protocols required to support the delivery of the technology to users. Once again, an initial wave of innovation relatively quickly leads to stabilization of the new infrastructure. This in turn provides a stable foundation for another wave of

entrepreneurs as everyone tries to figure out how to harness the potential of the new technology through innovations in the broader business world and society.

The **Foundation Index** quantifies and tracks the rate of change in these foundational forces, with a particular focus on the capabilities and diffusion of the new digital infrastructure. Key metrics include the change in performance of the technology foundations of the digital infrastructure, growth in the adoption rate of this infrastructure and a sub-index measuring product and labor market regulation in the economy.

Wave Two – Unleashing and Accessing Richer Flows of Knowledge

The second wave of change will be characterized by increasing flows of capital, talent, and knowledge across geographic and institutional boundaries. In this wave intensifying competition and the increasing rate of change precipitated by the first wave shifts the sources of economic value from “stocks” of knowledge to “flows” of new knowledge. In this rapidly changing world, our stocks of knowledge (what we know) obsolesce more quickly and success depends increasingly on our ability to tap into expanding and diverse flows of knowledge to more rapidly refresh our depleting stocks of knowledge.

While these knowledge flows are enhanced and enriched by digital infrastructures, the most valuable knowledge flows – those that result in new knowledge creation rather than simple transfers of well-codified existing knowledge – still most often occur in physical space through face to face interactions. In this rapidly changing world, there is far more value in a tightly knit team bringing together different experiences and views of the problem to solve a new performance challenge than in reading a training manual.

Knowledge flows certainly encompass accessing and transferring existing knowledge across larger groups of participants. However, a much more powerful form of knowledge flow arises when people with diverse skill sets, experiences and perspectives come together to address challenging performance issues and, in the process, create new knowledge. Knowledge transfer by definition is a diminishing returns game. Knowledge creation on the other hand offers the exciting prospect of unleashing increasing returns dynamics as more and more participants come together to build on each other’s contributions.

The social media technologies starting to gain adoption within the firm will be key enablers of these knowledge flows. While currently used in fragmentary ways, there is an opportunity to design much more robust technology platforms to deploy “creation spaces” where peers come together and learn faster as more and more participants join.

The metrics in the **Flow Index** capture physical and virtual flows as well as the amplifiers—such as how passionately engaged employees are with their jobs and social media use—that result from and magnify the effect of the digital infrastructure. Given the slower rate with which social and professional practices change relative to the digital infrastructure, this index will likely lag the Foundation Index. It will be extremely helpful to track the degree of lag over time for specific elements of knowledge flows – is it increasing or decreasing?

Our metrics in the Flow Index focus on identifying proxies for broad knowledge flows within this US economy. Ultimately, we believe leadership teams in companies will need to identify a set of operating metrics that track the ability of the firm to effectively participate in a growing range of diverse knowledge flows. This new set of operating metrics could become important leading indicators of the financial performance of the firm.

Wave Three – Effectively Addressing the Performance Challenge

The third wave of the Big Shift reflects the ability of companies to harness the first two waves of changes through innovations to institutional architectures. An example of this kind of institutional innovation might be the ability to deploy scalable learning ecosystems where performance accelerates as more participants join. Over time, these innovations will enable firms to develop and adopt new ways of creating and capturing wealth in the digital era. Initial deterioration in shareholder value and ROA will eventually improve as firms harness the foundational and flow forces of the first two waves of change and accelerate their rate of performance improvement.

The **Impact Index** is for that reason a lagging indicator reflecting the impact of the deep changes playing out in the first two waves on the performance of the firm and equity markets, consumer choice, and the value captured by talent.

