

The 2009 Shift Index

Industry metrics and perspectives

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Executive Summary

The 2009 Shift Index for the U.S. economy, released in June, 2009, revealed a troubling, long-term trend: return on assets (ROA) for U.S. public companies had declined by 75 percent since 1965. This sustained erosion in corporate performance suggests that the current way of doing business is fundamentally broken. The 25 metrics of the Shift Index went a long way toward describing and quantifying the forces underlying this steady deterioration in corporate performance.

Executives with whom we shared these economy-wide findings reacted with understandable concern. Many of them wanted to know, “What’s happening in my industry?” This report provides insight into that question for nine major U.S. industries. We found that there are few, if any, safe harbors from the mounting performance pressures unleashed by the Big Shift.

The Big Shift represents the convergence of long-term trends, playing out over decades, that are fundamentally re-shaping the business landscape. While these trends are leading to severe performance erosion in the near-term, they also offer powerful new ways to create economic value in the longer-term.

Performance on specific metrics varies across industries. However, these variations appear to be largely a function of timing: some industries are experiencing the Big Shift much earlier and more severely than others. Technology, Telecommunications, and Media, the industries that are most directly involved in developing and deploying the technologies, practices, and protocols underlying the new digital infrastructure—which, along with public policy, is catalyzing the Big Shift—are among those hit earliest and hardest by the mounting performance pressures of this new era. Analysis suggests that, in time, virtually every industry will experience the full force of the Big Shift. Most of the industries we examined fall within a middle tier, feeling the early effects of the Big Shift but not yet subject to the full impact of performance pressures.

Only two industries—Aerospace & Defense and Health Care—have bucked the overall erosion in Asset Profitability

that has occurred since 1965. Looking across industries, one variable stands out as the key to the impact of the Big Shift on a particular industry: public policy, especially in the form of regulation that limits entry and movement by competitors within the industry. We do not believe it is an accident that two of the most highly regulated industries in the U.S.—Aerospace & Defense and Health Care—are outliers in a broader trend of performance erosion. The ever-more-powerful digital infrastructure increases the potential for competitive intensity and performance pressures, but public policy shapes the degree to which specific industries feel that pressure.

The Big Shift represents the convergence of long-term trends, playing out over decades, that are fundamentally re-shaping the business landscape.

This does not mean that companies should rush to Washington, D.C. in search of additional barriers against the forces of the Big Shift; such barriers may turn out to provide the same false complacency as the Maginot line. Like France in World War I, companies risk focusing on building barriers against frontal assaults while ignoring attacks from the flanks.

While companies are being buffeted by increasing performance pressures, two constituencies—customers and creative talent—are benefiting significantly from the Big Shift. So far, these two groups appear to be far more effective than companies are at exploiting the digital infrastructure, and the knowledge flows enabled by it, to capture economic value for themselves.

In fact, customers and creative talent are driving competitive pressure across many of the industries surveyed and exerting market power to squeeze value from their vendors and employers. For example, while the Health Care business is highly regulated, a less-regulated sub-sector is evolving at the edge of the traditional

industry. This sub-sector includes a broad array of nutrition, fitness, and integrative health providers centered on helping people to stay healthy and fit. Increasingly, this sub-sector is competing for the attention and spending of traditional health care consumers. From the other side, creative workers are garnering more cash compensation from the firms employing them and have increasing flexibility to change employers as well as industries.

While consumers and creative talent gain power, previously secure industry boundaries are crumbling as companies move in from adjacent industries, as is the case with the Telecommunications industry. Thus, the most significant competitive pressures may be coming from the flanks of traditional industries rather than from direct competitors. Regulatory protection has limited value for insulating against competition from these flanks. The power of customers and creative talent may be an important leading indicator of competitive intensity and more revealing than traditional metrics.

What is a company to do in response to these growing competitive pressures? The analysis suggests that companies should be wary of relying too heavily on improving labor productivity through cost reduction. The Shift Index cross-industry analysis shows there is little correlation between increases in labor productivity and improvement in ROA. In fact, some of the industries experiencing the most dramatic improvements in labor productivity have also experienced the most dramatic erosion in ROA.

Many companies have relied on automation and scale economics to achieve productivity improvements, but these cost-reduction approaches yield diminishing returns over time and competition continues to intensify. Cost-driven productivity improvement may be necessary to stay in the game, but it is not sufficient against mounting performance pressures. While labor productivity is a key driver of overall economic prosperity, it does not provide a sustainable refuge for firms.

The Center research suggests more promising ways to address performance erosion, through harnessing the

proliferating knowledge flows that are enabled and amplified by the digital infrastructure. Knowledge flows are a key driver of the growing power of customers and creative talent. Rather than attempt to claw back profits from these two constituencies, firms need to create economic value by participating effectively in flows of knowledge and not simply continuing to exploit existing knowledge stocks through greater economic efficiency. The Shift Index metrics reveal that most companies, across all industries, are participating in only a small fraction of the knowledge flows available to them.

We also discovered that, despite some variations across industries, 75 to 80 percent of the workforce lacks passion for the work they perform on a daily basis. This is particularly significant given the strong correlation between Worker Passion and more active participation in knowledge flows. If companies are serious about more effective participation in knowledge flows, they must find ways to draw out greater passion from their workers.

And what about innovation? At least as conventionally defined and practiced, innovation may not help the trend. The Technology industry, known for innovation, experienced one of the steepest ROA declines of all the industries we studied. This suggests that while product and technology innovation may be necessary, they also are not sufficient. Given the growing importance of knowledge flows, perhaps the most powerful form of innovation in this context may be institutional innovation—re-thinking roles and relationships across organizations to better enable creation of and participation in knowledge flows.

The Shift Index cross-industry analysis suggests that the forces of the Big Shift are having a far broader and deeper effect than most executives expect. While focusing on the short-term economic downturn is understandable, we run the risk of losing sight of more profound trends that will continue to shape profitability and competitive success long after the current downturn is over. With this report, we hope to draw attention to emerging cross-industry patterns while at the same time providing in-depth analysis of the drivers and implications of these trends in each industry.

Shift Index Overview

The following section is an excerpt and adaptation from the 2009 Shift Index that provides relevant context related to the Big Shift themes. The earlier 2009 Shift Index analyzed 25 metrics across three indices while the current Industry Perspectives report focuses on 13 metrics included in the Flow and Impact indices. These metrics were selected based on their importance to assessing industry performance relative to the Big Shift. The key findings for Shift Index Industry Metrics & Perspectives are highlighted in the Cross-Industry Perspectives section.

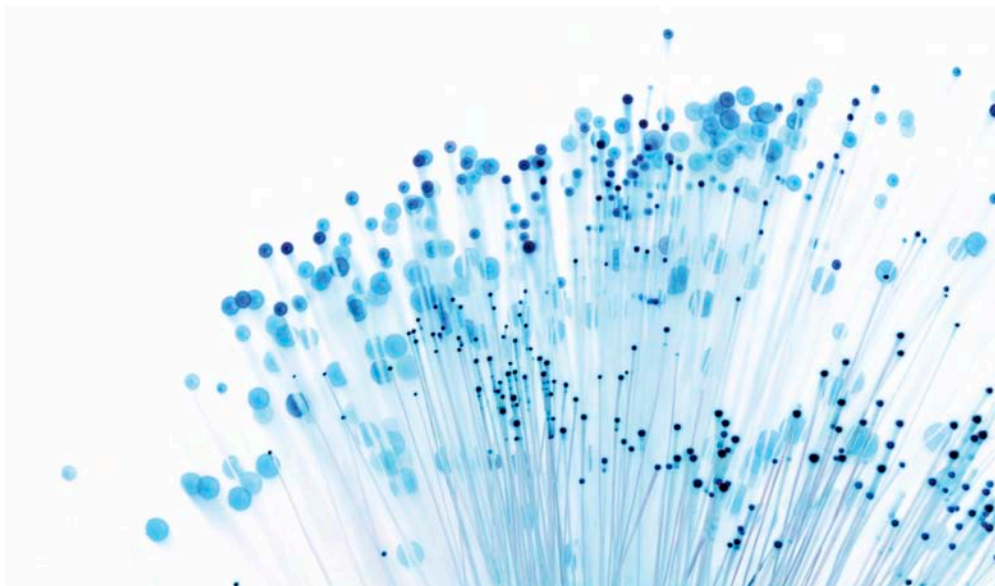
Introduction: The Big Shift

During a steep recession, managers obsess over short-term performance goals such as cost cutting, sales, and market share growth. Meanwhile, economists chart data like GDP growth, unemployment levels, and balance-of-trade shifts to gauge the health of the overall business environment. The problem is focusing only on traditional metrics often masks long-term forces of change that undercut normal sources of economic value.

“Normal” may in fact be a thing of the past: even when the economy heats up again, companies’ returns will remain under pressure. Trends set in motion decades ago are fundamentally altering the global business environment, abetted by a new digital infrastructure built on the sustained exponential pace of performance improvements in computing, storage, and bandwidth. This infrastructure is not just bits and bytes—it consists of institutions, practices, and protocols that together organize and deliver the increasing power of digital technology to business and society. This power must be harnessed if business is to thrive.

Until the 2009 Shift Index was published earlier this year, no one, to our knowledge, had quantified the dimensions of deep change precipitated by digital technologies and public policy shifts. Fragmentary metrics and sporadic studies existed, but nothing captured a clear, comprehensive, and sustained view of the deep dynamics changing our world. Instead, we experienced a daily bombardment of short-term economic indicators—employment, inventory levels, inflation, commodity prices, etc.

The 2009 Shift Index was developed to help managers in this decidedly challenging time, and presented a framework for understanding three waves of transformation in the competitive landscape: foundations for major change; flows of resources, such as knowledge, that allow firms to enhance productivity; and the impacts of the foundations and flows on companies and the economy. Combined, those factors reflect what we call the Big Shift in the global business environment. Additionally, the 2009 Shift Index consisted of three indices that quantified the three waves of long-term change we see happening today. By quantifying these forces, we sought



to help institutional leaders steer a course for “true north,” while helping minimize distraction from short-term events—and the growing din of metrics that reflect them. After the 2009 Shift Index was published, many executives expressed concern about how the broad-based economic trends presented for the U.S. economy affected their industry. The current Shift Index Industry Perspectives analyzes the Big Shift for nine major U.S. industries. We believe that the 2009 Shift Index coupled with Shift Index Industry Perspectives can serve as a useful compass and catalyst for the discussions and actions required not only to help executives weather today’s economic storm but also to position them to create significant economic value in an ever-more-challenging business landscape.

Key Findings: 2009 Shift Index

The first release of the Shift Index highlighted a core performance challenge and paradox for the firm that has been playing out for decades. ROA for 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. Some additional findings that highlight the performance challenges facing U.S. firms 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 “Firm 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, at least some of the benefits of the productivity improve-

ments appear to be captured by creative talent which is experiencing greater growth in total compensation

- Customers also appear to be gaining and using power as reflected in high levels of Consumer Power and Brand Disloyalty.

These findings have two levels of implication. First, the gap between potential and realized firm performance is steadily widening, as productivity grows at a rate far slower than the underlying performance increases of the digital infrastructure. Potential performance refers to the opportunity companies have to harness the increasing power and capability of the digital infrastructure to create higher returns for themselves as they achieve even higher levels of productivity improvement through product, process, and institutional innovations.

Second, the financial performance of the firm continues to deteriorate as a quickly evolving digital infrastructure and public policy liberalization combine to intensify competition. (Recent Obama administration regulatory moves to the contrary, the overwhelming policy trend since World War II has been towards reducing barriers to entry and movement in terms of freer trade and investment flows as well as deregulation of major industries.) The benefits from the modest productivity improvements companies have achieved increasingly accrue not to the firm or its shareholders, but to creative talent and customers, who are gaining market power as competition intensifies.

How do we reverse this trend? For precedent and inspiration we might look to the generation of companies that emerged in the early twentieth-century. 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. Today's companies must make the most of the era's new infrastructure through institutional innovations that shift the rationale for the firm from scalable efficiency to scalable learning by using digital infrastructures to create environments where performance improvement accelerates as more participants join, as illustrated in various kinds of emerging open innovation and process network initiatives. Only then will the corporate sector generate greater productivity improvement from the rapidly evolving digital infrastructure, and capture their fair share of the ensuing rewards. As this takes place, the Shift Index will turn from an indicator of corporate decline to one reflecting powerful new modes of economic growth.

Three Waves; Three Indices

The trends reported above, and the connections across them, are consistent with the theoretical model we used to define and structure the metrics in the 2009 Shift Index. The 2009 Shift Index sought to measure three waves of deep and overlapping change operating beneath the visible surfaces of today's events. In brief, this theoretical model suggests that a first wave of change in the foundations of our business and society are expanding flows of knowledge in a second wave. These two waves will intensify competition in the near-term and put increasing pressure on corporate performance. Later, institutional innovations emerging in a third wave of change will harness the unique potential of these foundations and flows, improving corporate performance as more value is created and delivered to markets. In other words, change occurs in distinct waves that are causally related.

To quantify these waves, we broke the corresponding Shift Index into three separate indices. In this section, we will explain each wave and the metrics we chose to represent it.

The first wave involves the fast moving, relentless evolution of a new digital infrastructure and shifts in global public policy that have reduced barriers to entry and movement, enabling vastly greater productivity, transparency, and connectivity. Consider how companies can use digital technology to create ecosystems of diverse, far-flung users, designers, and suppliers in which product and process innovations fuel performance gains without introducing too much complexity. This wave is represented in the first index of the Shift Index—the Foundations Index. It quantifies and tracks the rate of change in the foundational forces taking place today.

The Foundation Index reflects new possibilities and challenges for business as a result of new technology capability and public policy shifts. In this sense, it is a leading indicator because it shapes opportunities for new business and social practices to emerge in subsequent waves of change as everyone seeks to explore and master new possibilities. However, business will also be exposed to challenges as a result of increased competition. Key metrics in this index include the change in performance of the technology components underlying the digital infrastructure, growth in the adoption rate of this infrastructure, and the degree of product and labor market regulation in the economy. Metrics used in the Foundation Index are tracked at an economy level. Consequently, the Foundation Index is not analyzed by industry in Shift Index Industry Perspectives. An economy-level analysis of this index is available in the 2009 Shift Index report.

The second wave of change, represented in the Flow Index, is characterized by the 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.

Knowledge flows—which occur in any social, fluid environment where learning and collaboration can take place—are quickly becoming one of the most crucial sources of value creation. Facebook, Twitter, LinkedIn, and other social media foster them. Virtual communities and online discussion forums do, too. So do companies situated near one another, working on similar problems. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access. The more the business environment changes, however, the faster the value of what you know at any point in time diminishes. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to rapidly refresh knowledge stocks. For instance, when an organization tries to improve cycle times in a manufacturing process, it finds far more value in problem solving shaped by the diverse experiences, perspectives, and learning of a tightly knit team (shared through knowledge flows) than in a training manual (knowledge stocks) alone.

Knowledge flows can help companies gain competitive advantage in an age of near-constant disruption. The software company SAP, for instance, routinely taps the more than 1.5 million participants in its Developer Network, which extends well beyond the boundaries of the firm. Those who post questions for the network community to address will receive a response in 17 minutes, on average, and 85 percent of all the questions posted to date have been rated as “resolved.” By providing a virtual platform for customers, developers, system integrators and service vendors to create and exchange knowledge, SAP has significantly increased the productivity of all the participants in its ecosystem.

The metrics in the Flow Index capture physical and virtual flows as well as elements that can amplify a flow—examples of these “amplifiers” include social media use and the degree of passion with which employees are engaged with their jobs. This index represents how quickly individual and institutional practices are able to catch up with the opportunities offered by the advances in digital infrastructure. The Flow Index illustrates a conceptual way to represent practices. Given the slower rate with which social and professional practices change relative to the digital infrastructure, this index will likely serve as a lagging indicator of the Big Shift, trailing behind the Foundation Index. It will be useful to track the degree of lag over time.

The good news is that strong foundational technology is enabling much richer and more diverse knowledge flows. The bad news is that mind-sets and practices tend to hamper the generation of and participation in those flows. That is why we give such prominence to them in the second wave of the Big Shift. The number and quality of knowledge flows at a firm—partly determined by its adoption of openness, cross-enterprise teams, and information sharing—will be key indicators of its ability to master the Big Shift and turn performance challenges into opportunities. The ultimate differentiator among companies, though, may be a competency for creating and sharing knowledge across enterprises. Growth in Inter-firm Knowledge Flows will be a particularly important sign that firms are adopting the new institutional architectures, governance structures, and operational practices necessary to take full advantage of the digital infrastructure. This report focuses on two key metrics in the Flow Index—the Inter-firm Knowledge Flows and Worker Passion metrics—where industry-level data was available.

The final wave, represented by the Impact Index, reflects how well companies are exploiting foundational improvements in the digital infrastructure by creating and sharing knowledge—and what impacts those changes are having on markets, firms, and individuals. For now, institutional performance is almost universally suffering in the face of intensifying competition. Over time, as firms learn how to harness the digital infrastructure and participate more effectively in knowledge flows, their performance will improve.

Differences in approach between top-performing and underperforming companies are telling. As some organizations participate more in knowledge flows, we should see them break ahead of the pack and significantly improve overall performance in the long term. Others, still wedded to the old ways of operating, are likely to deteriorate faster than ever before.

This conceptual framework for the Big Shift underscores the belief that knowledge flows will be the key determinant of company success as deep foundational changes alter the sources of value creation. Knowledge flows thus serve as the key link connecting foundational changes to the impact that firms and other market participants will experience.

To respond to the growing long-term performance pressures described earlier, companies must design and then track operational metrics showing how well they participate in knowledge flows. For example, they might want to identify relevant geographic clusters of talent around the world and assess their access to that talent. In addition, they might want to track the number of institutions with which they collaborate to improve performance. Success against these metrics will provide early visibility into how well companies will perform later as the Big Shift continues to unfold.

Implications for Business Executives

The findings from the 2009 Shift Index highlight the stark performance challenges for companies. What's more, the data suggest that unless firms take radical action, the gap between their potential and their realized opportunities will

grow wider. That is because the benefits from the modest productivity improvements that companies have achieved increasingly accrue not to the firm or its shareholders, but to creative talent and customers, who are gaining market power as competition intensifies.

Until now, companies were designed to get more efficient by growing ever larger, and that is how they created considerable economic value. The rapidly changing digital infrastructure has altered the equation, however: as stability gives way to change and uncertainty, institutions must increase not just efficiency but also the rate at which they learn and innovate, which in turn will boost their rate of performance improvement. "Scalable efficiency," in other words, must be replaced by "scalable learning." The mismatch between the way companies are operated and governed on the one hand and how the business landscape is changing on the other helps explain why returns are deteriorating while talent and customers reap the rewards of productivity.

In contrast to the twentieth century—when senior management decided what shape a company should take in terms of culture, values, processes, and organizational structure—now we will see institutional innovations largely propelled by individuals, especially the younger workers, who put digital technologies such as social media to their most effective use. Findings from the Center research indicate a correlation between the rapidly growing use of social media and the increasing knowledge flows between organizations.

Worker Passion also appears to be an important amplifier: when people are engaged with their work and pushing the performance envelope, they seek ways to connect with others who share their passion and who can help them get better faster. Self-employed people are more than twice as likely to be passionate about their work as those who work for firms, according to a survey we conducted. This suggests a potential red flag for institutional leaders—companies appear to have difficulty holding on to passionate workers.

But management can play an important supporting role: recognizing that passionate employees are often talented

and motivated but also tend to be unhappy, because they see a lot of potential for themselves and for their companies but can feel blocked in their efforts to achieve it. Identify those who are adept participants in knowledge flows, provide them with platforms and tools to pursue their passions, and then celebrate their successes to inspire others.

Performance pressures will continue to increase well past the current downturn. As a result, beneath these surface pressures are underlying shifts in practices and norms that are driven by the continuous advances in the digital infrastructure:

- Wireless subscriptions have grown dramatically from 1 percent in 1985 to 83 percent in 2008 (32 percent CAGR) creating a rich medium for connectivity and knowledge flows. As a result of technology advances in the areas of computing, storage and bandwidth, innovations such as 3G and emerging 4G wireless networks and more powerful and affordable access devices like smart phones and netbooks, the line between the Internet and wireless media will continue to blur, moving us to a world of ubiquitous connectivity.
- Practices from personal connectivity are bleeding over into professional connectivity—institutional boundaries are becoming increasingly permeable as employees harness the tools they have adopted in their personal lives to enhance their professional productivity, often without the knowledge of, and sometimes over the opposition of, corporate authorities. Of the people that currently use social media to connect to professionals in other firms, 60 percent claimed they are participating more heavily in this activity than last year.
- Talent migrates to the most vibrant geographies and institutions potentially because that is where they can improve their performance more rapidly by learning faster. Our analysis has shown that the top 10 "creative cities" have outpaced the bottom 10 cities in terms of population growth since 1990, and between 1990 and 2008, the top 10 creative cities grew more than twice as fast as the bottom ten.
- Companies appear to have difficulty holding onto passionate workers. Workers who are passionate about their jobs are more likely to participate in knowledge flows and generate value for their companies—on

average the more passionate participate twice as much as the disengaged in nearly all the knowledge flows activities surveyed. We also found that self-employed people are more than twice as likely to be passionate about their work as those who work for firms. The current evolution in employee mindset and shifts in the talent marketplace require new rules on managing and retaining talent.

Leaders must move beyond the marginal expense cuts they might be focusing on now in order to weather the recession. They need instead to be ruthless about deciding which assets, metrics, operations, and practices have the greatest potential to generate long-term profitable growth and shedding those that do not. They must keep coming back to the most basic question of all: What business are we really in?

It is not just about being lean; it is also about making smart investments in the future. One of the easiest but most powerful ways firms can achieve the performance improvements promised by technology is to jettison management's distinction between "creative talent" and the rest of the organization. All workers can continually improve their performance by engaging in creative problem solving, often by connecting with peers inside and outside the firm. Japanese automakers used elements of this approach with dramatic effects on the bottom line, turning assembly-line employees from manual laborers into problem solvers.

At the end of the day, the Big Shift framework puts a number of key questions on the leadership agenda: Are companies organized to effectively generate and participate in a broader range of knowledge flows, especially those that go beyond the boundaries of the firm? How can they best create and capture value from such flows? And, most important, how do they measure their progress navigating the Big Shift in the business landscape? We hope that the 2009 Shift Index coupled with Shift Index Industry Perspectives will help executives answer those questions—in these difficult times and beyond.

Shift Index Structure

The Shift Index was designed to measure the rate of change and magnitude of these long-term forces that spawn the extreme events currently observed in today's business world. The Shift Index consists of three indices that quantify the three waves of the Big Shift. The three indices are the Foundation Index, Flow Index and Impact Index. Exhibit 1 summarizes the three indices of the 2009 Shift Index and describes specific indicators included in

each index. Shift Index Industry Perspectives focuses on the metrics included in the Flow and Impact Indices.¹ The inaugural Shift Index focused on the U.S. economy. Shift Index Industry Perspectives provides context for the Big Shift in nine major U.S. industries. Subsequent releases will broaden the Shift Index to provide a diagnostic tool to assess performance of individual companies relative to a set of firm-level metrics and, later, analyze the Big Shift on a global scale.

Exhibit 1: 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 U.S. firms ROA Performance Gap: Gap in ROA between firms in the top and the bottom quartiles Firm Topple Rate: Annual rank shuffling amongst U.S. 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 grouping ³ 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 U.S. 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 U.S. 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 U.S. population Wireless Subscriptions: Percentage of active wireless subscriptions as compared to the U.S. population
	Public Policy	Economic Freedom: Index of 10 freedom components as defined by the Heritage Foundation

1 Only the Inter-firm Knowledge Flows and Worker Passion metrics are analyzed in the Flow Index, given these are the two metrics which are measurable by industry.

2. Creative occupations and cities defined in Richard Florida's "Rise of the Creative Class", 2004
 3. Measured by the Bureau of Transportation Statistics Transportation Services Index
 Source: Deloitte Analysis

The Three Indices: A Comparative Discussion

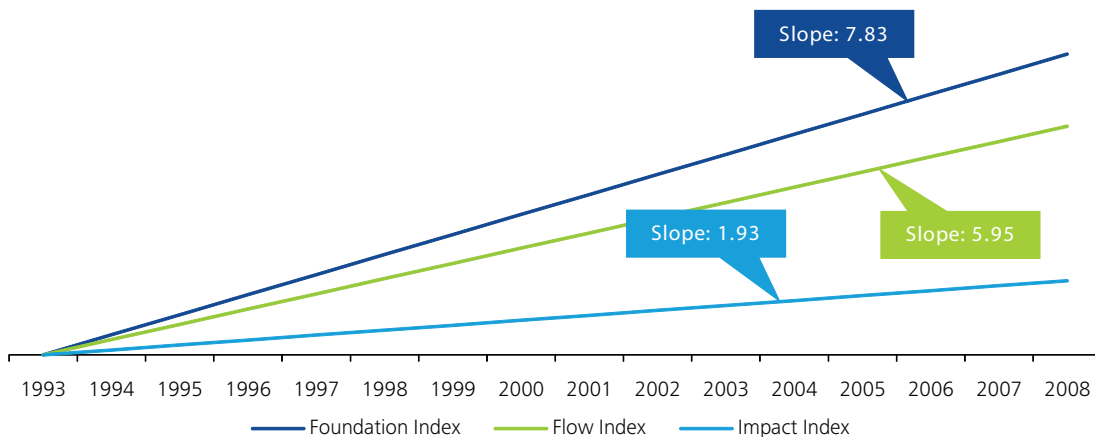
Findings from this first compilation of the Shift Index suggest that the deep changes at the foundations of our economy continue to move faster than changes in either flows or performance. The trend line for changes in the Foundation Index has a much steeper slope of 7.83 relative to the slope of 5.95 and 1.93 that measures the rate of change for the Flow Index and Impact Index, respectively (see Exhibit 2).

Tracking these relative rates of change helps to determine positioning in the Big Shift as a whole. The initial release of the Shift Index suggests that from at an economy level we are still largely in the first wave of the Big Shift, although specific industries vary in their breadth and magnitude of disruption.

We expect that companies, industries, and economies in the first tier 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, the Flow Index and Impact Index will likely pick up speed while the rate of technological improvement and penetration captured by the Foundation Index will begin to slow.

Comparing the relative rates of change across the three indices reveals telling gaps. The gap between the Foundation Index and the Impact Index, for example, defines the scope of the challenges and opportunities confronting business executives. The size of this gap measures instability generated in the economy as performance potential (reflected by the Foundation Index) rises more quickly than realized performance (reflected in the Impact Index). If realized performance is significantly

Exhibit 2: Component Index Trends (1993-2008)



Source: Deloitte analysis

lower than potential performance, there is growing room for disruptive innovations to narrow this gap. This becomes a measure of the opportunity awaiting creative companies that figure out how to more effectively harness the capabilities of digital infrastructures. Given sustained exponential performance increases in digital technology, this gap will be unlikely to close completely, at least in the foreseeable future. However, it can be narrowed through an increase in the rate of business innovation.

Insight also emerges from relative changes in the gap between the Foundation Index and the Flow Index, and that of the Flow Index and the Impact Index. The Foundation-Flow gap measures the ability of individuals and institutions to leverage the digital infrastructure to generate knowledge flows through new social and business practices. The Flow-Impact gap measures how

well market participants harness these knowledge flows to capture value for themselves.

The findings from our 2009 Shift Index show the Flow-Impact gap is substantially bigger than the Foundation-Flow gap, meaning that participants are relatively more successful in generating new knowledge flows than in capturing their value. Relative changes in these gaps over time will provide executives with an important measure of where progress is being made, where obstacles exist, and where management attention needs to be paid.

For more detailed economy-level analysis, please reference the 2009 Shift Index report:

<http://www.deloitte.com/us/shiftindex>

Cross-Industry Perspectives

The forces of the Big Shift are affecting U.S. industries at varying rates of speed. One set of industries has already been severely disrupted, and is suffering the consequences: declining return on assets (ROA) and increased Competitive Intensity. A second set, which includes the bulk of U.S. industries, is currently midstream: some are seeing declining ROA, and others are facing increases in Competitive Intensity, but none have yet encountered both. A third, smaller set of as-yet-unaffected industries shows little change in performance.

These findings—a follow-up to the macro-level study released in June 2009²—reflect a U.S. corporate sector on a troubling trajectory. The difficulties are more visible in some industries, but all industries will, to some degree, eventually be subject to the forces of the Big Shift, which represent a fundamental reordering of the economy driven by a new digital infrastructure³ and public policy changes.

The industry-level findings are cause for some alarm. U.S. industries are currently more productive than ever, as measured by improvements to Labor Productivity. Yet those improvements have not translated into financial returns. Underlying this performance paradox is the growing Competitive Intensity in most industries. Consolidation has helped offset these effects in some cases, but it is a short-term solution. Likewise, firms in most industries are investing heavily in technology, but the benefits are short-lived as competing firms do the same.

The breadth and magnitude of disruption to U.S. industries, and a trajectory that suggests more disruption

to come, call into question the very rationale for today's companies. Do they exist simply to achieve ever-lower costs by getting bigger and bigger—"scalable efficiency"? Or can they turn the forces of the Big Shift to their advantage by focusing instead on "scalable learning"—the ability to improve performance more rapidly and learn faster by effectively integrating more and more participants distributed across traditional institutional boundaries?

U.S. firms can learn two key lessons from the industries experiencing early disruption. First, the assumption that productivity improvement leads to higher returns is flawed: industries with higher productivity gains do not necessarily experience improvement in ROA. This is the performance paradox mentioned earlier. Second, customers and talented employees appear to be the primary beneficiaries of the value created by productivity improvements. Access to information and a greater availability of alternatives have put customers squarely in the driver's seat. Similarly, as talent becomes more central to strategic advantage and as labor markets become more transparent, creative talent has increased its bargaining position.

How, then, can firms also benefit from the Big Shift? The key is to not only create value but to capture the value created. To do so, firms must learn how to participate in and harness knowledge flows and how to tap into the passion of workers who will be a significant source of value creation as companies shift away from accumulating and exploiting stocks of knowledge. This move from scalable efficiency to scalable learning will be a key to surviving, and thriving, in the world of the Big Shift.

2 See John Hagel III, John Seely Brown, and Lang Davison, *The 2009 Shift Index: Measuring the Forces of Long-Term Change* (San Jose: Deloitte Development, June, 2009).

3 More than just bits and bytes, this digital infrastructure consists of the institutions, practices, and protocols that together organize and deliver the increasing power of digital technology to business and society.

Most Industries are Feeling the Effects of the Big Shift

The 2009 Shift Index highlighted trends at the economy-wide level in the U.S.: declining ROA, increasing Competitive Intensity, increasing Labor Productivity. The industry-level findings are similar. With few exceptions, all U.S. industries are being affected by the foundational forces of the Big Shift.

One set of industries—most notably Technology, Media, Telecommunications, and Automotive—is already being affected by the Big Shift. These industries have experienced significant increases in Competitive Intensity and corresponding declines in profitability. A middle tier of industries, representing the majority of industries evaluated in this report, appears to be experiencing the initial effects of the Big Shift. A third tier consists of two industries that have, so far, been insulated from the forces of the Big Shift.

In the Middle of the Storm

Industries that have experienced both increases in Competitive Intensity and declines in Asset Profitability are the early entrants into the Big Shift. Ten of the fourteen indus-

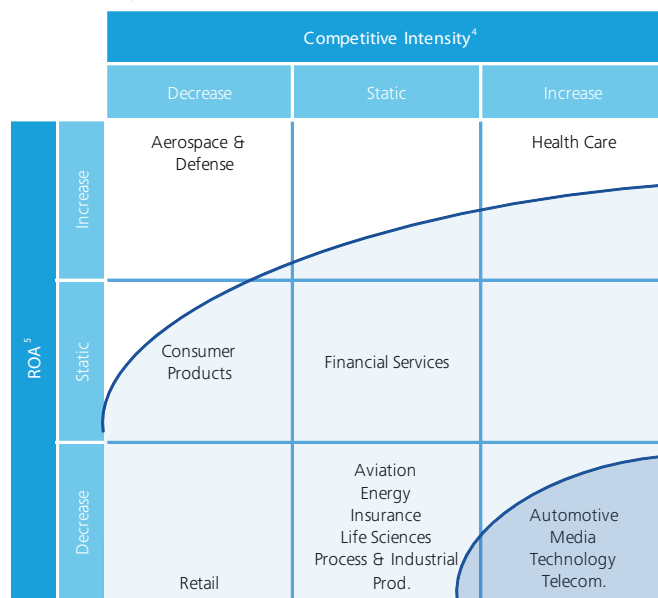
tries have experienced declining ROA, but only four have also endured a significant increase in Competitive Intensity (see Exhibit 3). These industries include Technology, Media, Telecommunications, and Automotive. They embody the long term forces that are re-shaping the business environment, and are thus harbingers of changes to come in other industries.

In Technology, customers have gained power as open architectures and commoditization of components have intensified competitive pressure. As a result, the Technology industry has experienced a significant deterioration in return on assets.

The Media industry has become more fragmented as forms of content proliferate and the long tail becomes ever richer with options. In a very real sense, customers—supported by digital infrastructures that enable convenient, low-cost production and distribution—are emerging as key competitors for traditional media companies, generating their own content and sharing it with friends and broader audiences.

The Telecommunications industry has experienced dramatic changes over the past two decades. Wireline service, the

Exhibit 3: Changes in Competitive Intensity and ROA (1965-2008)



4 Static Competitive Intensity is defined as a change of less than .01(+/-) in the HHI.

5 Static ROA is defined as a change of less than 5 percent (+/-).

Source: Compustat, Deloitte Analysis

former mainstay of the industry, is being supplanted by wireless and VOIP. A combination of regulatory changes and increased Competitive Intensity has driven firms to improve Labor Productivity, but has not resulted in improved financial returns.

In the Automotive industry, Competitive Intensity has been driven by greater global competition, supported both by trade liberalization and more robust digital infrastructures that facilitate global production networks. This has resulted in lower Asset Profitability as domestic firms have been unable to quickly adjust their operations to meet changing market demand and more aggressive international competitors.

Entering the Storm

The industries in this tier have not yet felt the dual impact of the Big Shift—intensifying competition and declining ROA—but are likely to soon. These industries already exhibited a high level of Competitive Intensity in 1965 as measured by industry concentration (see Exhibit 4), and it is likely, therefore, that the initial fragmenting impact of the Big Shift may have been muted. On the other hand, many of these industries did experience erosion in ROA, suggesting that other forms of Competitive Intensity were increas-

ing. As we will discuss, the metric for Competitive Intensity does not capture competition from other parts of the value chain. One of the pervasive themes of the Big Shift is the growing power of customers and creative talent and the pincer effect on firms' profitability as these two constituencies capture more of the value being created. Many of the firms in this tier are subject to greater competition from these two groups.

The Consumer Products and Retail industries both experienced decreasing Competitive Intensity as measured by industry concentration, although Retail also experienced a decline in ROA.⁶ Both of these industries were highly competitive, historically, and both have experienced significant consolidation among large firms to combat margin pressures driven in part by the growing power of customers. The consolidation of these two industries is related. As retailers became more concentrated, consumer products companies began to consolidate as a defensive measure to preserve bargaining power with the retailers. Conversely, as consumer products companies consolidated, retailers felt additional pressure to consolidate in order to preserve bargaining power relative to larger consumer products companies.

Exhibit 4: Competitive Intensity as measured by HHI for All Industries, 1965, 2008⁷

Industry	1965 Actual	2008 Actual	Absolute change	
Process & Industrial Products	0.01	0.01	0	Industries that began at higher levels of Competitive Intensity
Consumer Products	0.01	0.02	0.01	
Financial Services	0.02	0.03	0.01	
Aviation & Transport Services	0.03	0.03	0	
Energy	0.03	0.03	0	
Retail	0.03	0.06	0.02	
Life Sciences	0.04	0.03	-0.01	Industries that began at lower levels of Competitive Intensity
Insurance	0.04	0.05	0.01	
Aerospace & Defense	0.04	0.10	0.06	
Media & Entertainment	0.07	0.03	-0.04	
Technology	0.15	0.03	-0.12	
Automotive	0.17	0.08	-0.09	
Health Care Services	0.32	0.08	-0.24	
Telecommunications	0.37	0.03	-0.34	

Source: Compustat, Deloitte analysis

⁶ Retail ROA data display some cyclical-ity. The decline discussed here is derived from a line fit.

⁷ Insurance and Health Care data is from 1972–2008. Data from 1965–1972 was from a very small number of companies for these industries and therefore not truly indicative of market dynamics.

Financial Services experienced static ROA performance and static Competitive Intensity. Financial Services is comprised of two primary sub-sectors—Banking and Securities. ROA increased marginally for Banking while it declined significantly for Securities in the face of growing competition. As described in the Financial Services report, Banking has benefited from public policy that has regulated prices for banks over time. Nonetheless, recent trends in Financial Services suggest that there has been further erosion of the industry’s ROA in the past couple of years as a result of less protection from public policy. We anticipate further disruption going forward.⁸

The Calm Before the Storm

This last group is comprised of just two industries that have bucked the overall trend in ROA erosion, enjoying increased Asset Profitability.⁹ The Aerospace and Defense and Health Care industries actually improved their ROA to 6.7 percent and 3.6 percent respectively. As we will discuss, regulation and public policy have played a significant role in shielding these two industries from the effects of the Big Shift.

For Health Care ROA increased while Competitive Intensity was also increasing. As described in the Health Care industry section, however, the Health Plans sub-sector is still dominated by six plans that account for two-thirds of all enrollees. Of the 315 metropolitan markets surveyed by the American Medical Association, 94 percent of them were dominated by one or two health plans. Limited competition, reinforced by regulatory protection, has sustained Asset Profitability in this industry.

Aerospace & Defense appears to be an anomaly, the only industry that has yet to show any signs of the Big Shift. Improvements in Asset Profitability can be attributed to consolidation of the industry and a related pursuit of scale efficiencies and labor productivity measures as well as a movement from hardware to software as a source of value.

The ability of companies in this industry to retain the savings from these initiatives and improve ROA has been supported by the industry consolidation (leading to a decline in one key measure of competitive intensity), reinforced by high barriers to entry, including investment in technology and capital requirements. Subsidies to incumbents act as a further barrier to entry, as do burdensome qualifying requirements for bidding on government contracts, which require significant upfront investment by new players. Collectively, these factors limit the effects on this industry of broader public policy trends towards economic liberalization and enable the relatively small number of industry participants to achieve higher asset profitability.

The future is uncertain for these two industries. Of the two, Health Care is perhaps more exposed to changes that could dramatically reshape the industry: impending legislation, medical tourism, new provider delivery options and alternative Health Care options are just a few looming changes. In an intriguing parallel, the movement towards greater emphasis on prevention in both of these industries may represent a major catalyst for accelerated change. In the Aerospace and Defense industry, the rise of asymmetric warfare driven by a new generation of “competitors” may also catalyze interesting industry changes. In particular, the increasing emphasis on advanced software capabilities in intelligence, surveillance and reconnaissance domains perhaps sets the stage for the evolution of a more fragmented and competitive software driven industry.

Technology or Public Policy as Key Differentiators

What is it that determines why industries are affected by the Big Shift sooner rather than later? All of the industries in this report have access to the increasingly ubiquitous digital infrastructure, so the infrastructure itself does not appear to be a significant differentiator in how industries are affected. Of course, industries differ in terms of how they use the digital infrastructure and how creatively they re-think their own operations relative to the potential of

⁸ The data we present does not account for the current upheaval in the financial systems which we anticipate will be evident in 2009 data forward.

⁹ Insurance and Health Care ROA data is from 1972-2008. Data from 1965-1972 was from a very small number of companies for these industries and therefore not truly indicative of market dynamics. Health Care and Aerospace Defense ROA data display some cyclical behavior. The increases discussed here are derived from a line fit.

this infrastructure. In this regard, Competitive Intensity appears to provide motivation for making the most of the infrastructure. A 2002 study found that the impact of IT investment on productivity growth depended upon the presence of one or more competitors that had used IT to develop fundamental innovations in business practices or processes, putting pressure on all companies to replicate the innovations.¹⁰ While the digital infrastructure reduces barriers to entry and movement and enhances the likelihood that a disruptive innovator can change the game in an industry, other factors can dampen these effects.

In fact, the Center findings suggest that public policy significantly determines the extent to which a given industry is affected by the Big Shift. Aerospace and Defense and Health Care are the least affected industries and are also associated with high levels of regulation and government purchasing activity. Since 1989, the U.S. government has accounted for approximately 40 to 60 percent of total annual sales in the Aerospace and Defense industry.¹¹ Procurement policies and national security considerations have a profound influence on this industry and its relationship with its largest customer—the U.S. government.

Similarly, the Health Care industry has been, and continues to be, deeply affected by regulation and government spending at the national and state levels. Variable state regulations create barriers to entry for plans wishing to provide national coverage. Providers are also largely regulated at a state level, and only a few have a national reputation (such as the Mayo Clinic) or a national network (such as some laboratory companies).

The primary determinant of the extent to which industries are affected by the Big Shift thus appears to be public policy. The exponential improvement of capabilities of the digital infrastructure and its broader adoption across the business landscape creates the potential for intensifying competition. Whether or not that potential is realized,

however, appears to depend on the state of the regulatory environment and, in particular, the degree to which public policy actively increases barriers to entry or barriers to movement or helps to reduce them.

Lessons Learned from the Industries Disrupted To Date

All industries, whether part of the first wave of impact or not, should take note of the trends driving the first tier of industries. The performance paradox—decreasing profitability in the face of improving productivity—is evident in Technology, Media, Telecommunications, and Automotive (see Exhibit 3).

At an industry level, there appears to be some relationship between Labor Productivity and competition: industries that have faced significant increases in Competitive Intensity have also improved their productivity. For example, the Technology industry has experienced one of the greatest increases in Competitive Intensity as well as Labor Productivity improvements driven by advances in technology and business innovations. Industries that are typically on the leading edge of innovation and adoption of new practices are most likely to experience higher increases in productivity.

Unfortunately, productivity is not translating into profit for companies. The old assumption that improvements in productivity lead to higher returns turns out to be flawed. What used to be the key to success—an unremitting focus on efficiency—is no longer sufficient. In his book, *The Power of Productivity*,¹² Bill Lewis makes a connection between a country's wealth and its productivity. This is certainly true for the economy as a whole, and customers benefit from the enormous value created by improved productivity. On the other hand, the Center research suggests that companies are struggling to retain the value they are creating.

10 "How IT Enables Productivity Growth," McKinsey Global Institute, November 2002.

11 "Global Military Aerospace Products Manufacturing," IBIS World Industry Report, March 26, 2009.

12 William Lewis, *The Power of Productivity* (Chicago: the University of Chicago Press, 2994).

Exhibit 5: Changes in ROA and Labor Productivity (1987-2008)

		ROA ¹³		
		Decrease	Static	Increase
Labor Productivity ¹⁴	High Increase	Telecom. Technology		
	Mod. Increase	Automotive Energy Retail	Consumer Products	
	Low Increase	Media Aviation Life Sciences Process & Industrial Prod.	Financial Services	Aerospace & Defense

Source: Compustat, Deloitte Analysis

Some of the most significant increases in productivity occurred in industries like Telecommunications and Technology, which saw dramatic increases upwards of 800 percent, yet also experienced significant declines in ROA (see Exhibit 5). These industries are prime examples of innovation and productivity improvement that did not translate into improved firm performance.

At the other end of the spectrum, we find Aerospace and Defense. The capital requirements associated with aircraft construction and the restrictions tied to manufacturing and sales of advanced weapons systems create a unique ecosystem within which this industry has managed to improve its ROA. This performance improvement comes despite relatively small gains in Labor Productivity compared to other industries such as Technology or Telecommunications.

While Labor Productivity improvement appears to be necessary, especially in competitive markets, it is clear that it is not sufficient to sustain, much less improve, profitability. The Big Shift requires that companies broaden their focus to include other operating metrics if they want to thrive in an era of increasing economic pressure.

The rate of Labor Productivity improvement seems to be unrelated to the rate of ROA deterioration (see Exhibit 5). There were no industries that experienced both an increase in ROA and a high increase in Labor Productivity. If improvements in productivity are not finding their way to companies' bottom lines, then where are all those gains going? What are the implications for industries that are trying to reverse the trend of declining profitability?

¹³ Static ROA is defined as a change of less than 5 percent (+/-).

¹⁴ Labor Productivity increase is classified as low, 0 to 50; moderate, 50 to 100; or high, >100. Labor Productivity data is not available for the Health Care and Insurance industries.

The Economy Wins but Firms are Losing

The economy, as a whole, is benefiting from greater value creation. As competition intensifies across all industries and productivity gains are competed away, consumers and talented workers are reaping the benefits. Consumers and talent have been able to increase their share of value, largely through participation in information flows, which have provided them with greater information and access to alternatives than ever before.

Armed with increasing amounts of information and alternatives, consumers and talent are less loyal today than in the past. Consumers have harnessed the digital infrastructure to expand their range of options regarding vendors and products, gain information about vendors and products, compare vendors and products, and make it easier to switch from one vendor or product to another. Choices abound, information is plentiful, and brand loyalty is declining. Want a camera? Explore options on [dpreview.com](#), one of various independent resources that provide news, reviews, and information about digital photography. Need a programmer? Check out options on [elance.com](#) where one can gain instant access to 100,000 rated professionals who offer technical, marketing, and business expertise. And so on.

Similarly, talented workers today are less loyal to their employers, often viewing jobs as fairly transactional. Talent uses the digital infrastructure to participate in both information and knowledge flows. For example, where employees historically would have used a software program's built-in help function, they now do a quick search online to find a solution. If a solution does not exist, they post their

question and small communities develop to suggest ideas. Through participation in these knowledge and information flows, talented workers are learning at a faster pace than ever before. In addition, talented workers use the digital infrastructure to connect with their professional network to generate and explore job opportunities, including developing new ventures of their own. Talent, particularly creative talent, looks for jobs that provide them with the greatest benefit. In today's environment, benefits take the form of fast-paced learning environments and monetary rewards. Talented employees are also gaining power as a result of their crucial role in developing and sustaining the intangible assets that increasingly drive competitive differentiation and profitability.

All industries will be affected by these changing power dynamics, including those that were historically less competitive. As traditional industry boundaries dissolve, competition will emerge from unexpected edges. Consumers will move fluidly across industry boundaries, looking beyond traditional providers of goods and services to find the solutions that meet their needs. Talent will also look beyond traditional firms for employment. According to the Intuit Small Business Report (2007), "Entrepreneurs will no longer come predominantly from the middle of the age spectrum but instead from the edges. People nearing retirement and their children just entering the market will become the most entrepreneurial generation ever."¹⁵ Talented workers today have the opportunity to take learning from one industry and apply it to others as the digital infrastructure has lowered switching costs in the employment landscape. For example, while the Retail industry provides lower monetary rewards to creative and non-creative talent alike, Technology companies participating in e-Commerce

¹⁵ Steve King, Anthony Townsend, and Carolyn Ockels, "Intuit Future of Small Business Report," January 2007.

provide ample opportunities for Retail talent. Consequently, industries that do not offer sufficient monetary rewards or development opportunities may lose critical talent as employees flee to those industries that offer them greater rewards.

The power consumers and talent have gained, largely as a result of their participation in knowledge flows, fundamentally changes the competitive landscape. This shifting power dynamic will lead to increased Competitive Intensity for firms as they have to try harder to meet consumer demand and attract and retain talent. We expect that growth in Consumer Power will have a direct effect on Competitive Intensity within a given industry. In this regard, Consumer Power and talent power could be viewed as leading indicators of Competitive Intensity. HHI, a traditional measure of competition, could be viewed as a lagging indicator in this context. Rather than focusing solely on direct competitors, executives would be well-served to look at consumer and talent trends to preview competitive dynamics.

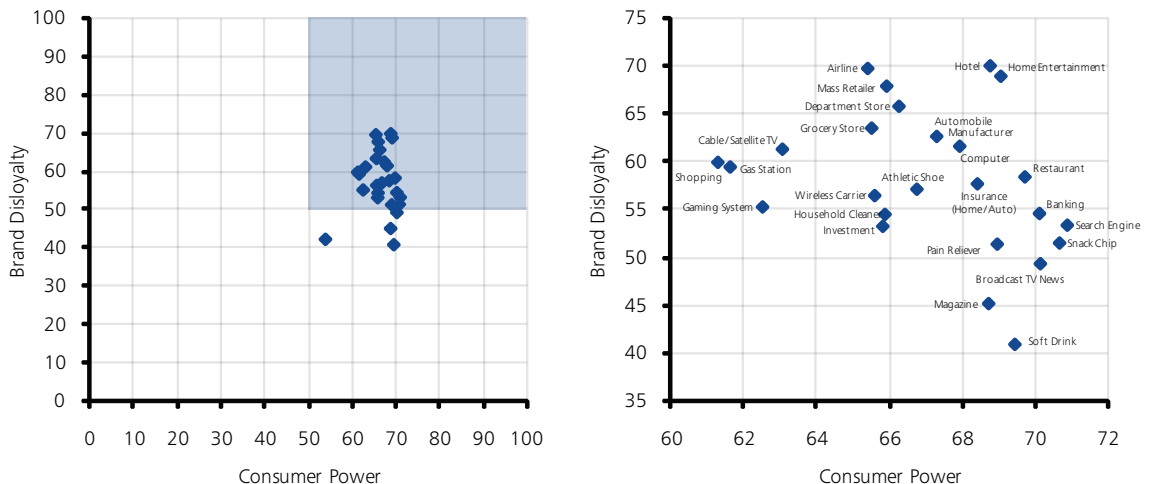
Our inaugural survey provides interesting insights related to the power consumers and talent have today. The following sections provide some highlights from the Shift Index Consumer Power, Brand Disloyalty, and Returns to Talent metrics.

Consumers

The Shift Index Consumer Power and Brand Disloyalty survey indicates that few sectors have been spared in any of the metrics evaluated.¹⁶ The indices were normalized to a 0–100 scale—any score over 50.0 indicates that the majority of respondents believe they have more power as consumers or are more disloyal towards brands. The Consumer Power index values for the consumer categories ranged from 54.0 for Newspapers to 70.9 for Search Engines. Similarly, the Brand Loyalty index values range from 40.9 for Soft Drinks to 70.1 for Hotels. These numbers indicate that consumers perceive themselves to have significant power across all categories and are relatively disloyal to brands in many categories as well.

The two major trends underlying Consumer Power are more convenient access to alternatives and greater information about alternatives. Each of these trends is driven by consumers’ use of digital infrastructure to participate in information flows. The ubiquity of devices (desktops, laptops, mobile, etc.) to access the information, the increasing richness of the information (descriptions, reviews, comparisons, etc.), along with increased trustworthiness of the source (independent consumers) has decimated information asymmetry. Technology enables consumers to conveniently and effectively compare products and prices

Exhibit 6: Consumer Power and Brand Disloyalty Matrix (2008)



Source: Deloitte Survey and Analysis

¹⁶ The Consumer Power and Brand Disloyalty indices were created as the aggregate responses to six questions per each index. While only categories that were directly related to consumers were studied, we assume the impact to industries and firms upstream on the value chain as the disruptions trickle up.

when making a purchase decision. These trends are also leading to a lower reliance on brands as an indicator of value and reliability. Trusted flows of information are beginning to trump brand in purchasing decisions.

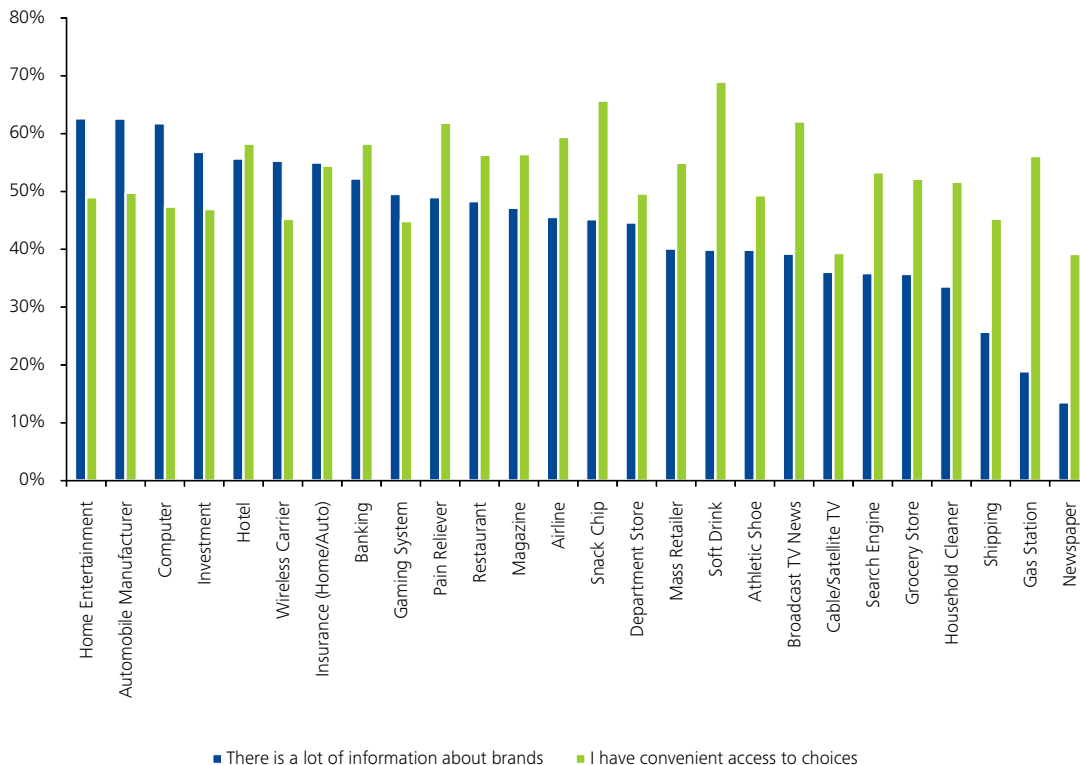
As Exhibit 6 shows, consumers perceive power over most categories and are disloyal to the majority of them. The few categories that fall below the midpoint value for Brand Disloyalty (Newspaper, Soft Drink, Magazine, and Broadcast TV/News) are all low-cost items where consumers may not invest a lot of time exploring options (see Exhibit 7).¹⁷ Most of the higher-cost categories (Hotel, Airline, Home Entertainment, Automobile, Computer, Department Store, Mass Retailer) fall on the high end of the spectrum for both Consumer Power and Brand Disloyalty. For these categories, consumers are participating in information flows to

gauge value and reliability and are consequently becoming more brand agnostic.

Talent

The second group of winners from the Big Shift are talented employees. The Center research shows that total cash compensation to creative talent in the U.S. has grown by 18 percent in the U.S from \$87,000 to \$103,000 during the time period from 2003 to 2008. This pattern is repeated in all industries, with growth in total cash compensation for creative talent ranging from a rate of 7 percent in the Consumer Products industry all the way to 21 percent in the Telecommunications, Technology, and Aerospace and Defense industries.

Exhibit 7: Consumer Access to Information and Availability of Choices (2008)



Source: Deloitte Survey and Analysis

¹⁷ Although the survey focused primarily on B2C consumer categories, similar trends hold true in B2B categories as well.