Shift index indicators	
Impact Index	Markets Competitive Intensity: Herfindahl-Hirschman Index Labor Productivity: Index of labor productivity as defined by the Bureau of Labor Statistics Stock Price Volatility: Average standard deviation of daily stock price returns over one year
	Firms Asset Profitability: Total ROA for all US firms ROA Performance Gap: Gap in ROA between firms in the top and the bottom quartiles Firm Topple Rate: Annual rank shuffling amongst US firms Shareholder Value Gap: Gap in the TRS ¹ between firm in the top and the bottom quartiles
	People Consumer Power: Index of 6 consumer power measures Brand Disloyalty: Index of 6 consumer disloyalty measures Returns to Talent: Compensation gap between more and less creative occupational groupings ² Executive Turnover: Number of Top Management terminated, retired or otherwise leaving companies
Flow Index	Virtual Flows Inter-firm Knowledge Flows: Extent of employee participation in knowledge flows across firms Wireless Activity: Total annual volume of mobile minutes and SMS messages Internet Activity: Internet traffic between top 20 US cities with the most domestic bandwidth
	Physical Flows Migration of People to Creative Cities: Population gap between top and bottom creative cities ² Travel Volume: Total volume of local commuter transit and passenger air transportation ³ Movement of Capital: Value of US Foreign Direct Investment inflows and outflows
	Amplifiers Worker Passion: Percentage of employees most passionate about their jobs Social Media Activity: Time spent on Social Media as a percentage of total Internet time
Foundation Index	Technology Performance Computing: Computing power per unit of cost Digital Storage: Digital storage capacity per unit of cost Bandwidth: Bandwidth capacity per unit of cost
	Infrastructure Penetration Internet Users: Number of people actively using the Internet as compared to the US population Wireless Subscriptions: Percentage of active wireless subscriptions as compared to the US population
	Public Policy Economic Freedom: Index of 10 freedom components as defined by the Heritage Foundation

1. TRS – Total Return to Shareholders
 2. Creative occupations and cities defined by Richard Florida's "The Rise of the Creative Class." 2004
 3. Measured by the Bureau of Transportation Statistics Transportation Services Index
 Source: Deloitte analysis

Exhibit 2: The Shift Index consists of three indices that quantify the three waves of the Big Shift - Foundation Index, Flow Index and Impact Index - each measured by a set of indicators.

Shift Index Findings

Our initial development of the Shift Index has focused on the US and US industries. Subsequent releases will broaden the index to a global scope and provide a diagnostic tool to help assess the performance of individual companies relative to a set of firm-level metrics.

The choice of metrics reflected a robust selection process. Many metrics are directional proxies chosen in the absence of ideal alternatives. Some are drawn from secondary data sources and analytical methodologies; some are unique to our index. While the data reveals significant correlations across metrics—consistent with the underlying logic of our theoretical framework—the findings are suggestive. We have not attempted to prove causality given the limitations in the ability to generate data to directly and tightly measure many of the deep changes occurring around us, but we are hopeful that the

Shift Index will become a catalyst for a broad set of research initiatives to test and refine our findings.

For a much deeper look at our methodology and data—as well as a full discussion of our findings—please see [The 2009 Shift Index Report](#).

Overall, the Shift Index suggests that the deep changes in the Foundation Index continue to move at a faster pace than the changes in either Flow or Impact Indices. The trend line for changes in Foundation metrics has a much steeper slope of 7.83 relative to the slope of 5.95 measuring change for Flow metrics or and the slope of 1.93 for Impact metrics.

This is one important way to track where we are in the overall Big Shift. We would expect that countries and industries that are in the earliest stage of the Big Shift will see the highest rates of change in the Foundation Index. Over time, as the Big Shift gathers momentum and pervades broader sectors of the economy and society, we would expect to see the rates of change in the Flow and Impact Indices to pick up speed while the rate of change in the Foundation Index may begin to show signs of slowing down.

Foundation Index

The Foundation Index, with a 2008 score of 153, has increased at a 10 percent compound annual growth rate (CAGR) since 1993, and tells the story of a swiftly moving digital infrastructure propelled by unremitting price performance improvements in computing, storage, and bandwidth that show no signs of stabilizing. Our findings show that the rate of change in the performance of the technology building blocks substantially exceeds the rate of change in the two other foundational metrics – adoption rates and public policy shifts. It remains the primary driver of all the other deep changes.