Exhibit 8: Average Compensation and Compensation Gap, All Industries (2003, 2008)

Industry	Creative (2003)	Creative (2008)	Creative Growth (2008)	Non-Creative (2003)	Non-Creative (2008)	Non-Creative Growth (2008)	Gap (2003)	Gap (2008)	Gap Growth (2008)
Automotive	\$90,429	\$108,888	20%	\$48,854	\$50,997	4%	\$41,575	\$57,890	39%
Telecommunications	\$96,412	\$116,577	21%	\$50,661	\$54,038	7%	\$45,750	\$62,539	37%
Aerospace and Defense	\$92,885	\$112,288	21%	\$51,753	\$58,164	12%	\$41,132	\$54,124	32%
Insurance	\$83,101	\$96,263	16%	\$47,074	\$49,184	4%	\$36,027	\$47,078	31%
Media and Entertainment	\$82,631	\$98,317	19%	\$39,184	\$43,315	11%	\$43,446	\$55,002	27%
Financial Services	\$86,974	\$104,467	20%	\$40,642	\$47,200	16%	\$46,332	\$57,267	24%
Technology	\$105,058	\$126,876	21%	\$48,750	\$57,835	19%	\$56,308	\$69,040	23%
Energy	\$98,174	\$112,342	14%	\$50,670	\$55,546	10%	\$47,504	\$56,795	20%
Life Sciences	\$101,269	\$118,838	17%	\$47,148	\$54,221	15%	\$54,121	\$64,617	19%
Health Care	\$71,624	\$85,181	19%	\$35,960	\$42,999	20%	\$35,663	\$42,181	18%
Aviation and Transport Services	\$77,525	\$92,023	19%	\$41,041	\$50,587	23%	\$36,484	\$41,436	14%
Retail	\$67,081	\$77,715	16%	\$32,293	\$38,767	20%	\$34,787	\$38,947	12%
Process and Industrial Products	\$89,395	\$98,198	10%	\$41,706	\$45,526	9%	\$47,689	\$52,672	10%
Consumer Products	\$81,771	\$87,587	7%	\$37,808	\$43,359	15%	\$43,963	\$44,228	1%

Source: US Census Bureau, Richard Florida's "The Rise of the Creative Class", Deloitte Analysis

The gap between compensation for creative and non-creative workers is also growing.¹⁸ Based on the Returns to Talent metric, we found the gap increasing nearly 20 percent over the past six years across the overall U.S. talent pool. Looking at the compensation gap across industries provides an equally compelling picture: nine of the 14 industries had gap increases greater than 20 percent.

In a world where industry boundaries are blurring (for example, Consumer Products and Retail) and disruptions can come from outside traditional industry lines (for example, Media, Telecommunications and Technology industries all competing to create and distribute digital content), firms are also competing across industry boundaries for the best talent. Talented employees are likewise searching for opportunities across industry boundaries, often applying their learning from one industry to careers in another. In the future, we expect to see a cross-industry war for more and more categories of talent. This poses a special challenge for those industries that are currently lagging in rewarding talent through faster-paced learning environments or higher cash compensation.

Knowledge Flows are Key to Converting Challenges to Opportunities

As the source of economic value creation shifts from stocks to flows of knowledge in this era of intensifying competition and more rapid change, participating in these flows becomes essential if firms are to convert challenges to opportunities. Currently the value that firms create is being captured primarily by consumers and creative talent: they have harnessed knowledge flows ahead of the firms and they are reaping benefits at the expense of the firms. Consumers enjoy lower prices and more alternatives, fueled by access to information. Creative talent has benefited from increased cash compensation. Firms have an opportunity to participate in the same knowledge flows and networks and rebalance that equation. Participating in knowledge flows will also significantly "grow the pie" and move firms away from a zero-sum game mindset that drives much of their behavior today.

Participating in knowledge flows is mutually beneficial for firms, talent, and consumers. The greater the firm's partici-

¹⁸ As defined by Richard Florida; *The Rise of the Creative Class* (New York: Basic Books, 2003).

pation in knowledge flows, the more value they can create. This value will be distributed between firms, talent and consumers, but as they start offering more non-monetary value to talent and consumers, firms have an opportunity to retain an increasing share of the monetary value. Talent, particularly the creative and passionate talent, is attracted to firms that are rich in relationships, generate knowledge flows, and that provide tools and platforms to help talent to grow and achieve their fullest potential. A large part of Google’s attraction is its reputation for allowing employees to grow; special programs such as “20 percent time,” which allows engineers one day a week to work on projects that are not in their job descriptions, are magnets for passionate talent. The Center research shows that passionate workers participate in more knowledge flows than their peers in their quest to constantly learn and create. Firms that attract the creative and passionate will logically participate in increasing volumes of knowledge flows and therefore create more value for all. Consumers, too, are

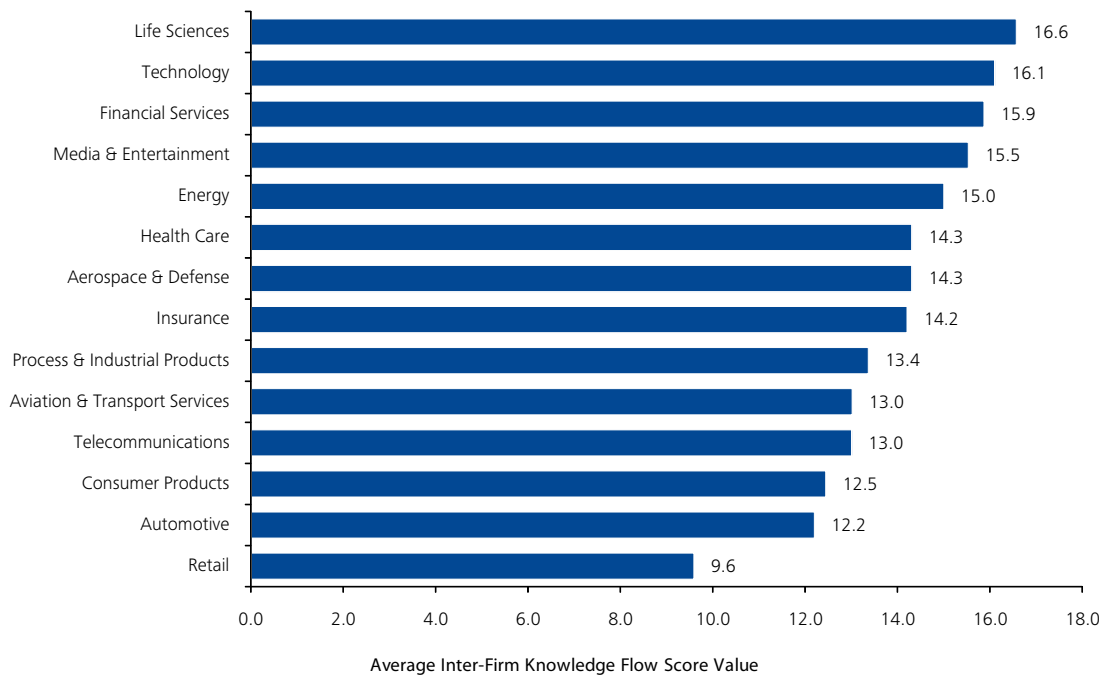
attracted to firms that are continuously creating value for them either in product features or expanded services, and may be willing to pay a premium for the value. Apple’s ability to maintain a price premium in otherwise commoditized product categories is an example of this.

Two of the Shift Index metrics, Inter-firm Knowledge Flows and Worker Passion, attempt to measure the rates of flow and passion by industry.

Inter-firm Knowledge Flows

The Shift Index inaugural survey of Inter-firm Knowledge Flows for the overall U.S. population revealed a 2008 index score of 14 percent.¹⁹ Looking across industries, this ranges from under 10 percent for the Retail industry to nearly 17 percent for the Life Sciences industry (see Exhibit 9). Employees in the Life Sciences industry were more likely to participate in conferences, belong to professional organizations, and share professional information and advice by

Exhibit 9: Inter-firm Knowledge Flow Index Score, All Industries (2008)



¹⁹ Inter-firm Knowledge Flows scores were calculated based on communication levels between firms across eight categories of knowledge flows.

Source: Deloitte Survey and Analysis

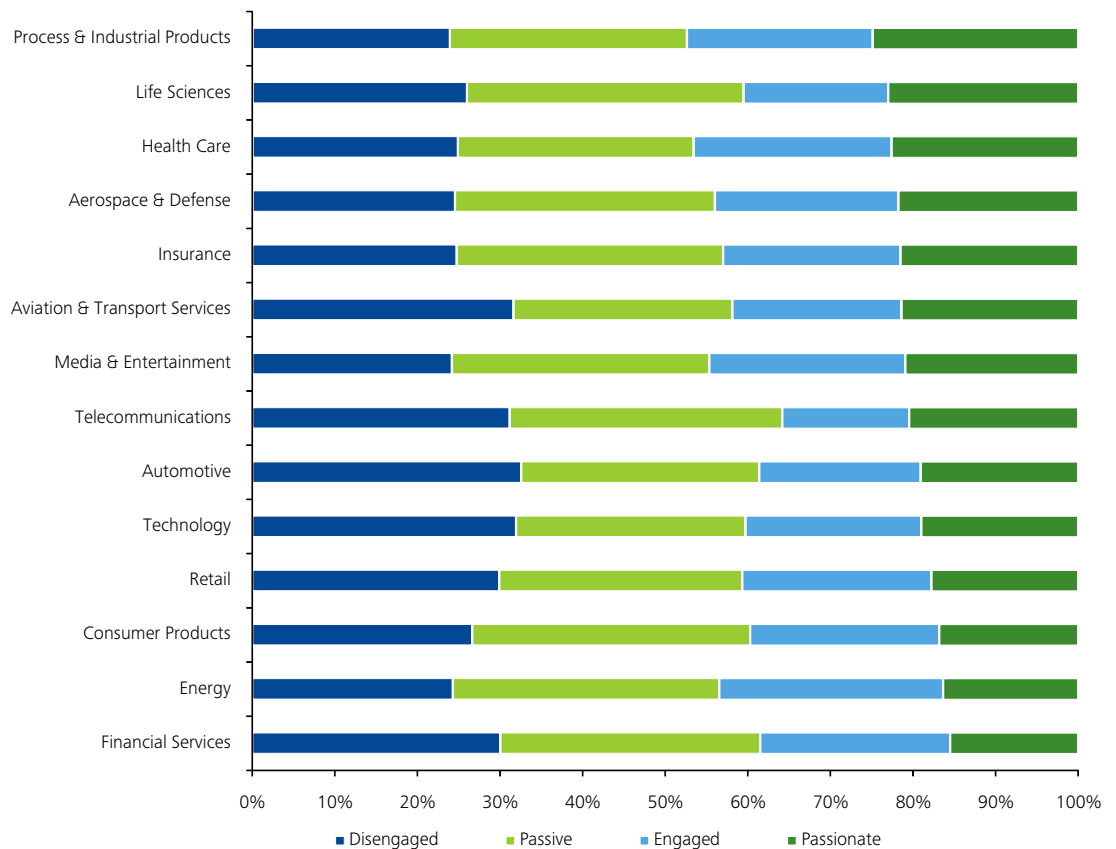
phone than employees in any other industry. Employees in the Retail industry were the least likely to participate in those same activities. In absolute terms, though, it should be noted that current levels of knowledge sharing across firm boundaries are very low in all industries, and we expect participation in Inter-firm Knowledge Flows to increase as competition intensifies.

Worker Passion

Worker Passion, different from employee satisfaction, denotes an intrinsic drive to do more and excel at every aspect of one’s profession. The inaugural survey of Worker Passion found that 20 percent of the overall U.S. workforce is passionate about their work.

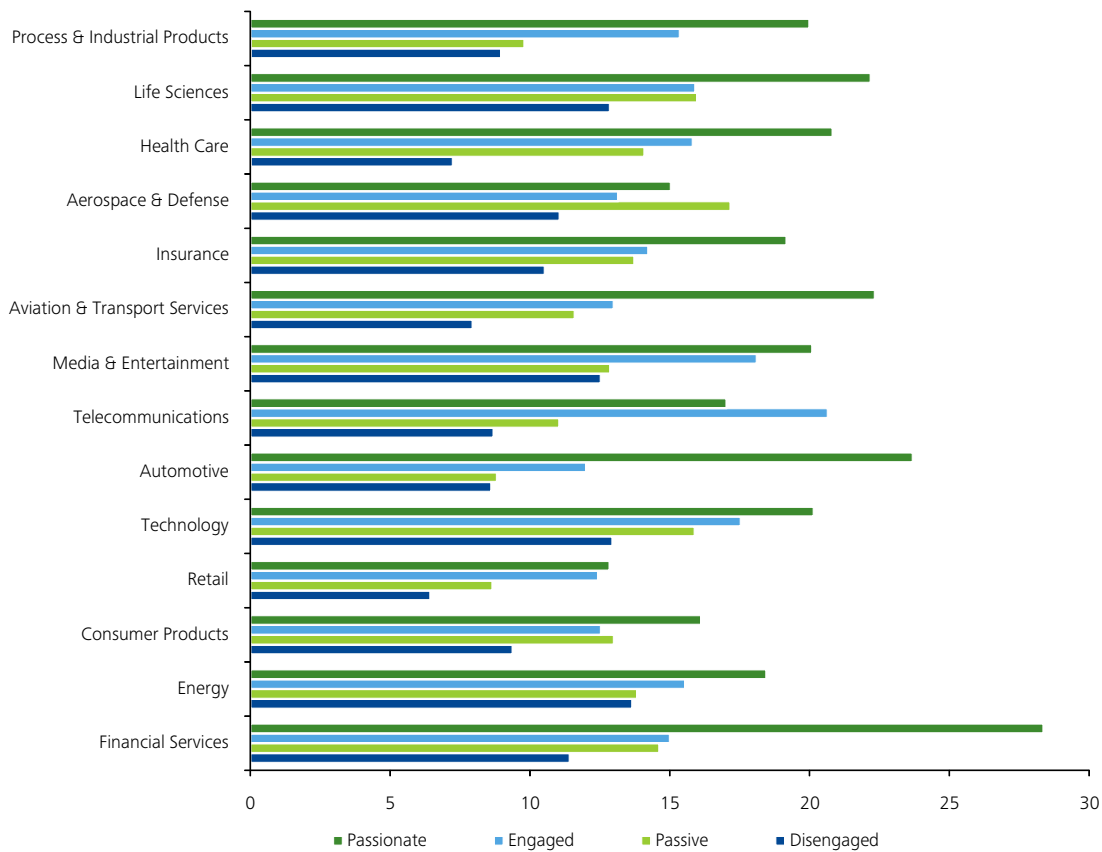
U.S. workers are generally not passionate about their professions: 80 percent of the U.S. workforce (ranging from 75 to 85 percent depending on the industry) reported not being passionate about work. There were more disengaged or passive employees than there were engaged or passionate employees in each of the industries we evaluated, with most employees falling into the “passive” category. Even in the most passionate industry (Process and Industrial Products), only 25 percent of employees reported being passionate about work. In contrast, industries like Technology, which we might expect to have passionate employees, had among the greatest percentage of disengaged employees, second only to the Automotive industry.

Exhibit 10: Worker Passion, All Industries (2008)



Source: Deloitte Survey and Analysis

Exhibit 11: Inter-firm Knowledge Flows by Passion Type, All Industries (2008)



Source: Deloitte Survey and Analysis

While the factors contributing to Worker Passion are complex, there is a clear need for companies to leverage passionate employees in the coming years. Firms will need to tap into the passion of their employees to stay competitive in a globalized labor market which requires everyone to constantly renew and enhance professional skills and capabilities. The Center research indicates that passionate workers participate in more knowledge flows across all but two industries (see Exhibit 11). Therefore the firms that attract and retain the passionate stand to benefit from participating in more flows and creating more value.

Efficiency is No Longer Sufficient

The performance pressures on U.S. industries will continue well past the current downturn. Today’s business environment has been fundamentally changed by the underlying shifts in practices and norms as a result of advances in digital infrastructure and public policy playing out over decades.

While conventional wisdom would suggest a greater focus on efficiency and investments in a time of growing

economic pressure, the findings of the Big Shift suggest a longer term view is necessary. In fact, the first tier of industries to be affected by the Big Shift has been unable to overcome performance pressures. While firms in these industries have improved their efficiency, these improvements have delivered diminishing returns and continuing deterioration of profitability. Today's business environment requires a longer term focus on value creation and capture.

Knowledge flows are the key to surviving and thriving through these tough times and beyond. The good news is that these knowledge flows are proliferating and becoming richer on a global scale as a result of the increasing capability of digital infrastructure and public policy initiatives to remove regulatory barriers to knowledge flows. In order

to improve performance and retain a greater share of the value created, firms must amplify Inter-firm Knowledge Flows and instill greater Worker Passion. Fortunately, passionate workers are more likely to participate in knowledge flows to generate economic value for their firms. Without more effective participation in knowledge flows, firms will be unable to respond successfully to the Big Shift.

In the coming years, consumer power will continue to grow, and firms, particularly in industries facing the greatest levels of Competitive Intensity, will become increasingly dependent on their creative class. With this in mind, one of the biggest challenges for firms will be to create even more economic value and become more effective at capturing a greater portion of the incremental value created.

Automotive

Randall W. Miller

The rise of global competition, the era of the consumer, and the impact of digital technologies on the Automotive industry

Executive Summary

Since 1965, financial performance in the U.S. Automotive industry, as measured by average return on assets (ROA), has fallen from 10.1 to negative 2.9 percent, despite moderate gains in labor productivity that exceeded those in the U.S. economy as a whole. Higher productivity was itself the result of increased levels of automation and the offshoring of labor-intensive components.

These findings reflect a mature industry undergoing massive change due to globalization of the industry and its markets—resulting in heightened Competitive Intensity and declining profitability. Although the entire industry has been affected, the Suppliers sub-sector, in particular, has seen its returns wiped out. This has culminated in a squeezing out of the bottom performing suppliers over the past few years.

For this analysis, we separated the Automotive industry into three sub-sectors:

- Light Vehicle original equipment manufacturers (LV OEMs), such as Daimler, Fiat, Ford, General Motors, Honda, Nissan, Toyota, and Volkswagen. This small, highly-focused group of companies dominates the global car and light truck market. They are implementing global product and market strategies built upon global vehicle architectures (“platforms”) which are adapted to regional market requirements. Emerging markets such as

China, India, Brazil, and Russia are a key focus for future investment and growth.

- Commercial Vehicle OEMs (CV OEMs), such as Agco, Caterpillar, Navistar, Scania, and Volvo. This group includes manufacturers of on-highway medium- and heavy-duty trucks, as well as agricultural, construction, military, mining and various other types of off-road equipment. This sub-sector is also globalizing, although to a lesser extent than the LV OEMs, and is driven by a more diverse set of markets and customers and a requirement for highly customized, engineered-to-order products.
- Suppliers, such as American Axle, ArvinMeritor, Borg-Warner, Continental, Delphi, Eaton, Federal-Mogul, Goodyear, Magna, Tenneco, Tompkins, TRW, Valeo, Visteon, and Wescast. The companies in this segment supply components to the LV and CV OEMs as their main business. Although some have significant aftermarket operations which sell to distributors and retailers, in general they sell high-volume, engineered parts and components directly to the OEM customers and ship directly to their powertrain or assembly plants. This sub-sector has also been undergoing significant globalization and consolidation over the past two decades.

The longer-term forces of the Big Shift are being amplified by current economic conditions. Our research shows that periods of volatility in consumer automotive demand have in the past correlated to shifts in the LV OEMs' Firm Topple

Rate—the reordering of firms in the industry. We are again in a period where industry sales are volatile, as the U.S. market emerges from recession, and new entrants such as BYD, Tesla and Fisker enter the market. Additionally, all of the OEMs are placing bets on new alternative fuel technologies such as hybrids, plug-in hybrids, electric plug-ins, and fuel cells. As a result, we should expect the tople rate to increase going forward.

Customers are also gaining power. The Internet has provided more readily available product information and reduced barriers to switching brands. For the manufacturers, digital design tools have been instrumental in accelerating product development and allowing mass customization of products. We are seeing many new approaches in automotive digital marketing, including viral marketing, social networking, and OEM-to-dealer integrated search, as manufacturers attempt to target and connect more effectively with a fragmented consumer base.

In this environment, branding has become more important than ever. While consumers seem to be satisfied with their last automotive purchase, they also express a willingness to consider a different brand for their next purchase. OEMs who fail to sharpen their brand messaging will struggle to retain market share.

The heightened level of competition in the Automotive industry and the related restructuring has had a major impact on its workers, including reductions in salaries and benefits at all levels. At the same time, Executive Turnover has remained relatively high throughout the past decade. One of the major challenges for the Automotive industry in the future will be competing with other sectors for talent.

Based upon our survey results, Inter-firm Knowledge Flows are somewhat lower in the Automotive industry than in other industries. This appears to be the result of very large firms working on large product programs with a limited number of key suppliers, and with relatively stable production systems and distribution channels. To keep pace with the technology developments underway inside and outside the industry, however, and to engage the enthusiasm of its workers, Automotive firms would benefit from improved Inter-firm Knowledge Flows in the future.

Historically, workers in the Automotive industry have been enthusiastic and passionate about their jobs and their industry. Survey data show that they have not lost their interest in the products, but challenging competitive conditions and widespread restructuring have made working in the Automotive industry much more difficult and less satisfying in comparison to other industries.

Markets

The Markets metrics measure the impact of technological platforms, open public policy, and knowledge flows on market-level dynamics facing corporations. Three metrics were evaluated in the Markets portion of the Impact Index. Of these, we highlight two metrics: *Competitive Intensity* and *Labor Productivity*.

Competitive Intensity¹

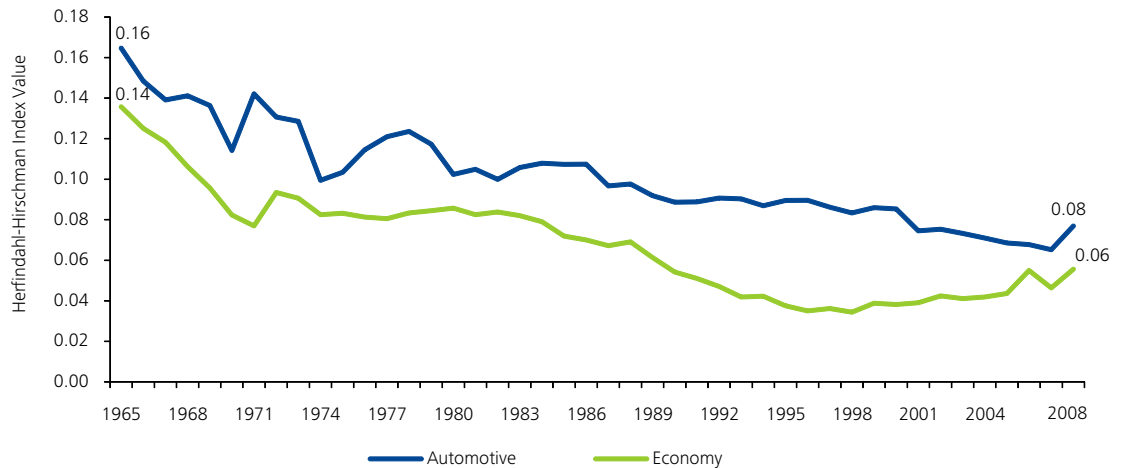
Similar to the trend seen overall in the U.S. economy, the Automotive industry has experienced increased competitive intensity over the past 40 years, nearly doubling from 1965 to 2008.

Dominated by the “Big 3” OEMs (GM, Ford, and Chrysler) into the 1980s, the U.S. Automotive industry has been somewhat less competitive (driven by relatively high barriers to entry into the industry) than the U.S. economy

as a whole. But the overall findings mask more interesting shifts in competitive intensity at the sub-sector level. Exhibit 1.2 shows competitive intensity by sub-sector: Suppliers; CV OEMs; and LV OEMs.

Looking first at the LV OEM sub-sector, we see that Competitive Intensity increased dramatically (lower HHI) starting around 1981. The second oil supply shock in 1979, and the elevated oil prices which temporarily followed, provided the opportunity for Asia-based OEMs to grow their market presence and introduce a broader array of products in the U.S. At this point, the LV OEM sub-sector in the U.S. began a long term reshuffling, with a three-decade-long decline in market share for the domestically-based OEMs. For the past two decades, the LV OEM sub-sector has experienced competitive intensity in line with the U.S. economy as a whole.

Exhibit 1.1: Competitive Intensity, Automotive (1965-2008)

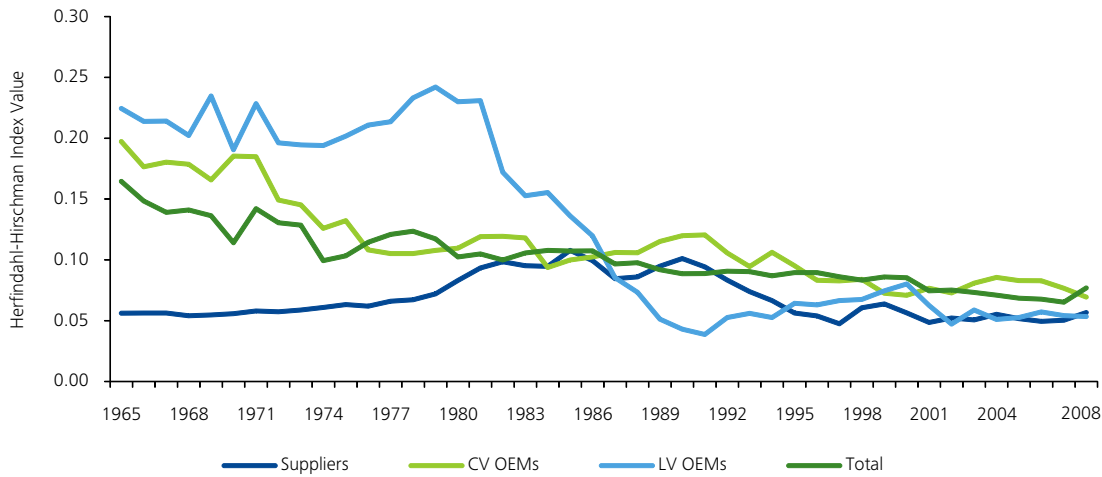


Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

¹ Competitive intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 1.2: Competitive Intensity of Sub-sectors, Automotive (1965-2008)



Source: Compustat, Deloitte Analysis

The Suppliers sub-sector, on the other hand, has been extremely competitive for many decades, even before 1965. In the late 1970s, globalization of the Automotive Suppliers sub-sector led to a period of consolidation among U.S.-based suppliers and a lesser degree of competition. By the late 1980s, both Japan-based and European suppliers began to increase their presence in the U.S. market, and Competitive Intensity again increased for the Suppliers sub-sector.

In the CV OEM sub-sector, Competitive Intensity has generally paralleled that of the U.S. economy at large, increasing slightly from 1965 to 2008. In total, the Automotive industry has experienced an increase in Competitive Intensity, largely driven by globalization.

Labor Productivity²

Labor Productivity in the Automotive industry grew at a three percent CAGR between 1987 and 2006, and over the last decade has outstripped overall U.S. Labor Productivity.

The steady growth in productivity is not surprising considering the Automotive industry is a leader in advanced manufacturing technologies and originated the lean concepts that have taken hold across many other industries. The lean approach has advanced manufacturing flexibility by enabling OEMs, and their suppliers, to reconfigure global product designs and production networks in ways which allow for better capacity utilization and other manufacturing efficiencies. The rapid increase in labor productivity through adoption of these technologies and techniques has certainly been reinforced by intensifying competition.

The off-shoring of labor-intensive components has been another factor driving labor productivity in the Automotive industry in recent years. For example, nearly all wiring harnesses and cut-and-sew interior trim components are produced in low-cost countries such as Mexico, Malaysia, or Morocco.

Firms

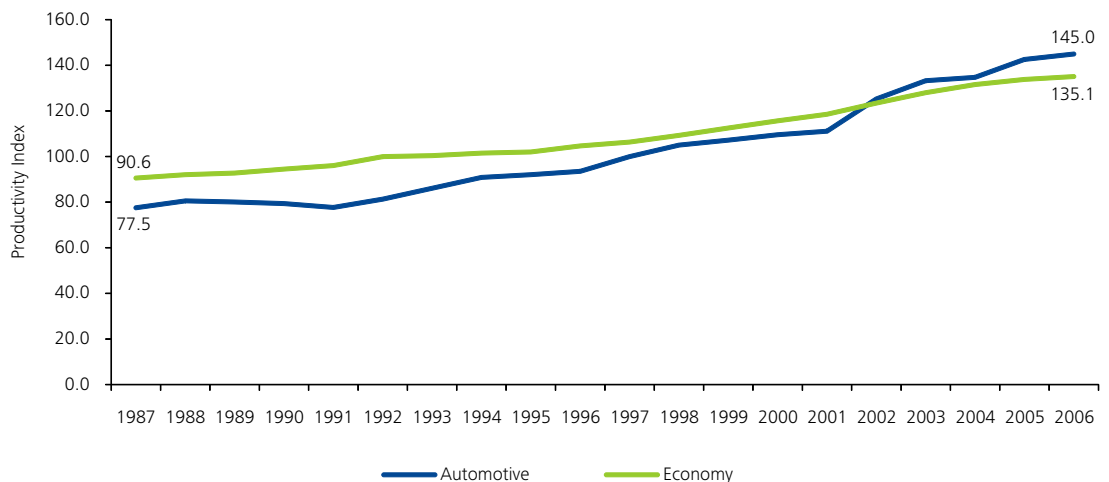
The Firms metrics measure the impact of intensifying competition and more powerful consumers on the performance of Automotive companies. This driver consists of three metrics: *Asset Profitability*, *ROA Performance Gap*, and *Firm Topple Rate*.

Asset Profitability³

The Automotive industry is asset-intensive with a high fixed-cost base, and has historically been driven by cyclical customer demand. In periods of low demand, labor costs are still difficult to scale back due to union contract terms. As a result, ROA for the industry has been more volatile than in the economy generally.

While Asset Profitability in the Automotive industry can fluctuate significantly year to year, overall ROA has been decreasing for the past several decades. Matching a trend line to the short term fluctuations in average ROA, we see a sharp decline in financial performance. The decline in industry ROA coincides with the increase in Competitive Intensity, especially among the LV OEMs.

Exhibit 1.3: Labor Productivity, Automotive (1987-2006)

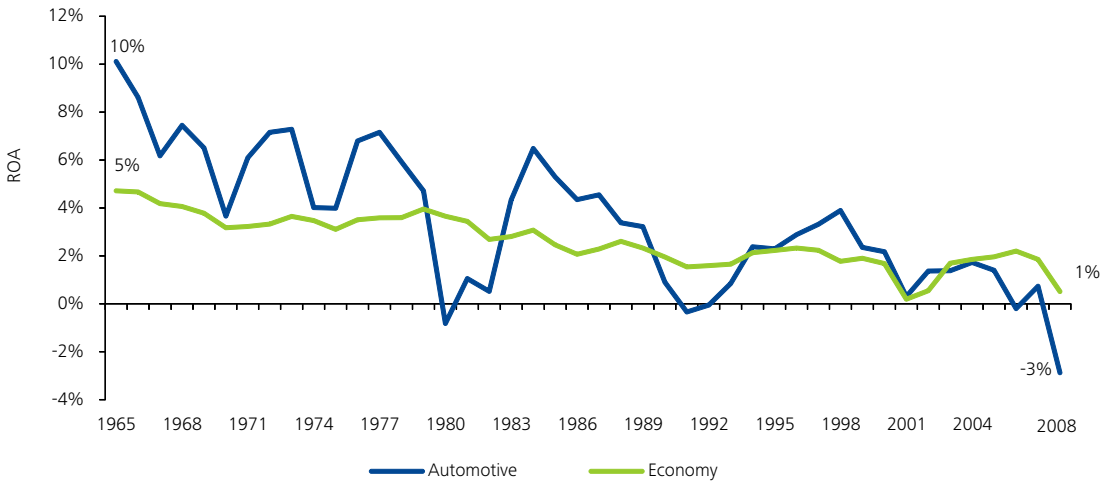


Source: Bureau of Labor Statistics, Deloitte Analysis

² Labor Productivity is defined by the Bureau of Labor Statistics as industry GDP/labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

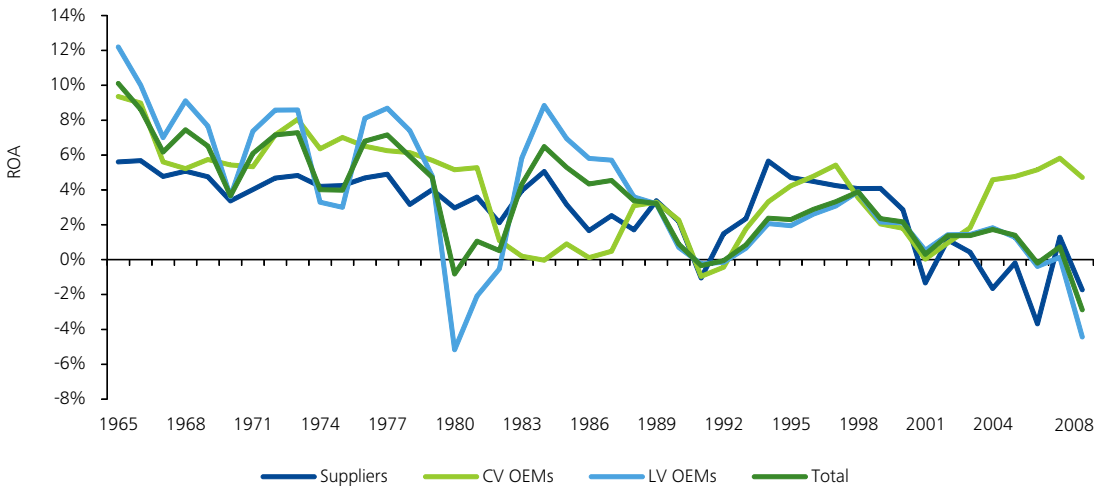
³ Asset Profitability is defined as total return on assets (net income/total assets). For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 1.4: Asset Profitability, Automotive (1965-2008)



Source: Compustat, Deloitte Analysis

Exhibit 1.5: Asset Profitability of Sub-sectors, Automotive (1965-2008)



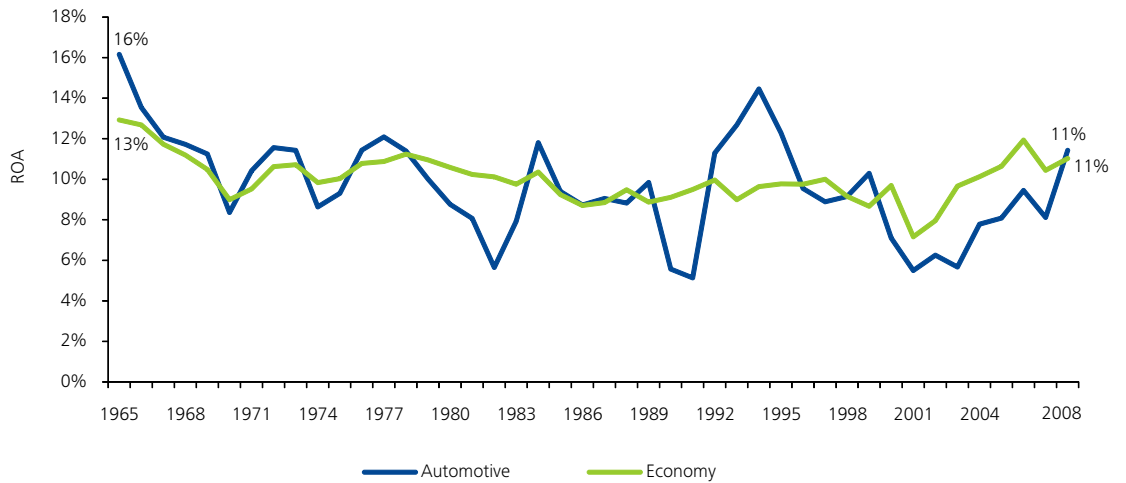
Source: Compustat, Deloitte Analysis

ROA Performance Gap⁴

While the Automotive industry did not experience the widening ROA Performance Gap seen in the overall economy from 1997 to 2002, the gap did suddenly grow in 2006. This likely reflected a culmination of decades-long trends reshaping the industry:

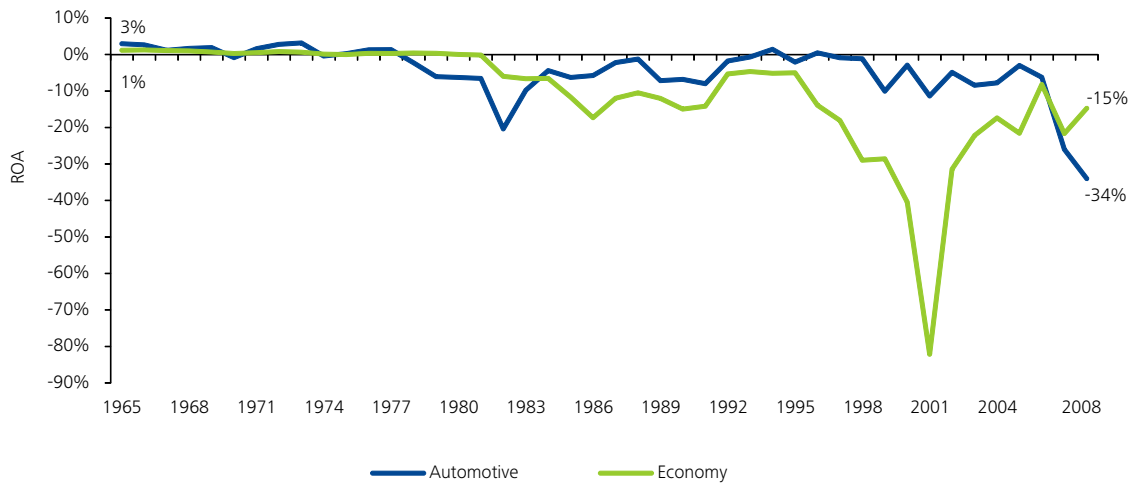
- Long term degradation in asset profitability
- Excess production capacity as market share continued to shift to newer entrants and off-shore suppliers
- Inability of firms to quickly adapt to volatile market conditions

Exhibit 1.6: Asset Profitability Top Quartile, Automotive (1965-2008)



Source: Compustat, Deloitte Analysis

Exhibit 1.7: Asset Profitability Bottom Quartile, Automotive (1965-2008)



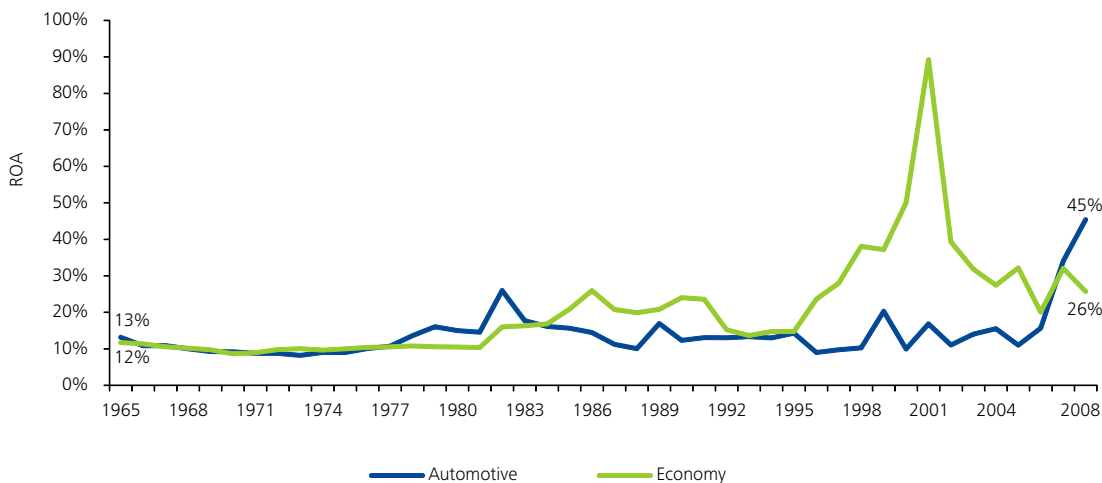
Source: Compustat, Deloitte Analysis

⁴ ROA Performance Gap is defined as the gap in return on assets between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

These trends reached a tipping point in 2006, and the marginal players were rapidly forced out of the Automotive industry. This resulted in a series of bankruptcies and liquidations—particularly in the LV OEM and Suppliers

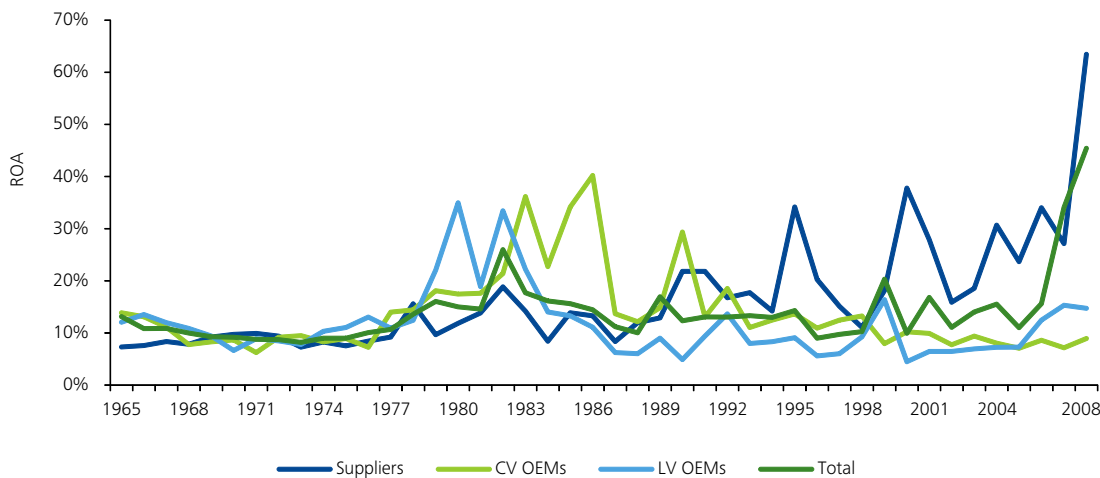
sub-sectors—which continue today. Ultimately, when the Automotive industry consolidation enters a more stable and profitable period, the ROA Performance Gap should again reflect that of the U.S. economy.

Exhibit 1.8: ROA Performance Gap, Automotive (1965-2008)



Source: Compustat, Deloitte Analysis

Exhibit 1.9: ROA Performance Gap of Sub-sectors, Automotive (1965-2008)



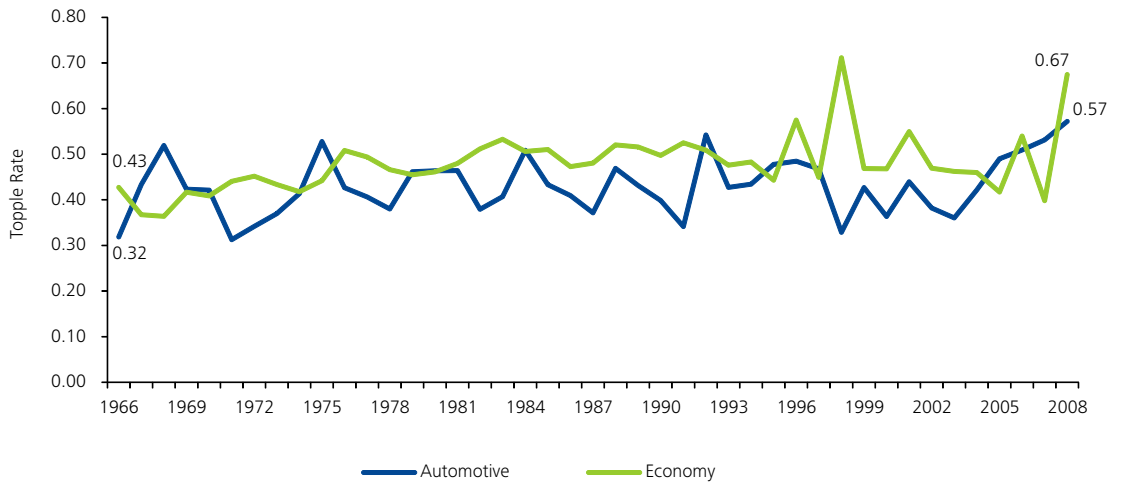
Source: Compustat, Deloitte Analysis

Firm Topple Rate⁵

Firm Topple Rate reflects the change in year-over-year ROA performance among all companies within the industries. The Firm Topple Rate for the Automotive industry has followed the trend of the overall U.S. economy, generally remaining between 0.3 and 0.6 throughout the past four decades. This reflects a fairly mature industry with a group of established global players, but also indicates that changes are ongoing through both consolidations and new entrants.

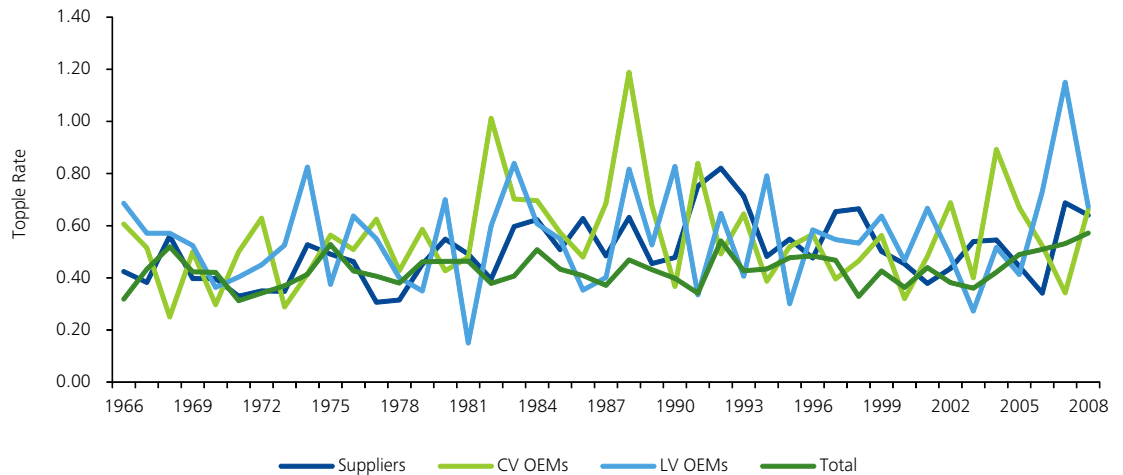
Again, we see more interesting results at the sub-sector level. Although the Firm Topple Rate has typically been between 0.4 and 0.6 for all sectors, the Firm Topple Rate for LV OEMs and CV OEMs jumped much higher several times during the 1970s and 1980s. The Automotive market was very volatile during this period: 1976 was the beginning of the recovery after the first oil shock sent the U.S. economy into recession; 1980 and 1984 marked the beginning and ending of a period of weak automobile sales; and 1988 was the beginning of a multi-year period of depressed automobile sales.

Exhibit 1.10: Firm Topple, Automotive (1966-2008)



Source: Compustat, Deloitte Analysis

Exhibit 1.11: Firm Topple of Sub-sectors, Automotive (1966-2008)



Source: Compustat, Deloitte Analysis

⁵ Firm Topple Rate is defined as the annual rank shuffling amongst firms. For additional information on this metric, please reference the Methodology section (see page 193).

It is significant that periods of volatility in consumer demand have in the past correlated to jumps in the LV OEM Firm Topple Rate. We are again entering a period of expected volatility as the U.S. emerges from recession and new entrants such as BYD, Tesla and Fisker enter the market. Further complicating the outlook, all of the OEMs are placing bets on various alternative fuel technologies such as hybrids, plug-in hybrids, electric plug-ins, and fuel cells—inevitably, some of those bets will not pay off and may drive the Firm Topple Rate upward.

People

The People metrics measure the impact of technology, open public policy, and knowledge flows on consumers and talent, including executives. This driver consists of three metrics: *Consumer Power*, *Brand Disloyalty*, and *Executive Turnover*. The Consumer Power and Brand Disloyalty metrics reflect the value captured by consumers; as such they are relevant for the LV OEM sub-sector, the only Automotive sub-sector which sells primarily to consumers.

Consumer Power⁶

Consumer Power in the Automotive industry falls at about the mean for all consumer categories, and is well above 50. However, several factors indicate that consumers have the upper hand:

- An increase in choices compared to the past, and easier access to choices
- Readily available product information
- Ability to get exactly what they want through customization
- Few cost or convenience barriers to switching brands with their next purchase.

Digital technology is playing a major role in increasing Consumer Power in the Automotive industry.

- The Internet has become a standard research tool for four out of five automobile shoppers in the U.S., providing easy access to detailed product and pricing information. Typically, consumers arrive at a dealership armed with the product choices they want and the price they should expect to pay.
- Digital design tools and digitally-integrated supply chains have allowed OEMs to cost-effectively design and build more models and increase the number of choices available to consumers. Online vehicle configuration

Exhibit 1.12: Consumer Power by Category, Automotive (2008)

Consumer Category	Consumer Power
Search Engine	70.9
Snack Chip	70.7
Broadcast TV News	70.2
Banking	70.1
Restaurant	69.7
Soft Drink	69.5
Home Entertainment	69.1
Pain Reliever	69.0
Hotel	68.8
Magazine	68.8
Insurance (Home/Auto)	68.4
Computer	68.0
Automobile Manufacturer	67.3
Athletic Shoe	66.8
Department Store	66.3
Mass Retailer	65.9
Household Cleaner	65.9
Investment	65.8
Wireless Carrier	65.6
Grocery Store	65.5
Airline	65.4
Cable/Satellite TV	63.1
Gaming System	62.5
Gas Station	61.6
Shipping	61.3
Newspaper	54.0

Source: Deloitte Survey and Analysis

tools allow customers to virtually “build and view” their vehicles, and even check local inventory, before setting foot in a dealer’s showroom.

- Digital marketing comprises a larger and larger share of the marketing budgets as OEMs attempt to find more precise ways of reaching specific consumers. As one example, both GM and Chrysler are integrating Internet search engine marketing by brands, dealer ad associations and dealerships.

⁶ Consumer Power scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

- OEMs are turning to social networking to create “buzz” around new products before, and as, they are introduced. For example, Ford has plugged into YouTube for the Fiesta’s reintroduction in the U.S. According to the September 14, 2009 edition of Advertising Age, “Ford handed out 100 European-spec Fiestas, along with gas cards and insurance, to 100 YouTube personalities last spring as part of a campaign dubbed ‘Fiesta Movement’ to raise awareness for the car, which is being reintroduced next summer. And so far those pros delivered, creating double the number of videos Ford expected. The videos attracted 3.5 million views and helped boost awareness of the car to 38 percent among 16- to 24-year-olds, a demo too young to remember a nameplate that left the U.S. market back in 1980.”⁷ In another example, the BMW X1 is being promoted on Facebook, Twitter, MySpace and YouTube in an effort to reach a younger group of potential buyers.
- The navigation and infotainment features offered in vehicles, including wireless connectivity, now allow consumers to fit the vehicle to their lifestyle. Drivers and passengers have many choices for integrating their digital tools and toys into their driving experience.

These trends of increasing consumer power and more extensive use of digital technology will continue and even accelerate in the future. Technology’s impact will not be confined to the consumer and the manufacturer; the vehicles themselves will become nodes on the network, with real-time interactions and new possibilities.

Brand Disloyalty⁸

As a result of increased Consumer Power and a generational shift in reliance on brands, the Brand Disloyalty measure indicates that consumers are claiming the value stemming from the Big Shift.

The results of the Brand Disloyalty survey indicate that automobile consumers are not very loyal to a brand. Many of the automobile buyers surveyed expressed satisfaction with their most recent purchase choice; however they also expressed a strong willingness to consider other brands for their next choice. Although the survey indicates that price

Exhibit 1.13: Brand Disloyalty by Category, Automotive (2008)

Consumer Category	Disloyalty
Hotel	70.1
Airline	69.9
Home Entertainment	69.0
Mass Retailer	68.0
Department Store	65.9
Grocery Store	63.6
Automobile Manufacturer	62.7
Computer	61.7
Cable/Satellite TV	61.4
Shipping	60.0
Gas Station	59.5
Restaurant	58.5
Insurance (Home/Auto)	57.8
Athletic Shoe	57.2
Wireless Carrier	56.5
Gaming System	55.3
Banking	54.6
Household Cleaner	54.5
Search Engine	53.4
Investment	53.3
Snack Chip	51.5
Pain Reliever	51.4
Broadcast TV News	49.4
Magazine	45.2
Newspaper	42.3
Soft Drink	40.9

Source: Deloitte Survey and Analysis

is an important factor in brand consideration, consumers did not indicate that they are looking for the least expensive product or brand. Consumers are looking for value and a brand with which they can identify.

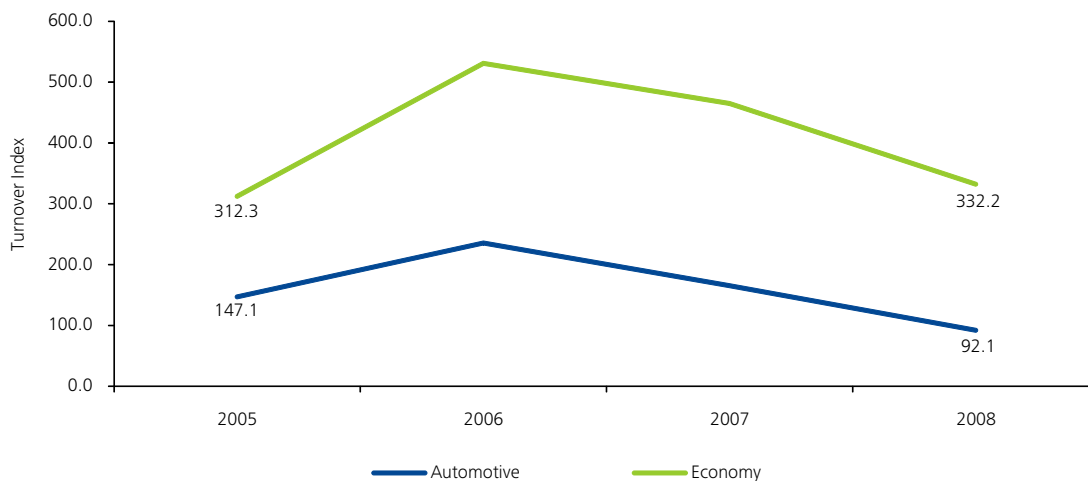
Executive Turnover⁹

The Executive Turnover metric is a proxy for the unpredictable, dynamic pressures on the market participants

⁷ Michael Learmonth, “Ford’s Fiesta to Party On - Without the Fiesta,” Advertising Age, September 14, 2009.

⁸ Brand Disloyalty scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on these metrics, please reference the Methodology section (see page 193).

⁹ Executive Turnover measures executive attrition rates as reported by Liberum Research. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 1.14: Executive Turnover, Automotive (2005-2008)

Source: Liberum Management Change Database, Deloitte Analysis

with the most responsibility—the executives. Executive Turnover in the Automotive industry has been very high over the past four years in comparison with the U.S. economy in general. The significant restructuring underway at many Automotive companies—which has included internal reorganizations, facility closings, early retirements, and other streamlining measures—have resulted in many executive changes.

Flows

Knowledge flows—which occur in any social, fluid environment where learning and collaboration take place—are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to rapidly refresh your knowledge stocks.

Eight metrics were evaluated in the Flow Index for the high-level analysis of the Shift Index. Of these, we highlight two metrics with available sub-sector-level data: *Inter-firm Knowledge Flows* and *Worker Passion*.

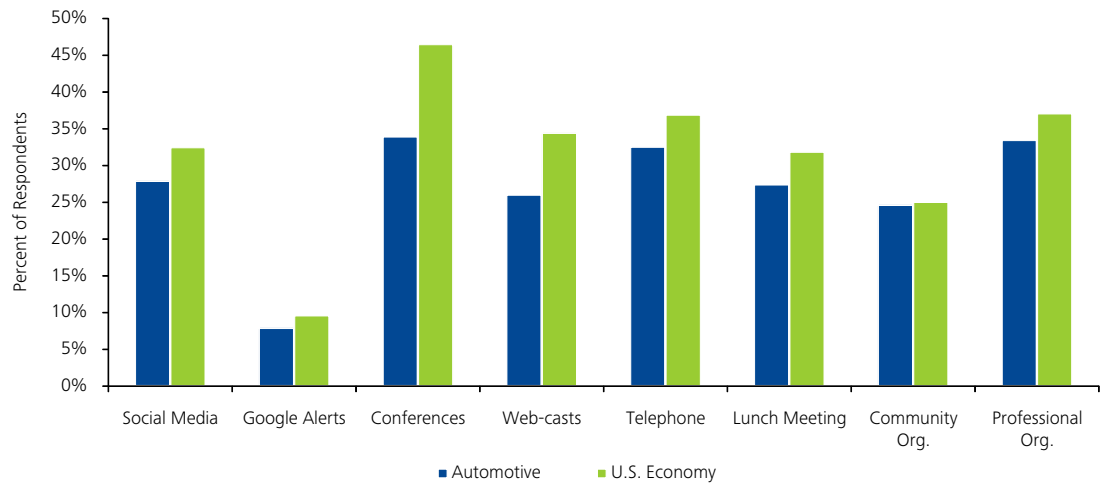
Inter-firm Knowledge Flows¹⁰

Although there are daily interactions between OEMs and their suppliers and among dealers, customers, and the OEMs, it appears the Inter-firm Knowledge Flows lag those in other industries. The cause is unclear, but may be partly explained by structural differences within the Automotive industry. The OEMs themselves are complex organizations focused on a limited number of large product programs and with a relatively fixed distribution network. As a result, day-to-day communication and knowledge flow occurs within each of these large, complex organizations, rather than between them.