Reflecting back on Carlotta Perez’s work, we are in the midst of an unprecedented transition to a new technology infrastructure. While all the previous generations of technology revolutions followed the pattern of rapid stabilization in the core technology, followed by the infrastructure and ultimately the broader business world, there is no near-term prospect of stabilization. The core technologies continue to advance in performance at exponential rates. As a consequence, the digital infrastructure continues to evolve at a rapid rate as well. We are just now entering into an era of “cloud computing”, a fundamentally new expression of digital infrastructure emerging in response to the rapidly evolving capabilities of the core technology building blocks. Rather than stabilization of the broader business world, we are likely to see an extended period of continued disruptions as firms race to embrace each new wave of capability.

Public policy remains the wild card. There is considerable risk that a policy backlash driving increasing barriers to entry and barriers to movement may gain force in response to the intense pressures of the current economic downturn. The Shift Index will monitor this trend over time relative to the changes in the other foundations.

Flow Index

The Flow Index, with a 2008 score of 139, has increased at a seven percent CAGR since 1993, although the trend analyses are limited here by the earliest dates for which data is available.

The creative classes Richard Florida identified as the driving force for economic development continue to increasingly congregate in concentrated “spikes” of talent. Increasing numbers of creatives are fleeing the confines of the firm, as well. This creative talent is the most passionate about their work, and most likely to participate in knowledge flows relative to their less passionate peers.

The face to face interactions that drive the most valuable knowledge flows—resulting in new knowledge creation—are impossible to measure directly. Social media usage, conference and web-cast attendance, professional information and advice shared by telephone and in lunch meetings all provide suggestive proxies of various kinds of knowledge flows. Our Shift Index surveys establish a baseline of these activities and indicates that social media such as Facebook may be expanding inter-firm knowledge flows. Future surveys will quantify the magnitude and pace of change of these important flows.

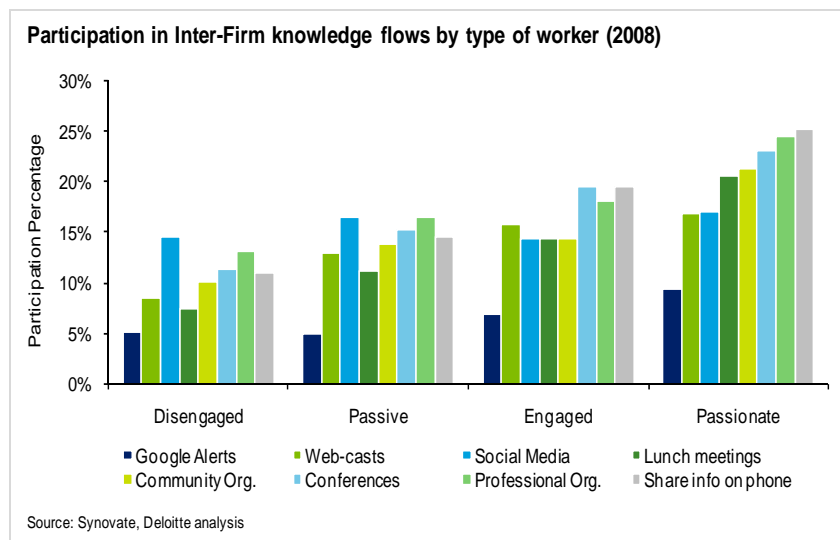


Exhibit 3: Workers who are passionate about their jobs are more likely to participate in knowledge flows and generate value for companies

Impact Index

The Impact Index, with a 2008 score of 111 at a 2.4 percent rate of change since 1993, tells the story of intensifying competition taking its toll on corporate performance despite a steady rise in labor productivity across all the industries in our study. Consistent with our view that new digital infrastructures create the potential for much greater improvements in productivity, it is striking that the Technology and Telecommunications industries – the ones most heavily involved in defining and deploying the digital infrastructures - have led the pack in terms of productivity improvement.

At the same time the economic environment has become considerably more unstable, as shown by increases in the topple rate at which companies lose their leadership positions, a doubling in stock price volatility since 1972, and growing divergence between winners and losers, as measured by both shareholder value creation and ROA.

Meanwhile, creative talent continues to capture increasingly disproportionate returns in terms of total compensation relative to the rest of the labor force. These increases in returns to creative talent appear to be correlated to an acceleration of growth of the most creative cities. On the customer side, new generations entering the marketplace appear to be more willing to exercise their market power to switch to products and services that more effectively meet their needs, putting greater pressure on vendors.