Concerns about intellectual property may also prevent significant day-to-day knowledge flow between competing OEMs or suppliers. However, there are some examples of cooperative projects to jointly develop new intellectual capital among OEMs (e.g., the two-mode hybrid

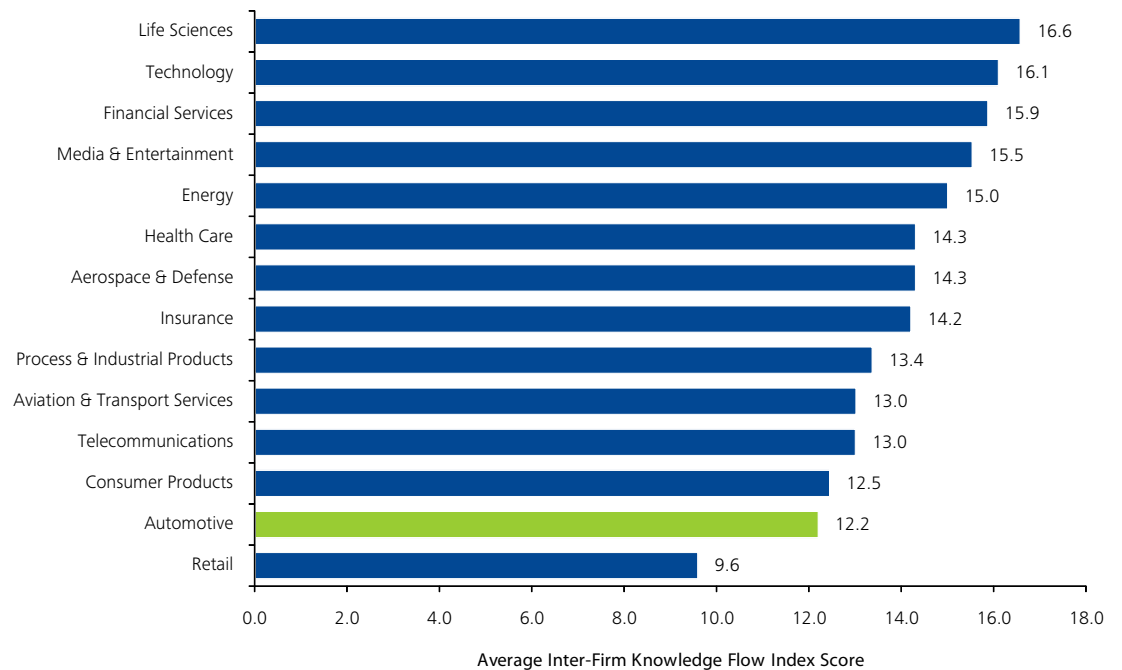
¹⁰ Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 1.15: Participation in Inter-firm Knowledge Flows, Automotive (2008)



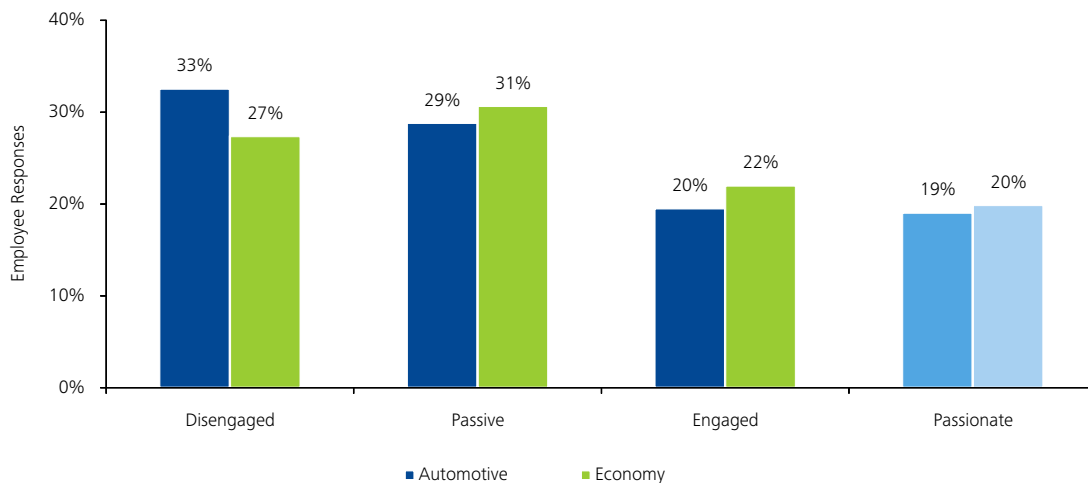
Source: Deloitte Survey and Analysis

Exhibit 1.16: Inter-firm Knowledge Flow Index Score, Automotive (2008)



Source: Deloitte Survey and Analysis

Exhibit 1.17: Worker Passion, Automotive (2008)



Source: Deloitte Survey and Analysis

development program with BMW, Daimler, and GM) and suppliers (e.g., the partnership between Valeo and Michelin to build hybrid-electric and electric powertrains).

Additionally, as margin pressures have intensified, many companies have taken an inward focus at the expense of external communication and engagement across the industry. Reductions in company budgets have resulted in a marked decline in participation in industry conferences and other traditional forums in recent years.

In coming years, with renewed focus on developing new technologies for alternative fuel vehicles and the need to cooperate with new entrants into the industry, we expect Inter-firm Knowledge Flows to increase, particularly for the most successful OEMs and suppliers.

Worker Passion¹¹

Workers in the Automotive industry are less engaged and somewhat less passionate about their jobs compared to the U.S. economy. Less than 80 percent of the Automotive work force classified themselves as “passionate” about their work.

While workers are relatively enthusiastic about recommending their company’s products to others,

compared to other industries they are much less likely to recommend their company as a good place to work. Perhaps because widespread restructuring in the industry has resulted in many workers being moved into new roles, Automotive workers have the highest response to preferring to stay with their company, but in a different position. Automotive workers also reported the highest workload across all the industries in terms of needing to work extra hours.

With the globalization of the industry, the Automotive industry is experiencing greater Competitive Intensity and declining profitability, which have been amplified by the global economic recession. The expected sales volatility of the next few years coincides with new competitors entering the market, the emergence of new automotive technologies, and an increasingly powerful but fragmented consumer base. More than ever automotive companies will have to sharpen their brands, exploit technology, and tap into the latent passion and commitment of the automotive workforce to meet these challenges.

¹¹ Worker Passion scores were calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to lack of data availability and inadequate data quality.

Metric Definitions and Sources¹²

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics (“BLS”)
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	Compustat
		ROA Performance Gap	Gap in return on assets (ROA) between firms in the top and bottom quartiles	
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms	
	People	Consumer Power	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	
		Executive Turnover	Measures executive attrition rates as reported by Liberum Research	
	Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate
Worker Passion		Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs		

¹² For additional information on this metric, please reference the Methodology section (see page 193).

Industry Definition: Automotive

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Automotive industry is no exception. With the help of industry experts, we divided this industry into three sub-sectors: Commercial Vehicle OEMs; Light Vehicle OEMs; and Suppliers. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. These sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
CV OEMs	3523	Farm Machinery & Equipment
	3531	Construction Machinery & Equip.
LV OEMs	3711	Motor Vehicles & Passenger Car Bodies
Suppliers	3011	Tires & Inner Tubes
	3714	Motor Vehicle Parts & Accessories

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Consumer Products

Pat Conroy and Anupam Narula

Harnessing the underlying forces of change, in times of increasingly tenuous competitive advantage in the Consumer Products industry

Executive Summary

The Consumer Products industry¹ has seen a slight erosion of performance since 1965 as consumers and retailers gained strength relative to Consumer Products companies. Although average return on assets (ROA) dipped through the 1980s and 1990s, it steadily increased from 2000 to 2007, resulting in a relatively static average ROA over the past four decades. This slight drop is considerably smaller than the average decline across all U.S. industries, likely reflecting consolidation in the industry, which reduced the forces of competition.

Despite a slower relative pace of competition, the Consumer Products industry is not without its own signs of heightened performance pressure. The winners are barely maintaining position, while the losers are increasingly harder hit. The gap in Asset Profitability between top and bottom performers, for instance, has widened rapidly in recent years, with the top quartile performers gradually losing asset profitability, while the bottom quartile performers experience a rapid deterioration in Asset

Profitability. This ROA “performance gap” has grown from 11.0 percent in 1965 to 27.5 percent in 2008.

Moreover, the companies that do make it to the top in the Consumer Products industry are having difficulty staying there. The rate at which Consumer Products companies lose their leadership positions (Firm Topple Rate) has increased more than 25 percent since 1965 and is slightly higher than for the overall economy.

Through the lens of the Shift Index, we see a number of factors putting pressure on consumer products sector performance:

- Declining brand loyalty and increasing power of consumers. Thanks to the proliferation of digital technology in the Big Shift, consumers have become increasingly empowered with information about a widening array of products. The rapidly advancing technology infrastructure and increasing use of social media have helped reduce information asymmetries between consumers and Consumer Products companies.

¹ The following sub-sectors were included in the Consumer Products industry for this study: Apparel, Textile, Footwear, Accessories and Cosmetics; Food, Beverages and Food Processing; Personal and Household Goods.

This transparency makes brands less relevant in buying decisions compared to other aspects of the product. As a result, consumers are trading down to lower-priced products, showing reduced brand loyalty, and increasing their use of private label products across a wide array of product categories.²

- Stronger consumers and retailers. The power struggle between consumers, Consumer Products companies, and retailers is intensifying. Consumers are gaining power as channels proliferate, providing easy access to an array of choices and minimizing switching costs. In addition, retailers have gained market power relative to Consumer Products companies as the Retail industry continues to consolidate.
- Higher regulatory expectations. Over the past four decades, we have seen a rising tide of consumer expectations with regard to product safety and manufacturing and labor practices. Regulators continue to introduce more laws related to efficacy, safety, and traceability. The brand promise of a consumer

product must now go beyond quality to include traceability throughout an extended global supply chain and alignment with ever-changing expectations of sustainability. These have very real costs for Consumer Products companies.

In addition to these factors, Consumer Products companies also face pressure to develop genuinely new products, identify opportunities in the unrealized potential of emerging and developing markets, execute the right services footprint, and generate or raise sufficient capital for both operating and investing. These forces are only accelerating thanks to the technology advances and economic liberalization that characterize the Big Shift. In these times of increasingly tenuous competitive advantage, the winners will be those companies that harness the underlying forces of change to develop new ways to participate in knowledge flows, to connect with their customers, and to tap into the passions of their employees.

2 "Private Label 2009 Game-Changing Economy Taking Private Label to New Heights," Information Resources, Inc., September 2009.

Markets

The Markets category for Consumer Products consists of two metrics: *Competitive Intensity* and *Labor Productivity*. These reflect the increasing power of retailers and the emergence of the direct-to-consumer channel, as well as operations and supply chain innovations.

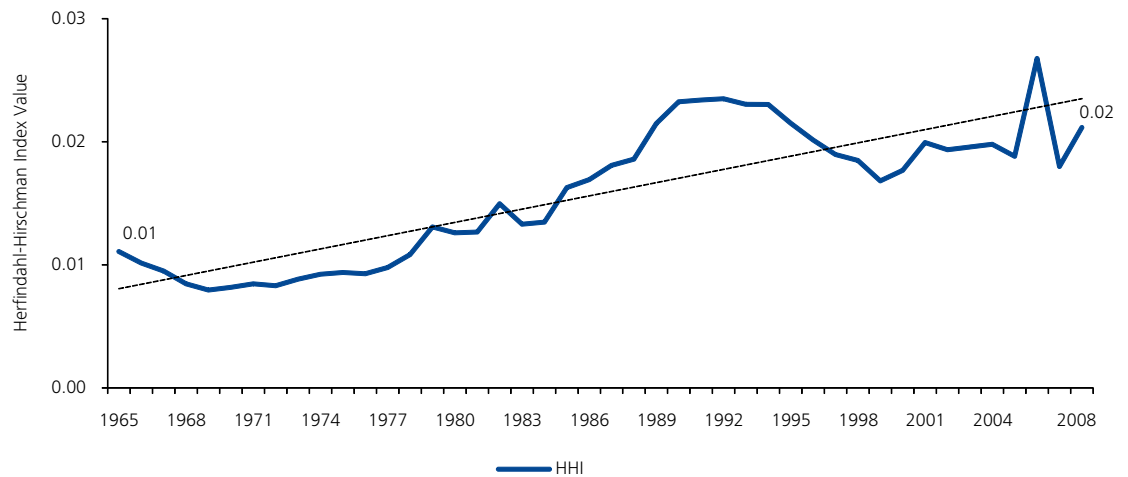
Competitive Intensity³

Industry concentration in the Consumer Products industry has nearly tripled since 1965 and is twice that of the overall economy—competitive intensity has declined by this measure. However, consolidation within the industry tells only one part of the story. Retailers and consumers are also becoming more powerful. While consumers will clearly reap the benefits from improved transparency and a choice

of channels, how the retailers and Consumer Products companies split the remaining profits is still undecided.

Building brand loyalty with the consumer, particularly in ways aided by technology, will be critical for Consumer Products companies. Historically, Consumer Products companies tended to cede the direct consumer connection to retailers. More recently, some Consumer Products companies have attempted to use their own retail outlets to better connect with the customer. For example, the 2009 World Retail Awards named Apple Retail the retailer of the year and Nike Town, London as retail design of the year.⁴ In addition, many Consumer Products companies are evaluating their own online direct-to-consumer channel options (e.g., *alice.com*). These direct-to-consumer options

Exhibit 2.1: Competitive Intensity, Consumer Products (1965-2008)



Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

³ Competitive Intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in sector concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

⁴ "Winners & Finalists, 2009 World Retail Awards" <http://www.worldretailcongress.com/files/wra09_the_winners_v2.pdf>.

provide the opportunity for companies to better manage the relationship with the consumer but have implications for their profitability and potential conflicts with existing channels that must be carefully managed.

Meanwhile, consolidation in the Retail industry, exemplified by the recent bankruptcies has made the competitive environment more challenging for consumer products companies.⁵ Some retailers are aggressively limiting shelf space and rationalizing those SKU's deemed not sufficiently profitable, all while expanding their private label portfolios with higher quality—and often distinctive—products.

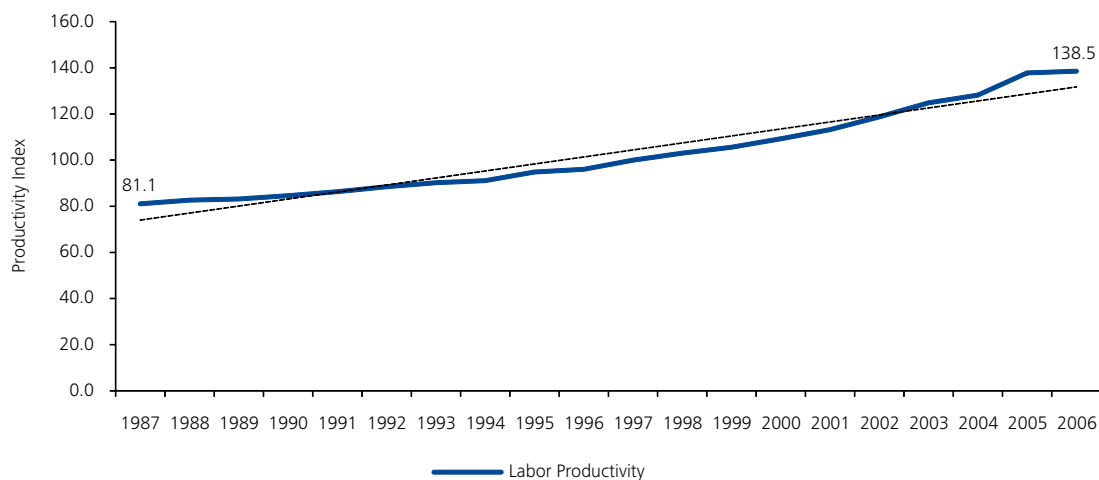
Walmart has applied a brand and SKU rationalization framework termed “win, play and show.” The retailer adds SKUs in categories in which it can “win” as the destination

retailer (e.g., pet food where the category is fast-growing, and Walmart has scale advantages and broad product access), maintains SKUs in categories in which it can “play” (e.g., denim jeans where Walmart has scale but not broad product access), and reduces SKUs in categories in which it can “show” (e.g., tape measures where Walmart does not have scale advantages).⁶ In many cases, the simplification of the buying decision has resulted in higher revenue and profitability for retailers as described in the book, *The Paradox of Choice: Why Less is More*.⁷

Labor Productivity⁸

Since 1987, labor productivity in the Consumer Products industry has grown at a 2.9 percent CAGR compared to the overall economy at a 2.1 percent CAGR. Economies of scale from industry consolidation, incremental operational

Exhibit 2.2: Labor Productivity, Consumer Products (1987-2006)



Source: Bureau of Labor Statistics, Deloitte Analysis

- 5 "Retailers and Bankruptcy," TheDeal.com, June 2, 2009.
- 6 Warren Thayer, "Changes in the Wind at Wal-Mart," R&FF Retailer, February 17, 2009.
- 7 Barry Schwartz, *The Paradox of Choice: Why Less is More*, (New York: Ecco, 2003).
- 8 Labor Productivity is defined by the Bureau of Labor Statistics as industry GDP/ labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

improvements, and more efficient supply chains drove the productivity improvement. However, these recent drivers may be reaching diminishing returns, and no breakthrough operational innovations have emerged to drive the next wave of labor productivity improvement.

Firms

The Firms category consists of three metrics: *Asset Profitability*, *ROA Performance Gap*, and *Firm Topple Rate*. For Consumer Products companies, these metrics reflect the erosion of asset profitability and a widening gap between “winners” and “losers.”

Asset Profitability⁹

Asset profitability in the Consumer Products industry has remained relatively static, declining slightly from just over seven percent in 1965 to just over six percent in 2008 and trending at about six percent over the past four decades. This decline is considerably less severe than that experienced in the U.S. economy as a whole, reflecting the weaker forces of competition in the Consumer Products industry relative to other industries. That said, after steadily

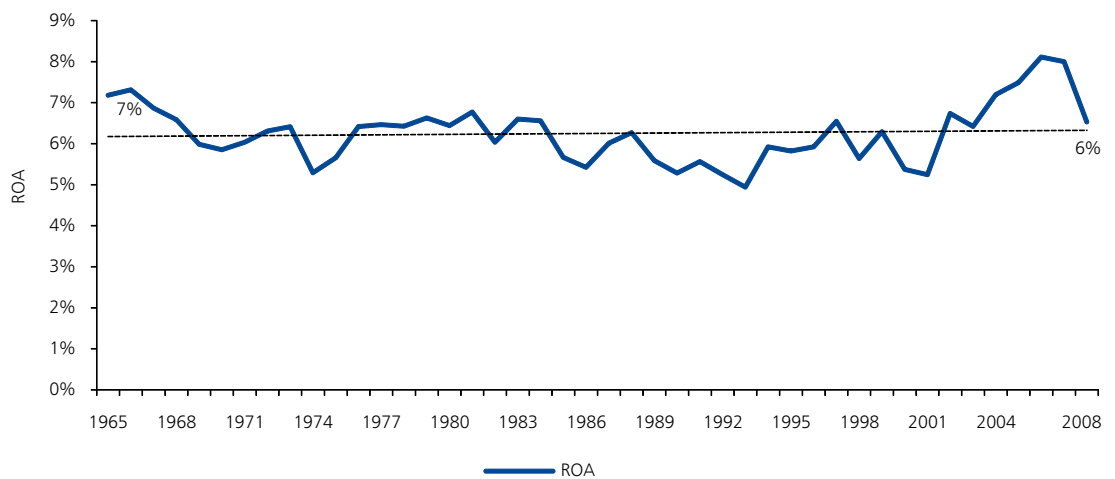
increasing through the past decade, profitability has declined sharply over the past few years.

The upward trend in ROA in recent years might be explained by the successful integration of the many acquisitions that occurred in the industry during that time. Greater efficiency in production and supply chains, reduced inventory levels, and increased outsourcing of back-office functions and production also contributed to the upward trend.

ROA Performance Gap¹⁰

The gap in ROA between the industry “winners” and “losers” (the top quartile of performers and the bottom quartile of performers) has more than doubled, from 10 percent in 1965 to 24 percent in 2008. This gap has widened more rapidly in recent years. The bottom quartile consists of many companies on the verge of bankruptcy rather than ones who have simply had an underperforming year. The current market is less forgiving, and bottom performers are dropping more quickly. If you fail to meet customer needs, the consequences are severe.

Exhibit 2.3: Asset Profitability, Consumer Products (1965-2008)

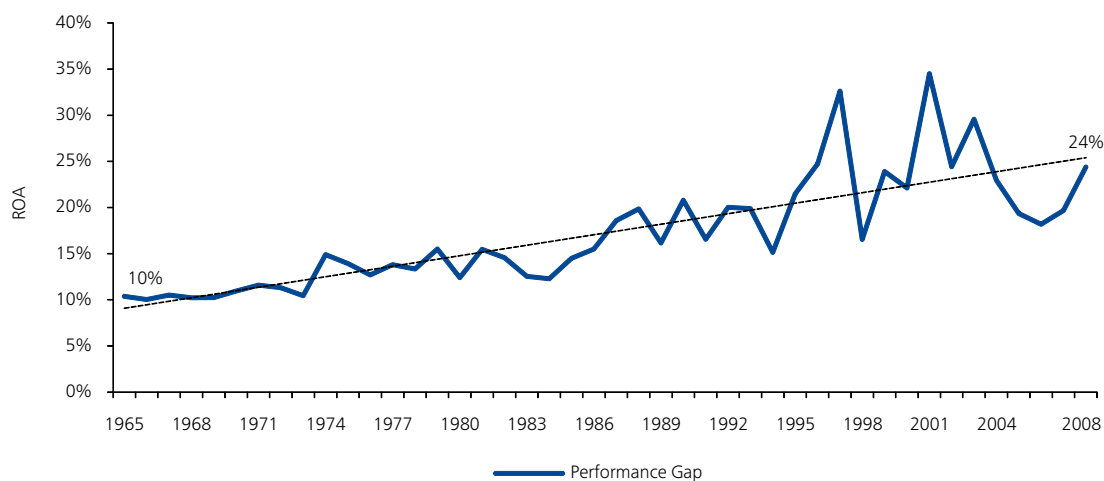


9 Asset Profitability is defined as total return on assets (net income / total assets). For additional information on this metric, please reference the Methodology section (see page 193).

10 ROA Performance Gap is defined as the gap in return on assets between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

Source: Compustat, Deloitte Analysis

Exhibit 2.4: ROA Performance Gap, Consumer Products (1965-2008)



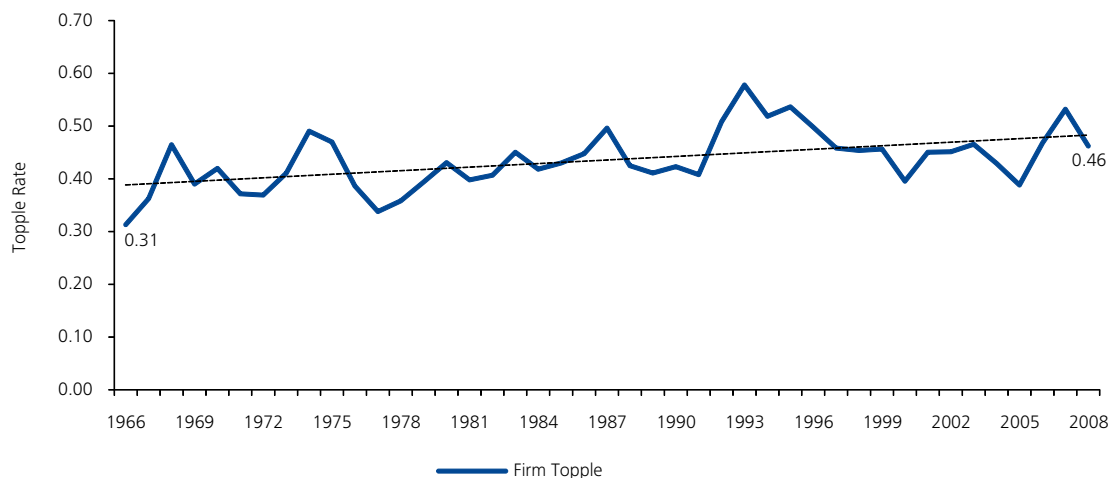
Source: Compustat, Deloitte Analysis

Firm Topple Rate¹¹

"Winners" are less likely to remain so. That is the message suggested by the increasing rate at which Consumer Products companies lose their ROA leadership position. The

Firm Topple Rate has increased nearly 50 percent in the Consumer Products industry and is slightly higher than in the overall economy.

Exhibit 2.5: Firm Topple, Consumer Products (1966-2008)



Source: Compustat, Deloitte Analysis

¹¹ Firm Topple Rate is defined as the annual rank shuffling amongst firms. For additional information on this metric, please reference the Methodology section (see page 193).

At first glance, this might seem paradoxical: why, if competition is less intense in Consumer Products than in other industries, would the Firm Topple Rate be higher? The answer may be that the competitive intensity metric captures only the competition from other players in the sector and does not fully capture the competitive pressures exerted by a consolidated Retail industry and more powerful customers. The recent consolidation of Consumer Products companies appears to be a defensive response to the growing market power of the consolidating Retail industry. In fact, the higher topple rate may be helping to dampen the erosion of ROA—the Consumer Products companies that do not learn to rapidly improve performance go out of business.

Underlying the three preceding metrics is a set of challenges to generating growth and sustaining returns. Consumer Products companies are struggling to develop genuinely new products and create new product markets. In addition, while emerging economies hold tantalizing growth opportunities, Consumer Products companies face ongoing challenges in successfully entering those markets.

New Products and Markets

A Consumer Products company's ability to capture value and improve asset profitability lies in developing genuinely new products that create new markets or dramatically expand existing markets. The majority of new product launches have been product extensions that either slightly expand the existing market or, worse, cannibalize existing products. This strategy has not moved the needle on asset profitability.

Some companies do have a record of success with new products and market creation. For example, Procter & Gamble's innovative Febreze, Swiffer, and Crest Whitestrips products each represent a market-creating success.¹² Many

other companies have not been as successful. However, for all industry players, the velocity at which competitors replicate innovative products has accelerated, shrinking the window of competitive advantage for new products.

In response to the uncertain economic environment, some companies have launched defensive "trade-down" strategies to hang onto their branded customers, offering new products, or newly positioned products, with lower price-point value propositions.¹³ This type of strategy is designed to retain existing customers and maintain share, but not to grow share or new markets.

Understandably, Consumer Products companies are exploring ways to make their R&D investments more productive. R&D spend projections from Industrial Research Institute show a trend away from traditional R&D investment in internal basic research (except for food and tobacco) and the development of existing products and toward significantly more investment in new-business products. R&D collaboration, in the form of academic partnerships, technology alliances and joint ventures, is also expected to continue to increase.¹⁴ Non-traditional R&D methods (e.g., crowd-sourcing) have gained recognition as complementary approach to traditional R&D. As an example, VitaminWater, part of The Coca-Cola Company, recently launched a contest on Facebook to develop a new flavor.¹⁵

Unrealized Potential in Emerging Markets

The growth prospects of Consumer Products companies are increasingly reliant on their success in emerging markets.¹⁶ However, companies are having mixed results there. This is the result of complex factors that differ from markets back home. Early attempts to treat China or India as one homogenous market—often with de-featured western products—mostly resulted in diminishing or

12 A. G. Lafely and Ram Charan, *The Game-Changer: How You Can Drive Revenue and Profit Growth with Innovation* (Random House, 2008).

13 Amy Golding, "P&G tackles discounter threat with Simply Dry," July 28, 2009. <www.market-ingmagazine.co.uk>

14 Raymond Cosner, "Industrial Research Institute's R&D Trends Forecast for 2009," *Research Technology Management*, January 1, 2009.

15 Brian Quinton, "Vitaminwater Puts Users at the Flavor Controls," September 10, 2009. <www.Promomagazine.com>

16 Loran Braverman, "Standard & Poor's Household Nondurables Industry Survey," *Standard & Poor's*, June 4, 2009.

negative returns. Developing genuinely new products tailored to the local population requires a more granular understanding of the nuances of the local markets and the buying decisions of each heterogeneous customer segment. The most successful companies have developed unique products for individual segments of developing countries and are poised to capitalize as consumers “trade up.”

Other leading Consumer Products companies are profiting from “trickle-up innovation,” the introduction of products, or product features, from developing economies into developed economies. Lower-priced products created for emerging economies often have future applicability in developed countries, particularly for price-sensitive customers. For example, Nestlé repositioned their low-cost Maggi brand noodles from India as an inexpensive health food in Australia.¹⁷

People

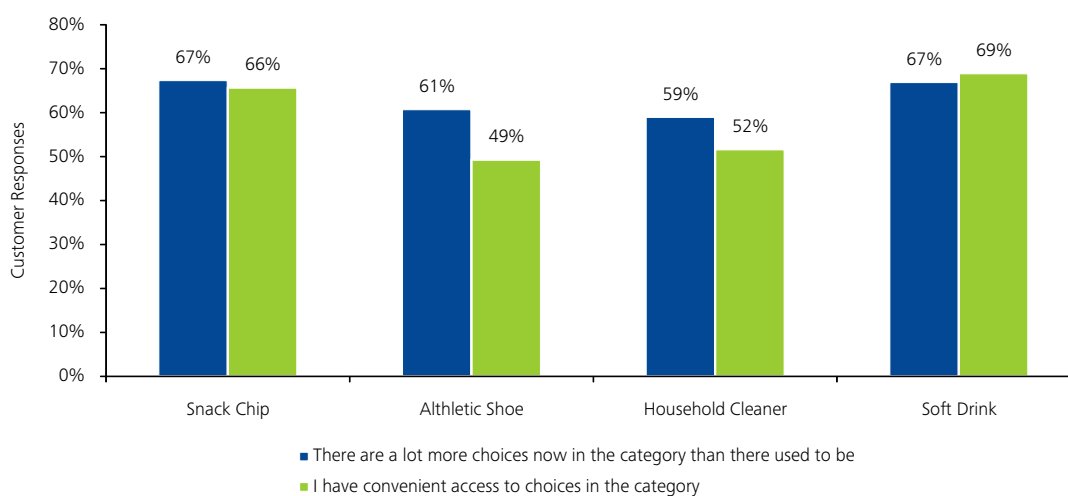
The People category for the Consumer Products industry consists of three metrics: *Consumer Power*, *Brand Disloyalty*, and *Returns to Talent*. These metrics reflect the impact of technology, open public policy, and knowledge flows on consumers and talent (including executives).

Consumer Power¹⁸ and Brand Disloyalty¹⁹

Our survey of consumers across four product categories (snack chips, soft drinks, athletic shoes, and household cleaners) revealed that consumers believe that they have more convenient access to a wider array of product and service choices and are more willing to try new and different brands.

When asked specific questions about consumer power, a high percentage of consumers agreed that there are more choices now and that they have convenient access to those choices.

Exhibit 2.6: Consumer Power, Consumer Products (2008)



Source: Deloitte Survey and Analysis

17 Reena Jana, “Innovation Trickles in a New Direction,” *BusinessWeek*, March 11, 2009.

18 Consumer Power scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

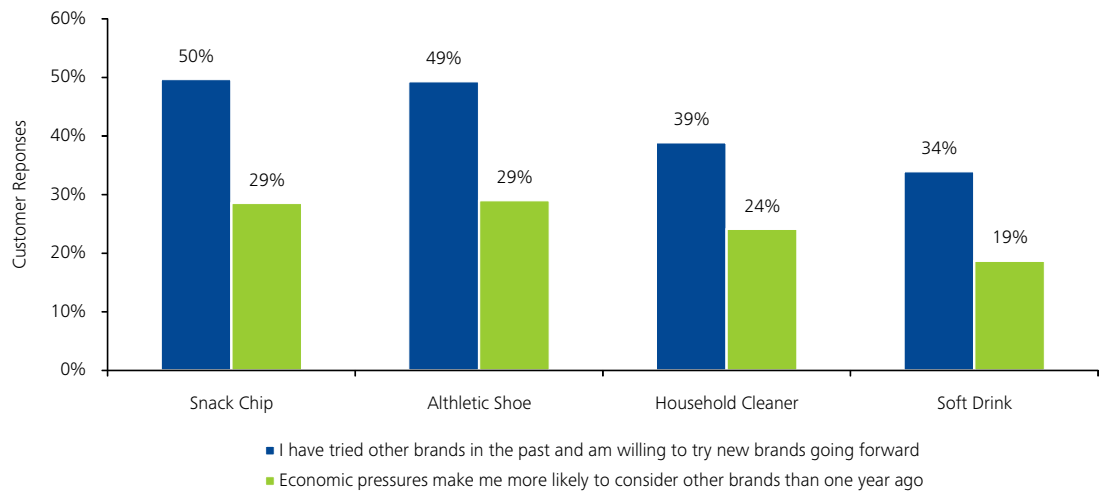
19 Brand Disloyalty scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Similarly, when asked for levels of agreement with specific questions about brand disloyalty, consumers indicated a willingness to try other brands, slightly amplified by recent economic pressures.

These results are probably not surprising. Thanks to digital technology, product and service markets have become more transparent to consumers, who can easily research products and product claims. A variety of emerging and

established online comparison tools (e.g., Amazon reviews, Consumer Reports, Frucall.com) allow consumers to compare product performance and price across branded and private label goods.²⁰ This transparency has the potential to make brands less relevant in buying decisions compared to other aspects of the product, and Consumer Products companies face worsening profit pressure, particularly as consumers are increasingly overwhelmed by the number of choices.

Exhibit 2.7: Brand Disloyalty, Consumer Products (2008)



Source: Deloitte Survey and Analysis

²⁰ Van L. Baker, "The Impact of Collaborative Hopping Sites," Gartner, July 13, 2009.

Moreover, with convenient access to choices and little cost associated with switching brands, consumers are open to trying less expensive alternatives. Economic pressures make consumers even more likely to consider alternatives. As economic conditions improve, Consumer Products companies are left to ponder the question of whether private label consumers will return to branded goods.

Determining and Executing on the Right Services Footprint to Build Brand Loyalty

Consumer Products companies have typically categorized ancillary services as either revenue-generating or brand-loyalty-building.

In the revenue-generating category, durable goods companies (e.g., appliances, water treatment) are evaluating how they can grow their repair, maintenance, and warranty businesses and reconsidering whether ceding installation services to retailers and distributors was the right move. In many cases these services not only generate revenue but also have the potential to build brand loyalty by demonstrating the manufacturer's support for the product.

In the brand-loyalty category, most services provide a means for connecting with consumers—e-mail subscriptions for recipes using products (e.g., Dairy Farmer's of America's Friends of Elsie program

promoting Borden's products), or recommendations for complementary products that improve product efficacy (e.g., Whirlpool recommending the use of Finish Jet-Dry dishwasher additive).²¹ Some services concurrently build loyalty and grow revenue. An example from the Retail industry is the success of the Geek Squad (computer set-up, maintenance and repair services) at Best Buy.²²

Meeting the Brand and Product Promise: Efficacy, Safety, Traceability, Quality, and Sustainability

Brand and product promises face additional scrutiny as consumer power rises and information becomes more available. Consumers expect products that are safe, meet product claims, and are manufactured in a sustainable way.²³ Regulators demand compliance with laws related to efficacy, safety and traceability. Where consumer product companies traditionally thought of the brand and product promise as the litmus test of efficacy and safety, it now means more. In addition to technical compliance, the promise encompasses traceability throughout an extended global supply chain, perceptions of product quality, and alignment with ever-changing expectations of equity and sustainability. Furthermore, the array of overlapping regulations and governing bodies, combined with heightened consumer awareness, has made meeting and communicating the brand and product promise increasingly difficult.²⁴

21 <http://www.friendsofelsie.com/>.

22 Kerri Susan Smith, "Geek Squad: Best Buy's Corporate Mythology," Knowledge@W.P. Carey, January 14, 2009.

23 Pat Conroy and Diane Kutyla, "What's for Dinner? Consumers Seek Answers About the Food They Eat," November 2008. <www.deloitte.com>

24 2008 CIES International Committee of Food Retail Chains Top of Mind Survey.

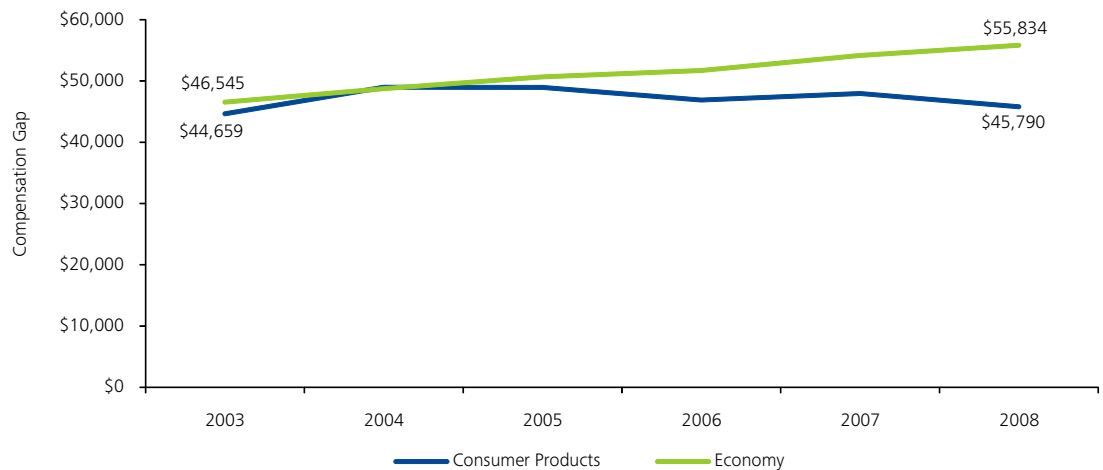
The distinction between perceived and real safety is also blurring. Perceived product issues can be just as damaging—in terms of declining sales, recall costs, and market valuation—as real product issues. For example, in January 2009 the Peanut Corporation of America recalled peanut products due to salmonella contamination. The recalled ingredients resulted in recalls of over 400 consumer products and reduced sales of other peanut-based products due to consumer uncertainty about which products were safe.²⁵ In this case, affected Consumer Products companies had to alert retailers and consumers, have additional monitoring of their supply base, and trace the usage of the ingredient—to address the “real” issue. It was also important for unaffected companies to communicate which products were safe—the “perceived” issue.

Returns to Talent²⁶

As companies use fewer tangible assets to generate revenues, the so-called “creative class” of workers plays an increasing role in profitability.²⁷ Across industries, the creative employees are capturing a disproportionate share of total annual compensation compared to other occupations (\$102,800 for creative workers in 2008 compared to \$48,600 for other workers).

The Consumer Products industry ranks near the bottom of all industries in compensation to both the creative and non-creative workforce. In Consumer Products, absolute compensation for creative workers is less than for creative workers in other industries (\$87,600 in Consumer Products versus \$102,800 across other industries in 2008),

Exhibit 2.8: Returns to Talent, Consumer Products (2003-2008)



Source: US Census Bureau, Richard Florida's "The Rise of the Creative Class", Deloitte Analysis

25 2008 CIES International Committee of Food Retail Chains Top of Mind Survey.

26 Returns to Talent is defined as the compensation gap between the creative class and non-creative class as measured by data from the Bureau of Labor Statistics and categorized by Richard Florida's Rise of the Creative Class. For additional information on this metric, please reference the Methodology section (see page 193).

27 The creative class, as defined by the book *The Rise of the Creative Class*, includes roles in areas like arts, design, entertainment, sports and media studies; computer science and mathematics; architecture and engineering; and life, physical, and social sciences.

suggesting that Consumer Products may not appear to be the most attractive industry for talented employees.²⁸ A more troubling sign for employees is that compensation for the creative class has been trending upwards in other industries, while in Consumer Products, compensation has been flat. This may reflect the profitability squeeze that retailers and consumers have put on Consumer Products companies, or possibly the fact that many creative class workers who might otherwise work in Consumer Products companies pursue positions in advertising agencies or industrial design firms.

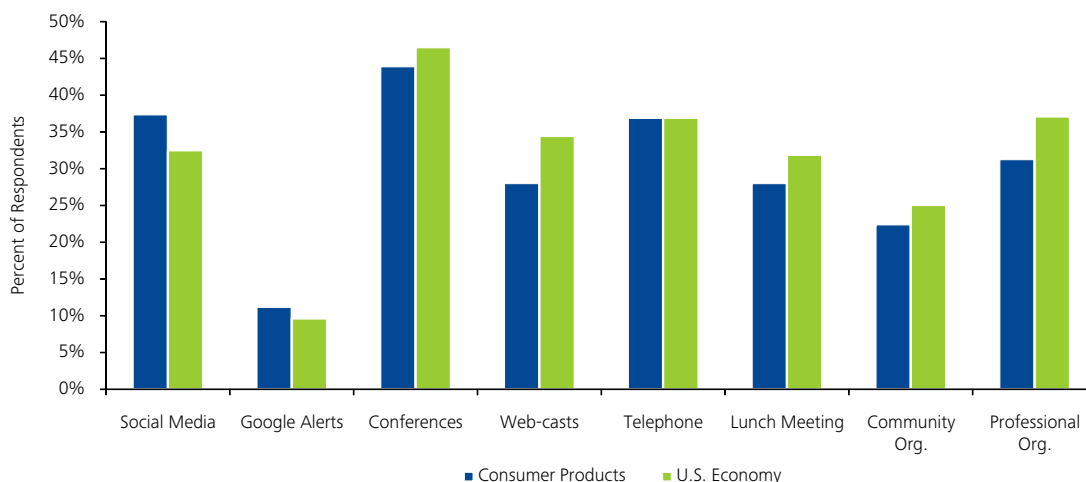
Companies should be concerned that nearly one in six Consumer Products employees surveyed by Deloitte in March 2009 said they were actively looking for other job opportunities, a much higher proportion than the one in twelve in industrial products, but lower than the one in five in Retail employees. The survey also found that 48 percent of employees in Consumer Products companies have a resume that is up-to-date and 24 percent are registered

on job-seeking sites. When the economy recovers, expect Consumer Products employees to actively seek new jobs (39 percent agreed strongly with the statement, “As the economy improves, I would try to find a different job”).

Flows

Knowledge flows—as opposed to knowledge stocks—are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to rapidly refresh your knowledge stocks. For the Consumer Products industry, the most relevant of the Flow metrics is *Inter-firm Knowledge Flows*.

Exhibit 2.9: Participation in Inter-firm Knowledge Flows, Consumer Products (2008)



Source: Deloitte Survey and Analysis

²⁸ The Returns to Talent metric examines fully loaded compensation between the most and least creative professions. The metric is a proxy for the value captured by talent. Bureau of Labor Statistics Occupational Employment Statistics (OES) and Employer Cost for Employee Compensation (ECEC). Creative Class Group. For additional information on this metric, please reference the Methodology section (see page 193).

Inter-firm Knowledge Flows²⁹

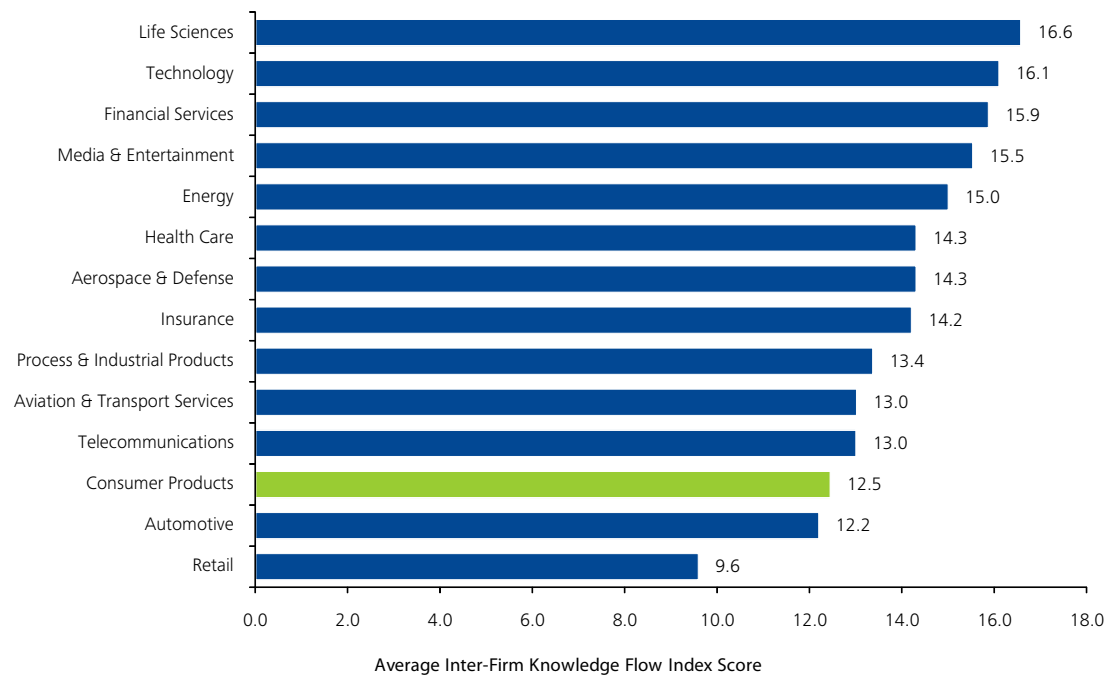
Employees in the Consumer Products industry rank 12th out of the 14 sectors in terms of participation in inter-firm knowledge flows.

It is possible that workers in Consumer Products companies perceive a need for secrecy in order to protect new products and avoid channel conflicts. In that case, we would expect to see a greater reluctance on the part of information and knowledge sharers versus those who receive information and knowledge. However, we see more “givers” than “takers” in the Consumer Products industry. That is, 19 percent of workers very frequently or somewhat frequently “rely on people outside [their companies] for advice and insights related to work issues”

while 28 percent of workers indicated that people from outside the company “sought [their] advice and insights related to work issues.”³⁰

It is unclear whether workers in other industries are simply turning to Consumer Products workers for their expertise in select areas like brand management and market research more often than Consumer Products workers have need to look to other industries for advice. In the world of the Big Shift, we expect that participation in inter-firm knowledge sharing will increase for all industries. Consumer Products companies should expect to benefit from more participation in flows of knowledge, both within and across industries, but may not yet realize what insight other industries have to offer. As an example, P&G and Google have

Exhibit 2.10: Inter-firm Knowledge Flow Index Score, Consumer Products (2008)



²⁹ Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion, which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

³⁰ Deloitte Analysis. Very frequently or somewhat frequently (six or seven on a seven-point scale).

Source: Deloitte Survey and Analysis

partnered to swap employees for several weeks at a time, acknowledging both companies can learn from each other about brand management and online advertising.³¹

Consumer Products companies are facing pressure across the value chain, especially from retailers and consumers. The growing consolidation of retailers and growing power of consumers, plus an erosion of asset profitability across the industry by more than one quarter, is strong evidence of intensifying competitive pressure. The winners are barely maintaining position, while the losers are increasingly harder hit. Moreover, the companies that do make it to the top in the Consumer Products industry are having difficulty staying there.

At first glance, declining brand loyalty and increasing power of consumers, stronger retailers, and higher regulatory expectations explain these trends. The Shift Index provides a closer look at the underlying trends including Competitive Intensity, Labor Productivity, Asset Profitability, Firm Topple Rate, Consumer Power, Returns to Talent, and knowledge sharing across companies.

Our Consumer Products analysis of the Shift Index suggests these trends will accelerate, and competitive advantage will be increasingly tenuous. How will you harness the underlying forces of change?

31 Ellen Byron, "A New Odd Couple: Google, P&G Swap Workers to Spur Innovation," Wall Street Journal, November 19, 2008.

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to lack of data availability and inadequate data quality.

Metric Definitions and Sources³²

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics (“BLS”)
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	Compustat
		ROA Performance Gap	Gap in return on assets (ROA) between firms in the top and bottom quartiles	
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms	
	People	Consumer Power	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	
		Returns to Talent	Compensation gap between the Creative Class and Non-Creative Class	BLS; categorized by Richard Florida’s Rise of the Creative Class
Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate	

³² For additional information on this metric, please reference the Methodology section (see page 193).

Industry Definition: Consumer Products

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Consumer Products industry is no exception. With the help of industry experts, we divided this industry into three sub-sectors: Apparel, Textile, Footwear, Accessories, and Cosmetics; Food, Beverages and Food Processing; and Personal and Household Goods. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. These sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
Apparel, Textile, Footwear, Accessories and Cosmetics	2200	Textile Mill Products
	2211	Broad-woven Fabric Mills, Cotton
	2221	Broad-woven Fabric Mills, Manmade Fiber & Silk
	2250	Knitting Mills
	2253	Knit Outwear Mills
	2273	Carpets & Rugs
	2300	Apparel & Other Finished Products
	2320	Men's & Boys Furnishings, Work Clothing & Allied Garments
	2330	Women's, Misses' and Children's Outware
	2340	Women's, Misses' Children's and Infants' Undergarments
	2390	Miscellaneous Fabricated Textile Products
	2844	Perfumes, Cosmetics & Other Toilet Preparations
	3021	Rubber & Plastics Footware
	3100	Leather & Leather Products
	3140	Footware, (No Rubber)
	3942	Dolls & Stuffed Toys
	3949	Sporting & Athletic Goods, NEC
3960	Costume Jewelry & Novelties	
Food, Beverages and Food Processing	100	Agriculture Products - Crops
	200	Agriculture Products-Livestock and Animal Specialties
	900	Fishing, Hunting & Trapping
	2000	Food and Kindred Products
	2011	Meat Packing Plants
	2013	Sausages & Other Prepared Meat
	2015	Poultry Slaughtering and Processing
	2020	Dairy Products
	2021	Creamery Butter
	2024	Ice Cream & Frozen Desserts

Sub-sector	SIC Code	SIC Description	
Food, Beverages and Food Processing	2030	Canned, Frozen & Preserved Fruit, Veg & Food Specialties	
	2033	Canned, Fruits, Veg, Preservatives, Jams & Jellies	
	2040	Grain Mill Products	
	2050	Bakery Products	
	2052	Cookies & Crackers	
	2060	Sugar & Confectionery Products	
	2070	Fats & Oils	
	2080	Beverages	
	2082	Malt Beverages	
	2084	Wines, Brandy, and Brandy Spirits	
	2085	Distilled and Blended Liquors	
	2086	Bottled & Canned Soft Drinks & Carbonated Water	
	2090	Miscellaneous Food Products	
	2092	Prepared Fresh or Frozen Fish & Seafood	
	2100	Tobacco Products	
	2111	Cigarettes	
	Personal and Household Goods	2510	Household Furniture
		2511	Wood Household Furniture, (No Upholstered)
2520		Office Furniture	
2522		Office Furniture (No Wood)	
2771		Greeting Cards	
2840		Soap, Detergents, Cleaning Preparations, Perfumes, and Cosmetics	
3260		Pottery & Related Products	
3630		Household Appliances	
3634		Electric Housewares & Fans	
3873		Watches, Clocks, Clockwork Operated Devices/Parts	
3910		Jewelry, Silverware & Plated Ware	
3911		Jewelry, Precious Metals	
3931		Musical Instruments	
3944		Games, Toys & Children's Vehicles (No Dolls and Bicycles)	
3950	Pens, Pencils & Other Artists' Materials		

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Financial Services

David Cox, Andrew Freeman, and Jim Reichbach

Navigating the shifts to a new Financial Services marketplace

Executive Summary

Some crises are dramatic ruptures, quickly changing an industry in fundamental ways. Others serve to accelerate longer-term trends which have steadily been creating deep shifts in industry landscapes. The Financial Services¹ industry has been subject to both types of crisis. While the unprecedented disruptive shift over the last two years is dominating today's debate about the industry's future, it took long-term shifts to shape the context in which the crisis occurred.

Over several decades, the U.S. Financial Services industry has moved from a model in which bank-originated credit was the main driver of economic activity to a far more diversified industry consisting of investment and commercial banking conglomerates operating on a global scale and competing with a "shadow" banking system consisting of private-equity firms, broker-dealers, non-bank finance companies and hedge funds. Thousands of smaller retail and middle market banks conducted their activities at local and regional levels. Both commercial and investment banks responded to competitive pressures by consolidating, first among themselves and then increasingly with each other, migrating from a local/regional to a national model and ultimately to a global one. Today, there are more hedge funds than commercial banks.

This profound shift gathered speed only in the early 1990s. After the excesses of the pre-Great Depression era, public policy formally separated banking and securities activities

in 1933, only to sanction market realities by allowing them to be brought back together again in 1999. There had been steady erosion of the functional separation between bank credit origination designed to be held on balance sheet and the securitization for trading and selling on to end investors favored by investment banks and securities firms. In essence, the Securities sub-sector needed bank balance sheet capital strength to underwrite its operations, and the Banking sub-sector needed securities skills to expand its activities into new areas of credit extension. Today the Banking and Securities sub-sectors have merged within the model of universal banking. One measure of this shift is that in 1965, the total supply of credit was just under \$1 trillion.² It increased, at first gradually, and then dramatically, rising from \$12 trillion to \$38 trillion over the last decade.³ The shadow banking system accounted for roughly half of this activity before the crisis that began in 2007.

The final convergence of Banking and Securities sub-sectors coincided with a period of strong credit creation in a low-interest rate/high asset price environment, and in parallel the emergence of the shadow banking system. As investors globally chased yield, there was a significant increase in leverage and assumption of risk throughout the Financial Services industry, which led to increased volatility and ultimately significant losses and the need for a massive government bail-out. One big public policy issue is whether the consolidation process has in fact created an oligopolistic industry structure in which a few mega-institutions are dominant, reversing a long shift

¹ The following sub-sectors were included in the Financial Services industry for this study: Banking and Securities.

² "Flow of Funds Accounts of the United States", Board of Governors of the Federal Reserve System, Washington DC 20511, Sept. 17, 2009.

³ Ibid.

towards greater competition. For example, the top five banks in the U.S. now control nearly 60 percent of industry assets.⁴ There are similar concentrations in other markets, e.g., Canada and the United Kingdom.

Society has also changed significantly over the last few decades. A new creative class of consumers (including institutional customers) and employees are challenging established industry boundaries and business models.⁵ Rapid changes in technology have empowered this class, making its members more informed about the choices available to them and more influential in exercising that choice both in the market and in the workplace. The biggest implication for financial institutions is that they must manage customers and employees in new and creative ways.

The impact of these trends is reflected in a number of key areas:

- **Markets:** Banks' Stock Price Volatility has increased significantly in recent years, reflecting industry convergence and intense competition, particularly among larger firms.
- **Firms:** Return on equity (ROE) has been under pressure in Banking for some time. Banks have responded in a number of ways. First, they have changed their business model. In 1965, fee-based revenues were a little over one percent of total revenues; in 2008 they were almost 30 percent.⁶ Second, they merged with the leading players in the Securities sub-sector. Investment banking

contributed almost 60 percent of JP Morgan's profits in the first months of 2009.⁷ Finally, before the 2007 crisis, banks steadily increased their leverage.