The growing power of creative talent and customers as competition intensifies rises helps to resolve the mystery of why ROA is declining so markedly at the same time that productivity improvements continue to occur. The answer is not to find ways to squeeze creative talent and customers in a zero sum battle to capture more of the existing pie.

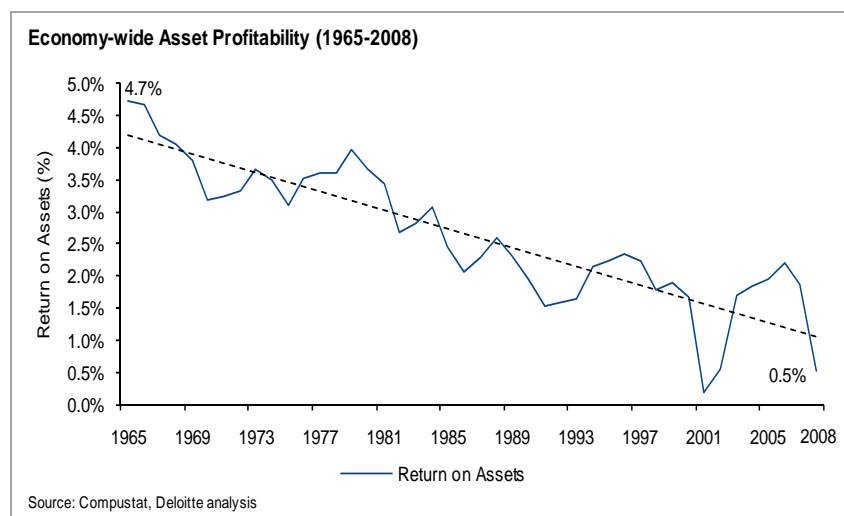


Exhibit 4: Asset profitability for U.S. firms steadily fall more than 75% over the past four decades

We picked Return on Assets as our primary measure of corporate performance because we wanted to find a measure of profitability that went beyond income statement profitability and measured the ability of management to earn an acceptable return on the assets deployed in the business as well. At the same time, we wanted to look at profitability independent of financial engineering choices involving debt/equity structures, so we avoided measures involving return on equity. In fact, the declining return of assets over the period we examined may explain why many companies, particularly in the financial sector, were tempted to resort to more and more financial leverage as a way to boost returns to shareholders.

We realize that accounting measures of assets have many imperfections, in particular the difficulty in quantifying intangible assets like intellectual property and tacit knowledge that can often be significant advantages in business. We will leave to others the task of developing standardized ways of measuring these kinds of assets and factoring them into new ROA calculations. We will simply point out that, if anything, accounting reports of assets of public firms are understated today because they do not capture these intangible assets very well. Thus, if these asset values were more effectively represented, it would only drive down return on assets even more steeply – the asset denominator would go up while the returns numerator would stay the same.

The Shift Index suggests that in some industries companies have pursued aggressive M&A strategies. While this may help to drive new scale efficiencies and market power in the short term, these defensive strategies are a diminishing returns game. This tends to be confirmed by the fact that “winners” in the growing performance gap are barely hanging on in terms of sustaining existing levels of performance – even they are finding it very difficult to hold on to the bottom line benefits of productivity improvements.