- **People:** A new creative class is re-defining the industry, increasing Competitive Intensity both in the marketplace and the workplace. The competition for talented people is intensifying even in a recession, and creativity is increasingly separating the relative performance of institutions.
- **Flows:** Financial institutions can use these forces behind big shifts to their advantage, particularly in the area of Inter-firm Knowledge Flows and the motivation of employees, or Worker Passion. In the case of knowledge flows, two areas in particular stand out as important for the Financial Services industry. The first is the ability to understand both markets and customer needs much more accurately and then create better products and services. The second is to use information to improve risk management.

It has been a long journey to a new Financial Services marketplace. Our period of analysis is nearly fifty years. The Financial Services industry and society have changed dramatically in that time. However, there have also been sharp differences between sub-sectors within the industry, for example, between capital markets and retail banking. As technological change continues to empower consumers and institutional customers, the industry will have to adapt to further shifts in the competitive landscape.

4 "Flow of Funds Accounts of the United States", Board of Governors of the Federal Reserve System, Washington DC 20511, Sept. 17, 2009.

5 Richard Florida, *The Rise of the Creative Class* (New York: Basic Books, 2002).

6 "Flow of Funds Accounts of the United States", Board of Governors of the Federal Reserve System, Washington DC 20511, Sept. 17, 2009.

7 Peter Eavis, "Divorce as Cure for Banking Headache," *The Wall Street Journal*, October 22, 2009.

Markets

Has the Financial Services industry been becoming more or less competitive? The evidence is confusing and at times contradictory. Competition at the level of small retail banks is clearly not comparable with that among large commercial and investment banking conglomerates, which are subject to substitution by non-bank intermediaries. In addition, the boundaries of the industry are constantly shifting, and many measures do not capture market realities.

Shifting Patterns of Competitive Intensity in Financial Services

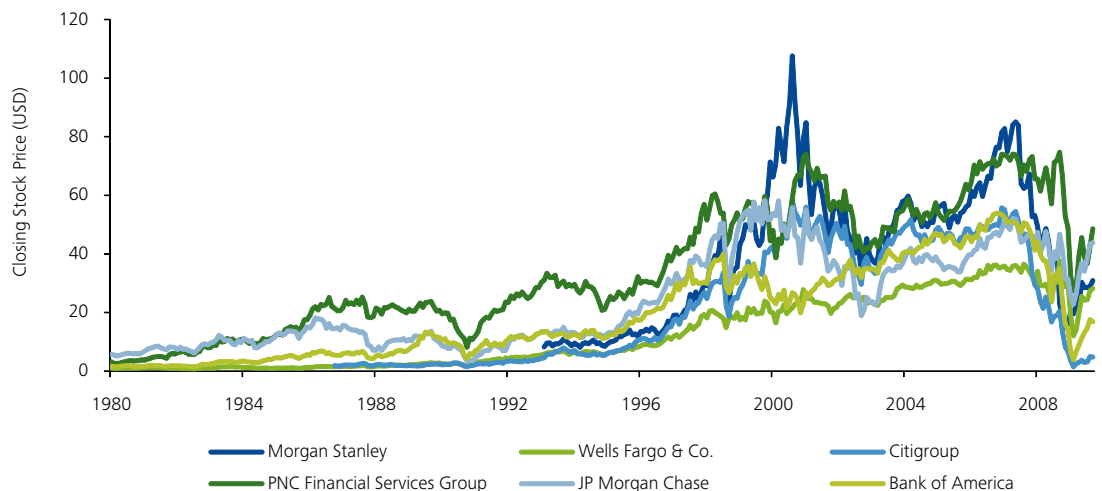
The last few years have seen several discernable shifts in the Financial Services landscape. Recognizing the growing links between commercial and investment banking, the Clinton Administration in 1999 reversed the Glass Steagall Act,⁸ which had separated commercial and investment banking.⁹ The result was both a consolidation in the Financial Services industry within the universal banking model, and a significant increase in competition and stock price volatility, particularly among the largest financial

institutions (see Exhibit 3.1). However, the recent market turbulence has reduced the number of players in some markets, for example in investment banking, potentially reversing a trend towards greater competition.

Competitive Intensity¹⁰

A broader view of the Banking sub-sector clearly shows the trend towards consolidation. The number of commercial banks in the U.S. has steadily diminished from over 30,000 in the 1920s to just over 7,000 today.¹¹ We have measured the different levels of concentration in the Banking sub-sector using the Herfindahl-Hirschmann Index (HHI). Under this approach, an industry with only one provider—a monopoly—would have a score of one, while a highly competitive industry would have a score approaching zero. We have taken the assets of nearly 2,000 banking institutions publically quoted in the U.S. market and measured the change in their concentration over the last forty years, using the HHI index, focusing on asset concentration. The resulting picture shows a consolidating industry that nevertheless remains highly competitive in relation to the rest of the economy.

Exhibit 3.1: End-of-Month Closing Stock Prices, Major Banks (1980-2009)



Source: Compustat, Deloitte Analysis

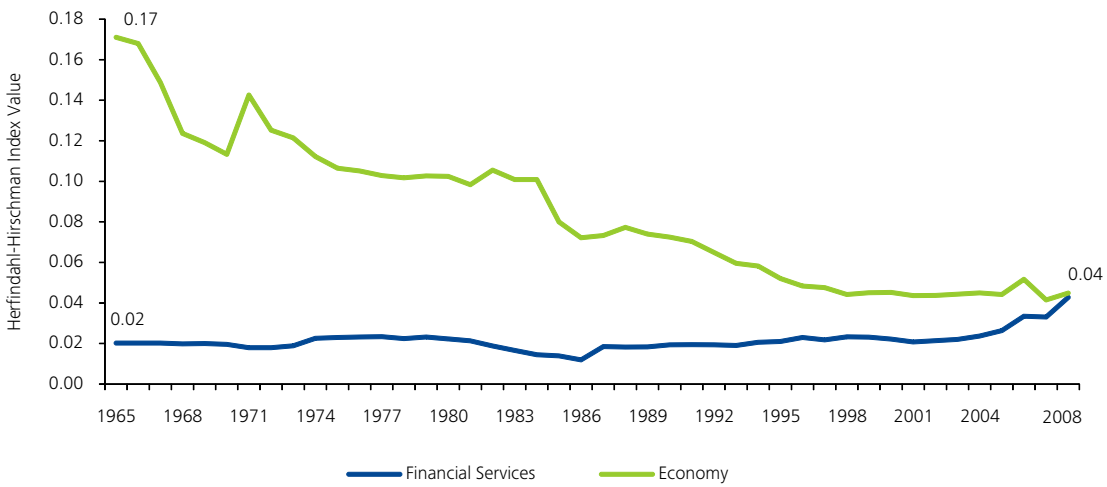
⁸ Banking Act of 1933.

⁹ The Financial Modernization Act of 1999.

¹⁰ Competitive Intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in sector concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

¹¹ FDIC.

Exhibit 3.2: Competitive Intensity, Financial Services (1965-2008)



Source: Compustat, Deloitte Analysis

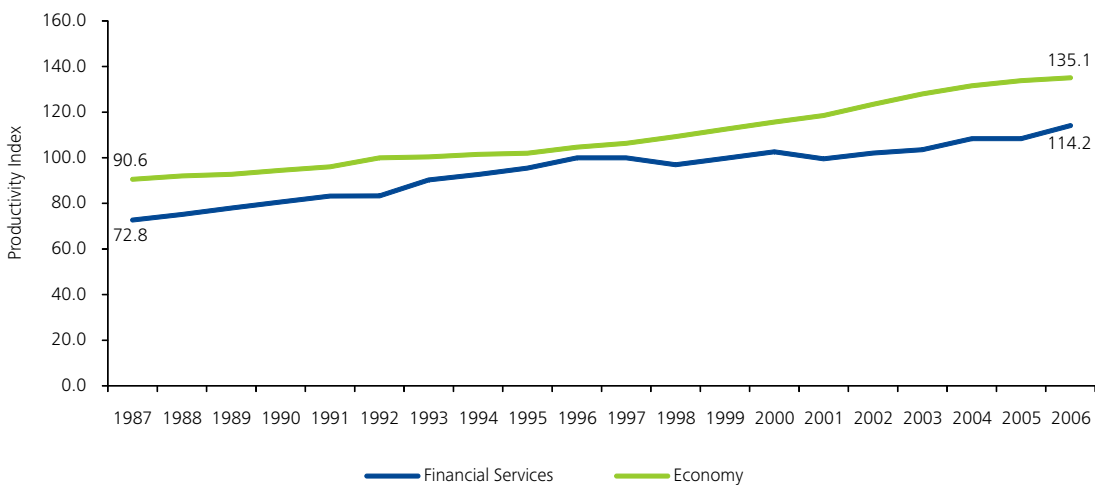
HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

Labor Productivity¹²

Intensely competitive industries are often characterized by a strong drive towards continuous efficiency improvement, and Financial Services is no exception. However, it has not always been successful. The industry lags the economy in Labor Productivity growth. Consolidation in commercial banking, particularly in retail banking, has created many

legacy systems within individual institutions that are expensive and risky to replace, acting as a brake on overall industry Labor Productivity. In addition, the industry’s inherent cyclical nature might encourage a short-term rather than a long-term approach to efficiency improvement (see Exhibit 3.3).

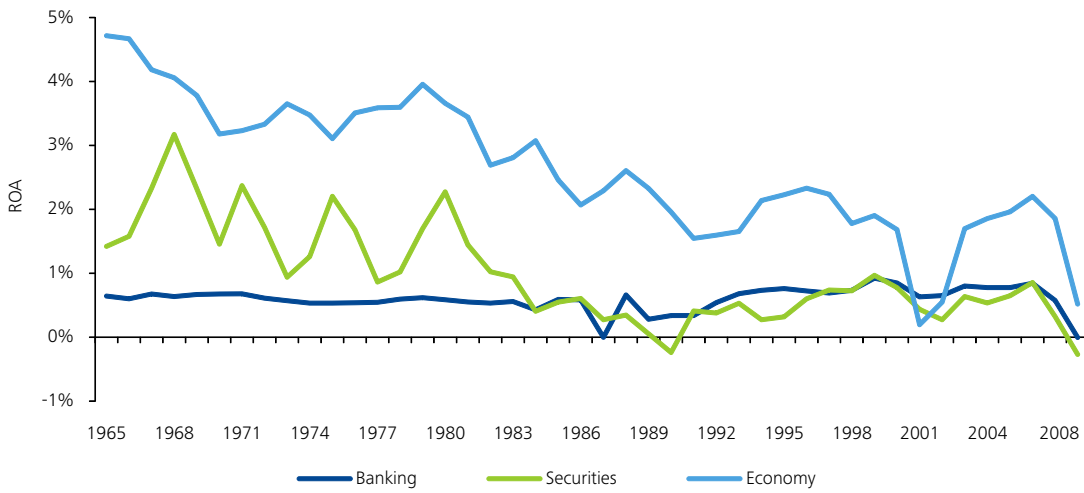
Exhibit 3.3: Labor Productivity, Financial Services (1987-2006)



Source: Bureau of Labor Statistics, Deloitte Analysis

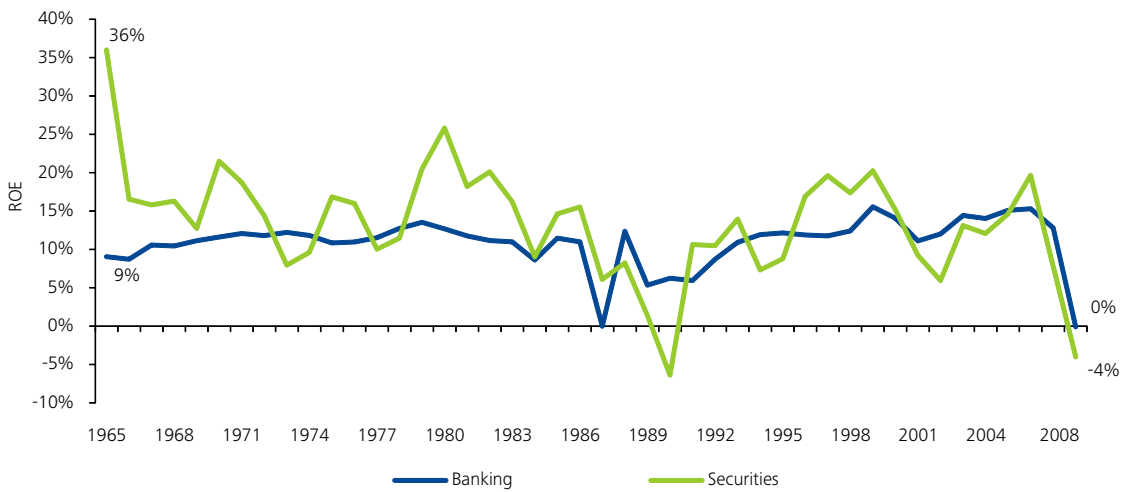
¹² Labor productivity is defined by the Bureau of Labor Statistics as Industry GDP/ Labor Hours. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 3.4: Asset Profitability of Sub-sectors, Financial Services (1965-2008)



Source: Compustat, Deloitte Analysis

Exhibit 3.5: Return on Equity of Sub-sectors, Financial Services (1965-2008)



Source: Compustat, Deloitte Analysis

Firms

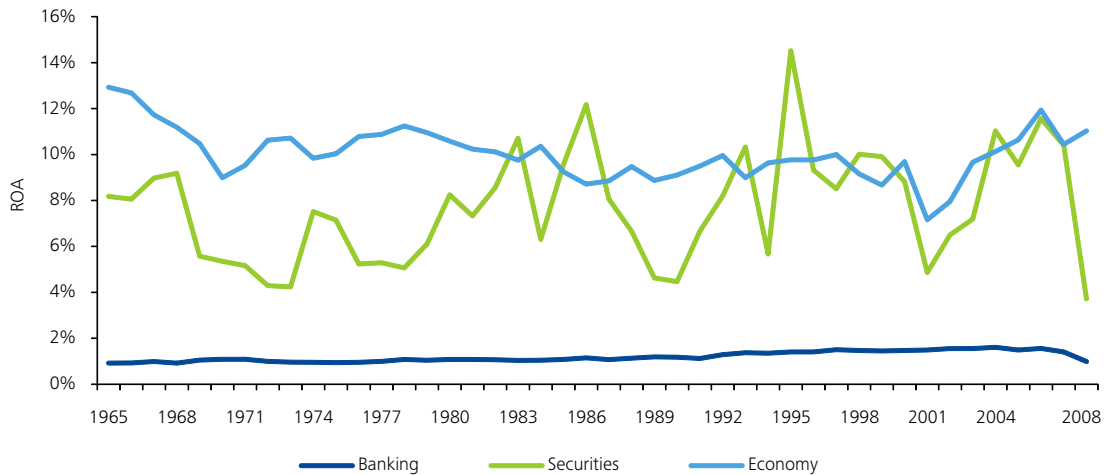
The Firms category consists of four metrics: *Asset Profitability*, *ROA Performance Gap*, *Firm Topple Rate*, and *Shareholder Value Gap* (the difference between “winners and losers” in terms of the total return to shareholders). These measure the impact of intensifying competition on firms in the Banking and Securities sub-sectors.

Asset Profitability¹³

Before the shifts in the Banking industry it was common to measure performance by looking at return on assets (ROA). In an era of mostly stable retail and commercial

lending ROA was an appropriate measure of relative competitive skill, as individual banks sought to grow profitable loan portfolios (ie, assets). ROA remains a useful measure for smaller banks and focused specialists. As the banking/financial intermediation business became more complex, however, and as fees grew in importance, ROA became less representative of actual performance. As a consequence, most investors turned to return on equity (ROE) as a reliable indicator of performance—hence our decision to include this measure alongside the ROA numbers. The ROA numbers can best be seen as a proxy for performance among the mass of smaller banks, while the ROE numbers show how much performance changed

Exhibit 3.6: Asset Profitability Top Quartile of Sub-sectors, Financial Services (1965-2008)



Source: Compustat, Deloitte Analysis

¹³ Asset Profitability is defined as total return on assets (Net Income / Total Assets). For additional information on this metric, please reference the Methodology section (see page 193).

once banking was deregulated and had to compete with new sources of credit.

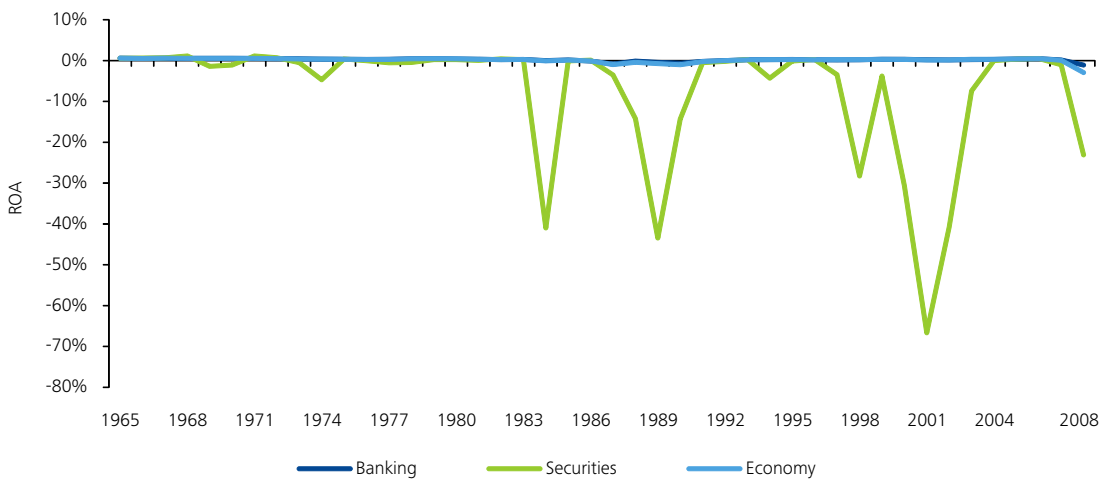
The long-term ROE trend for banks appears to have been quite stable compared with the rest of the economy, but this reflects significant efforts by the industry to maintain profitability through the development of fee-based businesses, more leveraged balance sheets and convergence with the Securities sub-sector.

ROA Performance Gap¹⁴

Another measure of Competitive Intensity is the gap between “winners” and “losers” as measured by

differences in ROA performance. In the case of Banking, there has been little difference in the ROA Performance Gap over the long term between different institutions. In contrast, the Securities sub-sector—broker-dealers—shows much sharper gaps between winners and losers. The more successful firms (the top 25 percent of our database) show improving ROA, while the less successful (the bottom 25 percent) show declining ROA (see Exhibits 3.6 and 3.7). This is particularly striking for the period at the end of the 1990s when the dot-com bubble burst, leading to a major shakeout among securities firms of all sizes.

Exhibit 3.7: Asset Profitability Bottom Quartile of Sub-sectors, Financial Services (1965-2008)



Source: Compustat, Deloitte Analysis

¹⁴ ROA Performance Gap is defined as the gap in return on assets between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

Firm Topple Rate¹⁵

A similar pattern is reflected in Firm Topple Rates—changes in leadership positions based on relative ROA. Leadership positions in the Banking sub-sector have been more entrenched than in the rest of the economy, while wide fluctuations in Firm Topple Rates in the Securities sub-sector reflect the cyclical nature of the sub-sector. As

the two sub-sectors move towards convergence so too do the Firm Topple Rates, as banking increasingly assumes the more competitive characteristics of securities firms (see Exhibits 3.8¹⁶ and 3.9).

The Firm Topple Rate for the leading firms has changed significantly in the last two years, notably with the

Exhibit 3.8: Firm Topple, Banking (1966-2008)



Source: Compustat, Deloitte Analysis

Exhibit 3.9: Firm Topple, Securities (1972-2008)



Source: Compustat, Deloitte Analysis

¹⁵ Firm Topple Rate is defined as the annual rank shuffling amongst firms. For additional information on this metric, please reference the Methodology section (see page 193).

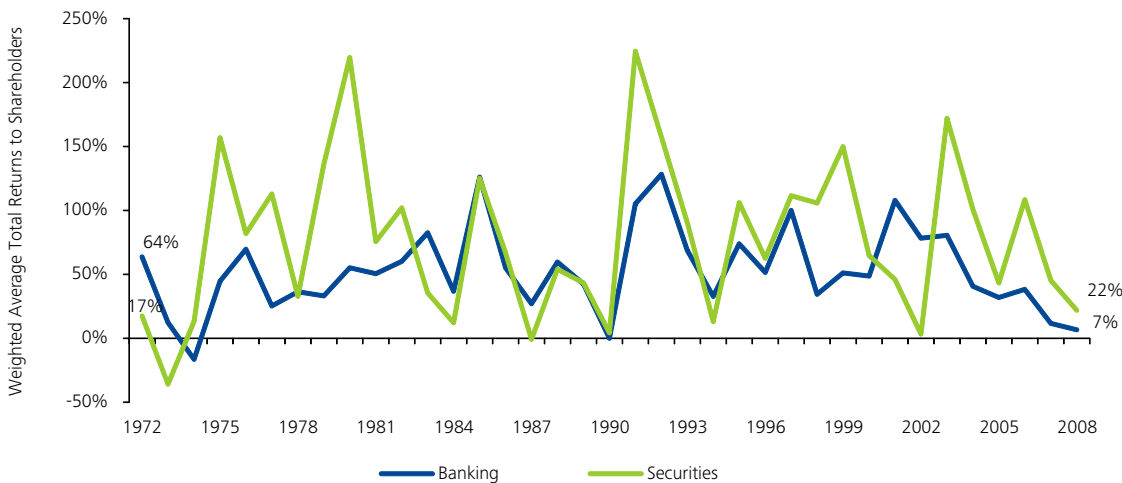
¹⁶ The spike in 1993 reflects the expansion of the S&P database to include smaller banks.

collapse of a major investment bank, the incorporation of Wachovia within Wells Fargo, Merrill Lynch within Bank of America and Bear Stearns and Washington Mutual within JP Morgan. This amounts to another dramatic shift in the industry landscape, as regulators have sought to limit the collateral damage of the credit crisis.

Shareholder Value Gap¹⁷

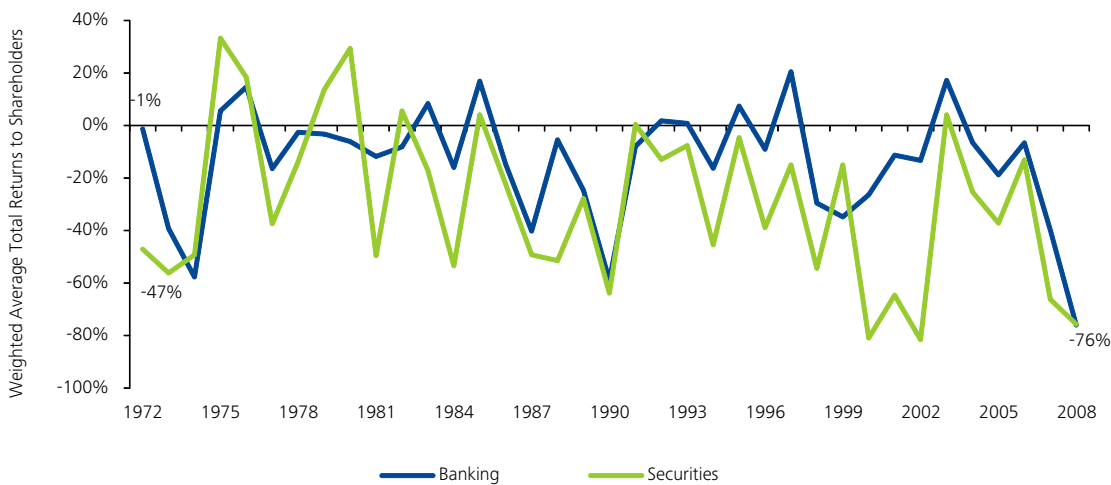
The Securities sub-sector has clearly had more dramatic differences in performance between top and bottom performing firms (top and bottom 25 percent of our database; see Exhibits 2.10¹⁸ and 2.11¹⁹). One possible explanation is that as a rule, failing banks get taken over

Exhibit 3.10: Weighted Average Total Returns to Shareholders Top Quartile, Financial Services (1972-2008)



Source: Compustat, Deloitte Analysis

Exhibit 3.11: Weighted Average Total Returns to Shareholders Bottom Quartile, Financial Services (1972-2008)



Source: Compustat, Deloitte Analysis

17 Shareholder Value Gap is defined as the gap in total returns to shareholders (TRS) between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

or bailed out, whereas failing securities firms disappear. However, this is no longer generally the case, given the convergence of the two sub-sectors and the startling sequence of events since 2007.

People

Knowledge flows are increasingly empowering consumers in the digital age. Opinions about a company’s services can become public information transmitted globally in seconds. Knowledge flows enable consumers to make more informed decisions about products and services. Public policy is encouraging this trend in financial services, encouraging financial institutions to be more transparent about the products and services they offer.

Increased consumer power increases the pressure on banks to perform. The more empowered consumers become, the more willing they are to switch, creating further competitive pressures for financial providers. That said, retail banks continue to benefit from the “sticky deposits” attributable to customer lethargy.

Consumer Power²⁰

Supported by the Internet, search engines, and feedback from other customers which has become more publicly available, consumers now have more power over financial service providers than in the past. This allows consumers to become less dependent on or be influenced by marketing messages. Technology has empowered consumers to judge what they see and experience (see Exhibit 3.12).

The average Consumer Power score across all industries is 67. These indices were normalized to a 0-100 scale, which denotes that any score over 50 would indicate that there are more respondents that claim to have more power as consumers or are more disloyal towards brands than those who don’t. Banking consumers feel they have slightly more choice than average, and investment consumers slightly less. The scores in each category are driven by different underlying elements. Low switching costs, for example, can have a significant impact on Consumer Power, as can strong brands which may reduce competitive threats in the short term, but remain vulnerable over the long term. Public policy can also impact Consumer Power. For example, government legislation in the form of the

CARD Act²¹ has significantly altered the balance of power between customers and issuers in the credit card industry, in favor of consumers. Proposals to develop a Consumer Financial Protection Agency, if approved by Congress, could significantly alter the types of products financial services firms provide, again strengthening the consumer’s hand.

Exhibit 3.12: Consumer Power by Category, Financial Services (2008)

Consumer Category	Consumer Power
Search Engine	70.9
Snack Chip	70.7
Broadcast TV News	70.2
Banking	70.1
Restaurant	69.7
Soft Drink	69.5
Home Entertainment	69.1
Pain Reliever	69.0
Hotel	68.8
Magazine	68.8
Insurance (Home/Auto)	68.4
Computer	68.0
Automobile Manufacturer	67.3
Athletic Shoe	66.8
Department Store	66.3
Mass Retailer	65.9
Household Cleaner	65.9
Investment	65.8
Wireless Carrier	65.6
Grocery Store	65.5
Airline	65.4
Cable/Satellite TV	63.1
Gaming System	62.5
Gas Station	61.6
Shipping	61.3
Newspaper	54.0

Source: Deloitte Survey and Analysis

18 The spike in 1993 reflects the expansion of the S&P database to include smaller banks.

19 Ibid.

20 Consumer Power scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

21 The Credit Card Accountability Responsibility and Disclosure Act of 2009 or Credit CARD Act of 2009 is a federal law passed by the United States Congress and signed by President Barack Obama on May 22, 2009. It is comprehensive credit card reform legislation that aims “...to establish fair and transparent practices relating to the extension of credit under an open end consumer credit plan, and for other purposes.”

Brand Disloyalty²²

Increased access to information is empowering consumers, making traditional branding—“share of voice” and “unique selling proposition”—less effective. Consumers are researching products more than ever and reading peers’ opinions about brand and products.²³ They have access to trusted sources to evaluate brands. In January 2009, consumer trust in business reached its lowest level post-Enron, with the Automotive and Financial Services industries leading the decline.²⁴ In *Business Week’s* survey, 100 Best Global Brands, only two financial institutions retained their brand positions, while others dropped substantially.²⁵ Neither finding came as a surprise given the dramatic events in the industry. Our study focuses on Brand Disloyalty—the willingness to switch brands. The average score was 57, which is relatively high, with banking and investments close to that level (see Exhibit 3.13).