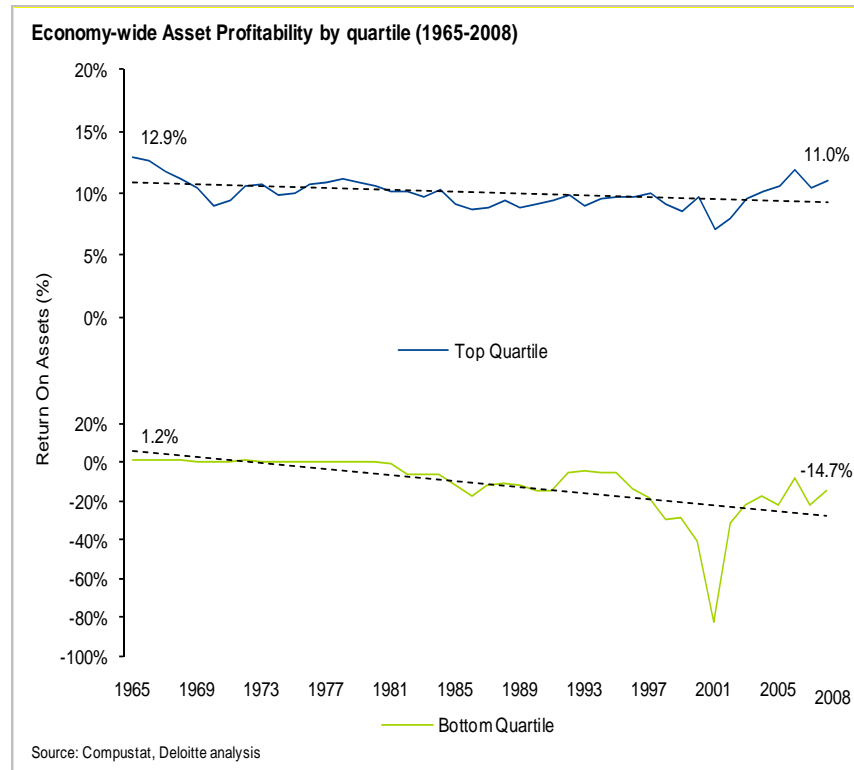


Exhibit 5: Winning companies are barely holding on, while losers are rapidly deteriorating

As an alternative, the opportunity is to drive institutional innovation to more effectively harness the performance potential of digital infrastructures and find ways to unleash the creative potential of the rest of the workforce (not just the “creative” professions) so that there is a much bigger pie in terms of total returns that can be shared more fairly with all relevant constituencies. After all, everyone has a craft, whether it is a welder in a large construction project or a mechanic maintaining a fleet of trucks in good order.

We are still in the process of transitioning to an “Enterprise 2.0” that seeks to embed a growing array of Web 2.0 technologies into existing enterprises, yet we see the prospect for an even more profound transition to an “Enterprise 3.0”. While this label has already been proposed to cover a variety of leading edge initiatives, we are concerned that, like Enterprise 2.0 initiatives, many of the evangelists for this next wave seem to be focused more on emerging technologies and less on unmet needs.

Driven by a growing perception of the unmet need to foster scalable peer learning, our suggested Enterprise 3.0 initiatives would at last challenge some of the key assumptions that continue to support the 20th century firm. For us, Enterprise 3.0 desperately needs to look beyond the four walls of existing enterprises. It would focus on connecting people across large numbers of institutions, shaping much broader ecosystems of

participants and helping them to build long-term trust-based relationships that can then provide a solid foundation for sustained and aggressive efforts to drive performance to new levels and help participants to create new knowledge and learn more rapidly in the process.

We should be clear that the significant and sustained deterioration in performance of US public firms does not suggest that the firm will disappear as an institution or that we will see disintegration into smaller and smaller firms or even the growth of a free agent nation consisting of independent contractors. Rather, we believe the deterioration in performance reflects a misalignment that needs to be addressed at a fundamental level. Rather than continuing to focus on scalable efficiency, firms need to shift to a focus on supporting scalable peer learning. We believe that ultimately people will be able to learn faster as part of an institution that can help them to improve performance by working with others. Until this difficult transition occurs, however, we expect that the most passionate workers, frustrated over the institutional barriers to their development, will continue to flee large firms and firm performance will continue to deteriorate.

Summary

It is completely understandable that we all have become so focused on the short-term economic events playing out around us. At the same time, though, it is very dangerous to lose sight of the deep changes that will continue to play out long after the current economic downturn is a distant memory. We face a long-term performance challenge that continues to intensify. The steps we take now to address this challenge will not only help us to weather the current economic storms but will position us to create significant economic value in an increasingly challenging business landscape. We believe that the Shift Index can serve as a useful compass and catalyst for the actions required to turn a performance challenge into a performance opportunity.

In the process, we will define and deploy new institutional architectures and practices that will lead to the emergence of a distinctive set of 21st century firms and ecosystems that harness the capabilities of our new digital infrastructure. Those who understand this potential and move aggressively not only to re-shape their own institutions but the broader arenas they play in through shaping strategies will potentially reap the greatest rewards of all.