Combining this score with the score for Consumer Power suggests that consumers of financial services institutions are relatively prepared to switch service providers if they do not get what they want. Comparing Brand Disloyalty by age group, we find it is much higher for younger consumers than for older ones. Across all industries, the scores range from 62.8 to 50 in the 20-to-40-years-old age groups and 55.8 to 47.9 in the 50-to-80-years-old age groups. The implications for financial institutions are that they need to build trust with younger consumers by being more transparent and supportive of customer interests. The Automotive industry, for instance, has shifted its marketing message to emphasize new technology, fuel economy, and quality and safety scores.

Flows

Knowledge flows—which occur in any social, fluid environment where learning and collaboration can take place—are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary

Exhibit 3.13: Brand Disloyalty by Category, Financial Services (2008)

Consumer Category	Disloyalty
Hotel	70.1
Airline	69.9
Home Entertainment	69.0
Mass Retailer	68.0
Department Store	65.9
Grocery Store	63.6
Automobile Manufacturer	62.7
Computer	61.7
Cable/Satellite TV	61.4
Shipping	60.0
Gas Station	59.5
Restaurant	58.5
Insurance (Home/Auto)	57.8
Athletic Shoe	57.2
Wireless Carrier	56.5
Gaming System	55.3
Banking	54.6
Household Cleaner	54.5
Search Engine	53.4
Investment	53.3
Snack Chip	51.5
Pain Reliever	51.4
Broadcast TV News	49.4
Magazine	45.2
Newspaper	42.3
Soft Drink	40.9

Source: Deloitte Survey and Analysis

resources that no one else could access. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to refresh knowledge stocks continually.

22 Brand Disloyalty scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

23 David and Burt Helm, “100 Best Global Brands—The Great Trust Offensive,” *BusinessWeek*, September 28, 2009.

24 “The 2009 Mid Year Edelman Trust Survey,” August 3, 2009, <<http://www.edelman.com/trust/midyear/>>.

25 “Best Global Brands 2009: The Definitive Guide to the World’s Most Valuable Brands”, Interbrand, <http://issuu.com/interbrand/docs/bgb2009_magazine_final>, Sept. 2009>.

Inter-firm Knowledge Flows²⁶

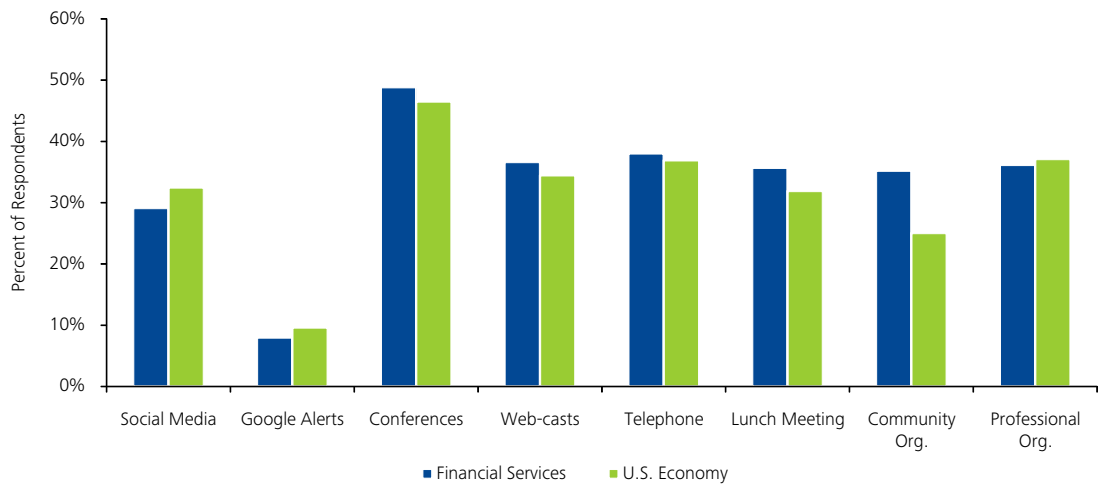
The Banking sub-sector, and its Securities counterpart before they converged, has had a long tradition of face-to-face meetings. It has also heavily invested in conferences both for sharing industry information and knowledge and for engagement with customers. There are prominent industry associations which provide research on the industry and suggestions for performance improvement. The one area where both sub-sectors seem to lag the economy is in the use of social networking and to some degree the Internet in sharing knowledge, both for employees and for customer engagement.

There are a number of possible reasons for this. Perhaps the main one is that the Banking sub-sector in particular puts a high degree of stress on information security and the integrity of its essential payments and clearing systems. It is challenging to open these systems without compromising their utility. However, additional threats are emerging, particularly for retail banking in the alternative banking and aggregator models that are possible on the Internet. Retail banks will need to respond more aggressively to the open architecture challenges of the

Internet. They have yet to exploit the huge potential of the Internet in general, and social networking sites in particular, as a new way of communicating with customers and employees. This is in part because it is difficult to foresee the commercial and reputational consequences of fully embracing these new channels (see Exhibit 3.14).

One of the areas where Banking and Securities firms already collaborate in a significant scale and may see an additional opportunity for performance improvement is risk management. There has been a growing awareness of the contribution systemic risk may have made to the recent market turmoil. Any revival of securitization, for example, may well depend on greater transparency of the underlying risks of individual securities, and less reliance on rating agencies. Additionally, credit default swaps have significantly increased awareness of the market's evaluation of corporate, institutional and sovereign risk, and although there are many issues associated with this market, it has created a new range of options for corporations to hedge business risks and more clearly assess counter-party exposures.

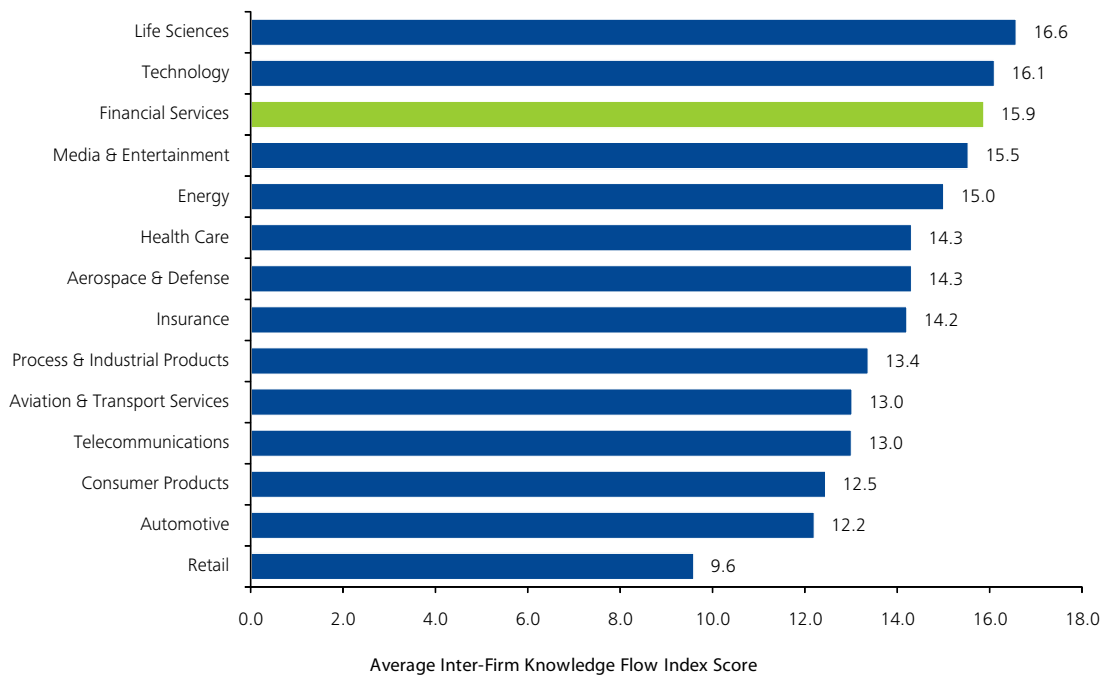
Exhibit 3.14: Participation in Inter-firm Knowledge Flows, Financial Services (2008)



Source: Deloitte Survey and Analysis

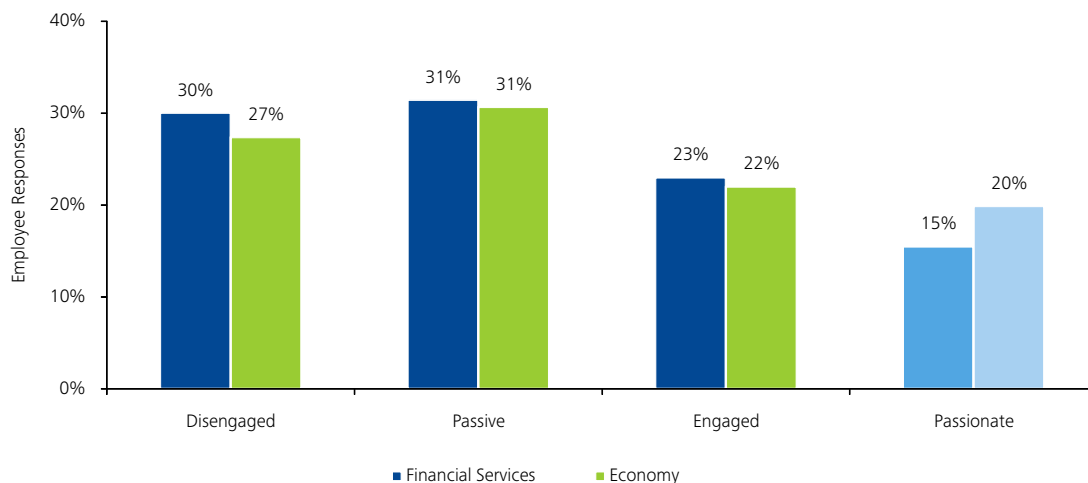
²⁶ Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 3.15: Inter-firm Knowledge Flow Index Score, Financial Services (2008)



Source: Deloitte Survey and Analysis

Exhibit 3.16: Worker Passion, Financial Services (2008)



Source: Deloitte Survey and Analysis

Worker Passion²⁷

Although the headline result for the Financial Services industry looks relatively poor, the survey took place at a time of significant industry turmoil, when morale might be expected to be low. Indeed, to some extent, the industry scored higher than might be expected (see Exhibit 3.16). An interesting finding from the survey is that while employees might not be thrilled by their role, they are more content with their company than on average across the economy. It is possible that adversity has strengthened employee passion, although it remains to be seen how this will evolve. The need to retain and motivate key staff in an environment where compensation alternatives may be less attractive suggests there is room for firms to invest in “Worker Passion.” If they can do this successfully, they could have a major impact on customer experience at a time when franchises are most at risk.

The Financial Services industry has undergone profound shifts over a period of decades. Large parts of it are unrecognizable, such has been the transformative power of consolidation and convergence with the once separate securities and investment banking sector. New technologies and regulatory frameworks have allowed the emergence of intense competition from non-bank sources of credit and the industry has become global at every level except that of retail and small business banking. New technologies have also altered consumers' and customers' attitudes and offered them new channels for transactions and choices. An unprecedented disruptive shift began in mid-2007 which is still playing out today. Survivors of the turmoil face new challenges from further regulatory change and from highly uncertain economic conditions. An observable reversal in Competitive Intensity might prove temporary depending on how both factors evolve in the coming months and years.

²⁷ Worker Passion scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs. For additional information on this metric, please reference the Methodology section (see page 193).

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to lack of data availability and inadequate data quality.

Metric Definitions and Sources²⁸

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics (“BLS”)
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	Compustat
		ROA Performance Gap	Gap in return on assets (ROA) between firms in the top and bottom quartiles	
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms	
		Shareholder Value Gap	Gap in total returns to shareholders (TRS) between firms in the top and bottom quartiles	
	People	Consumer Power	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty	
	Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate
Worker Passion		Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs		

²⁸ For additional information on this metric, please reference the Methodology section (see page 193).

Although market share is traditionally based on revenue when calculating HHI and the overall Competitive Intensity level of an industry or sub-sector, the analysis of market share based on assets in the Banking industry is more congruent with industry practice. As a result, this calculation has been used in place of the more traditional HHI metric. Similarly, Return on Equity (Net income / Total Equity) has been included alongside ROA to add additional insight into the profitability of the industry.

Industry Definition: Financial Services

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Financial Services industry is no exception. With the help of industry experts, we divided this industry into two sub-sectors: Banking and Securities. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. These sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
Banking	6020	Commercial Banks
	6021	National Commercial Banks
	6022	State Commercial Banks
	6035	Savings Institutions, Federally Chartered
	6036	Savings Institutions, Not Federally Chartered
Securities	6200	Security & Commodity Brokers, Dealers, Exchanges & Services
	6211	Security Brokers, Dealers & Flotation Companies

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Protected but not impervious to the Big Shift

Executive Summary

The Shift Index illustrates the shift from asset based to knowledge-based industries resulting in new competitors, operating models and strategies. Major changes in the industry are directly the result of its growing dependence on knowledge management-- from blockbusters to personalized therapeutics, from experience-based medicine to evidence-based medicine, from patient passivity to consumer engagement using personal health records, from volume based incentives to performance based payments based on measurable quality, from independent sectors to integrated organizations that share information and core operating processes, and others.

The Health care industry is arguably among the most complex: it is 17% of the US GDP with costs increasing at 6.2% annually. It is fragmented, highly regulated, capital intense and labor intense. While the overall economy has shed 7,000,000 jobs since December 2007, health care employment has increased more than 200,000. Yet business models, efficiencies, regulatory oversight, payments, workforce characteristics, costs, and value propositions vary widely by sector: the common challenges—access to capital, sustainability, regulatory compliance, cost management and clinical performance are C Suite action items. Two segments offer a glimpse of the Big Shift in health care: each is unique and complex, and each faces challenges in knowledge management to transform legacy business models, strategies and value propositions to customers.

- The nation's 1300 health plans face enormous challenges: health reform portends increased regulation, increased risks, reduced margins but a bigger market for

a portfolio of customized services. The Big Shift drives major changes in the sub-sector's approach to product design, provider contracting, regulatory compliance and pricing.

- The nation's 5800 hospitals face similar challenges—access to and efficient deployment of capital, reduced margins, increased regulatory oversight, changes in payment from volume to outcomes and operational integration of physicians and allied health professionals into accountable care organizations. The Big Shift drives clinical processes, alignment of operations with workforce training, structural designs to optimize performance and even access to capital at rates linked to demonstrated clinical performance.

These are two of the industry's major sub-sectors. Each is unique. The business models vary widely; operating processes, regulatory oversight, value propositions and strategies are dissimilar. But each is increasingly dependent on efficient deployment of capital to optimize performance.

Likewise, the industry's other sub-sectors face knowledge management challenges to transform their organizations--physicians and allied health professionals, biotechnology, medical devices, pharmaceuticals, information technology, long term care.

By 2008, the average return on assets (ROA) for the entire U.S. economy had fallen to almost one-quarter of its 1965 levels, while performance in the Health Care industry¹ has run contrary to the trend. ROA in Health Care rose from 1.7 percent in the early 1970s to 3.8 percent in 2008, more than doubling. As will be discussed later in this

¹ The Health Care industry can generally be divided into three sub-sectors: Health Insurers or "Health Plans," (Plans), Providers (hospitals, physicians, nursing homes, medical service companies, labs, etc.), and life sciences companies. Life sciences companies, which primarily consist of biotech, pharma and medical device companies, have unique characteristics, and are not included in the scope of this report.

paper, lack of transparency, regulatory activity and other factors have inhibited competition, partially contributing to the trend toward increasing ROA in the Health Care industry.

The Health Care industry is shaped by regulatory factors that are unique to the industry. Plans are regulated at the state level, and the wide variability of regulations from state-to-state creates barriers to entry for Plans wishing to provide national coverage. Providers are also largely regulated at a state level, and only a few Providers have a national reputation (e.g., the Mayo Clinic) or a national network (e.g., some laboratory companies) which allows them to expand their service area beyond the boundaries of a single state.

Despite the regulatory and other factors that have until now shielded the Health Care industry from the forces of the Big Shift, disruptive change is gaining momentum. In Washington, substantial majorities agree on several major Health Care reform elements (whether or not these elements address critical, core issues in the system is debatable). Economic and political pressures have reached a tipping point and are likely to re-shape both the structure of the Health Care industry and the strategy and performance of its participants.

As powerful as regulatory changes may be, the industry is also feeling the effects of more powerful and better informed consumers. Widespread use of the Internet and decreases in the cost of bandwidth are equipping today's consumer to access more Health Care information than they ever had in the past. This will drive greater Competitive Intensity in the Health Care industry. Online

technologies have enabled consumers to better understand both the coverage and treatment options available to them, as well as how their health plan or community provider ranks in the latest quality surveys. In a 2009 Deloitte survey, 57 percent of respondents turned to online resources for information: one in four searched for quality information, and three in five mentioned Internet use for comparative purposes.² Soon, physicians will be competing with more than just the medical group across town. As virtual consultations and online office visits become accepted methods of delivering care, competition will expand geographically. In fact, if traditional incentives evolve to accommodate these new forms of care delivery, Providers may find that they are competing with technology-enabled, licensed physicians from across the globe. Consequently, companies must now cater to an online consumer who is less interested in a bricks-and-mortar facility than with a Health Care setting that is virtual and accessible from any location—even outside the U.S.

While the increased availability of information and the consumer's ability to use it are still in the early stages of development and adoption, these trends seem likely to continue. In 2008, Kaiser Permanente members engaged in six million e-mail exchanges with their clinicians; at least some of these exchanges replaced in-person office visits.³

An expanded definition of health is also opening the door to potentially disruptive innovations. Innovations in areas like wellness, well-being, and medical tourism are on the rise. Although people from around the world still come to the U.S. for care, we are also seeing more Americans leave the U.S. for care. Providers like the Mayo and Cleveland Clinics are expanding globally by partnering with new

2 Deloitte Survey of U.S. Health Care Consumers: Key Findings and Strategic Implications, 2009.

3 Kaiser Permanente web site, October 2009, <<http://xnet.kp.org/newscenter/aboutkp/healthconnect/index.html>>.

medical centers of excellence such as Dubai's Health Care City. Plans are experimenting with benefit designs that embrace medical tourism by providing coverage for overseas treatments.

Non-Health Care entities are also making plays in Health Care; for instance, Intel has a workforce focused exclusively on technology applications in Health Care. Some Health Care experts predict that companies like Walmart, Costco, Publix and CVS will enter the care management business and offer insurance, primary care services or other services that will circumvent the traditional patient—provider relationship.

Companies clearly have incentives to adopt new technologies and knowledge-driven business models to benefit themselves and their customers—particularly in

the context of a reformed market. As an industry that has typically been slow to change, whether due to cost or patient safety concerns, the Health Care industry is now poised for foundational shifts in technology, information exchange, performance, and infrastructure—not to mention a dramatic market expansion.

The combination of mounting economic pressure, regulatory mandates, and impending Health Care reform will likely drive significant changes in this industry over the next several years. While regulation has historically been a barrier to change and innovation, it is becoming an impetus for change and has the potential to provide avenues towards more innovation. The types of trends we are beginning to see on the “edge” of this industry, such as wellness and medical tourism, may be indicative of changes we will soon see in the “core.”

Markets

The Markets metrics measure the impact of technological platforms, open public policy, and knowledge flows on market-level dynamics facing corporations. Three metrics were evaluated in the Markets portion of the Impact Index: *Competitive Intensity*, *Labor Productivity*, and *Stock Price Volatility*.

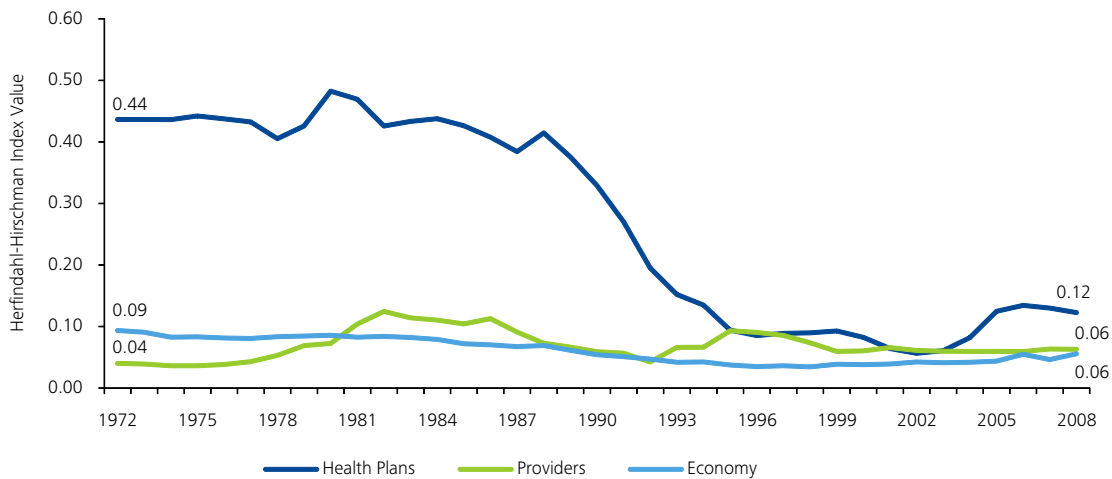
Competitive Intensity⁴

Historically, competition in the Health Care industry has been driven by multiple factors, such as new market disruptions (e.g., growth of managed care in the 1990s) and increased consumer engagement. The Herfindahl-Hirschman Index (HHI) provides one measure of Competitive Intensity at a national level.

The HHI has some inherent limitations for the Health Care industry given that it is calculated on a national basis, and only a few Health Care organizations compete nationally. Many Plans began as local Blue Cross Blue Shield plans to serve a state or regional market, and even some of the largest Plans do not serve all states. In addition, because HHI relies on data from for-profit, publicly traded companies, it is of limited use in an industry where a significant number of companies are private, not-for-profit organizations. For example, only 18 percent of all community hospitals were for-profit in 2007. For health plans, there are fewer than 50 publicly traded health insurance plans.

In terms of health plan enrollment, there is a high degree of concentration: just six Plans cover approximately

Exhibit 4.1: Competitive Intensity, Health Care (1972-2008)



Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

4 Competitive intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

two-thirds of all health plan enrollees. However, this concentration at an aggregate, national level obscures the fact that competition can vary dramatically among specific geographic markets. According to a recent survey by the American Medical Association (AMA), out of 314 U.S. metropolitan markets, 94 percent were dominated by one or two Plans. Alabama serves as a prime example, where Blue Cross Blue Shield of Alabama controls more than 90 percent of the market.⁵

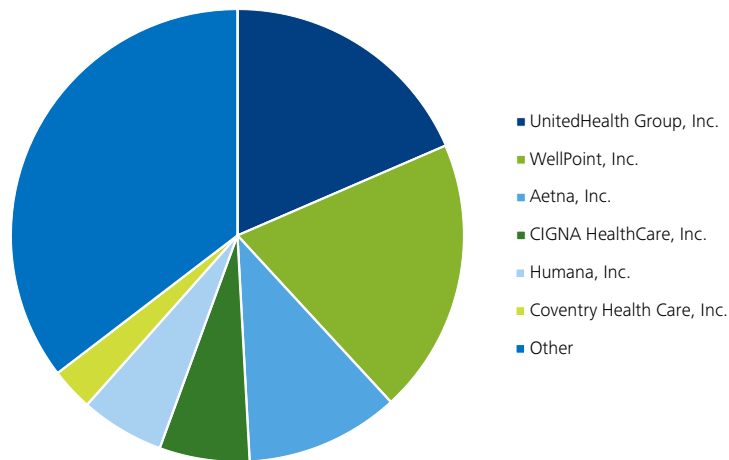
On the Providers' side, a separate 2006 study showed that one or two hospitals held more than half the market in 88 percent of the nation's largest metropolitan areas.⁶ The level of Competitive Intensity is limited in these markets that are dominated by just a few players.

The current concentration in local markets notwithstanding, there is an increasing shift in the Health Care industry from a regional to a national market. Although large, high-quality providers do not have the expansive

geographic reach that national Plans do, there is some movement toward larger physician groups and multi-hospital systems that span several states. In the short term at least, this trend will likely increase competition as new players enter regional markets that previously had no competition.

Regulatory changes drive some of the Competitive Intensity—or the lack thereof—in the Health Care space. Since the 1960s, the role of government as a payor has dampened Competitive Intensity in this industry. As a single entity that represents more than one-third of the \$2.1 trillion Health Care industry, the government is large enough that its operations and policies reverberate throughout the industry, creating standards (such as reimbursement rates) that are adopted by the rest of the industry. The government typically underpays for services compared to the private sector, which has shifted costs to private payers who are making up for the government's shortfall. In addition, regulatory requirements often

Exhibit 4.2: Health Plan Enrollment, Health Care (2007)



Source: Atlantic Information Services

⁵ Emily Berry, "Most metro areas dominated by 1 or 2 health insurers," American Medical Association web site, <<http://www.ama-assn.org/amednews/2009/03/09/bisb0309.htm>>.

⁶ Catherine Arnst, "In most markets, a few Insurers dominate," Businessweek, July 23, 2009.

result in Health Care organizations shifting extensive resources away from innovation or competition-building to compliance activities. As the federal government’s role as a payor continues to change, it is unclear what effect it may have on Competitive Intensity in the future.

Labor Productivity⁷

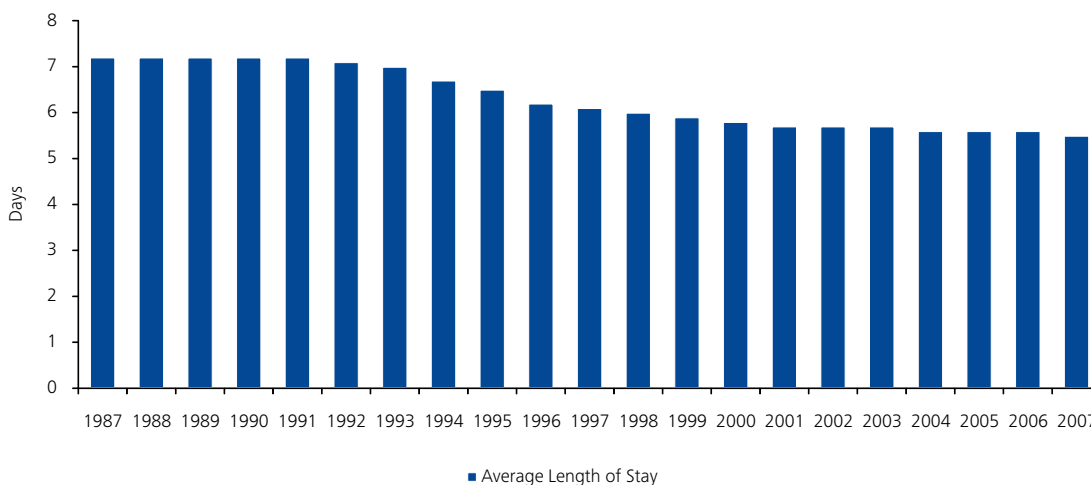
In the Health Care industry, improvements in Labor Productivity have been driven by new technologies, workforce specialization, and regulatory and public pressure to cut costs; in some instances, those gains are mitigated by other factors such as mandatory nurse staffing ratios and the influence of unionized labor. Since the Bureau of Labor Statistics (BLS) tracks productivity in the Health Care industry only for medical laboratories, we look to other metrics to gauge productivity changes. For Providers, average length of stay (ALOS) is an industry-standard for tracking changes in productivity and labor effectiveness. A decrease in ALOS indicates hospitals’ ability to deliver care in less time and using fewer hospital resources, and/or an ability to move some services out of the hospital setting.

Hospital ALOS has decreased for the past twenty years (see Exhibit 4.3), going from an average of 7.2 days in 1987 to 5.5 days in 2007, a decrease of almost 25 percent.⁸ These trends indicate that the challenges of minimum nurse-to-patient ratios and a heavily unionized workforce were outweighed by other factors. Examples include: improved clinical technologies, better case management, advanced drug therapies, and more effective treatments and procedures.

Over the past 20 years, Providers have also improved their ability to more efficiently and effectively treat diseases and medical conditions, and have successfully shifted some Health Care services into an outpatient setting.^{9,10} Exhibit 4.4 reflects this shift through the gradual reduction in inpatient stays with a concomitant increase in outpatient visits since 1987.

Labor Productivity is also affected by the increased exchange of data and information. On a daily basis, massive amounts of information are passed between Providers, Plans, and other stakeholders. While the

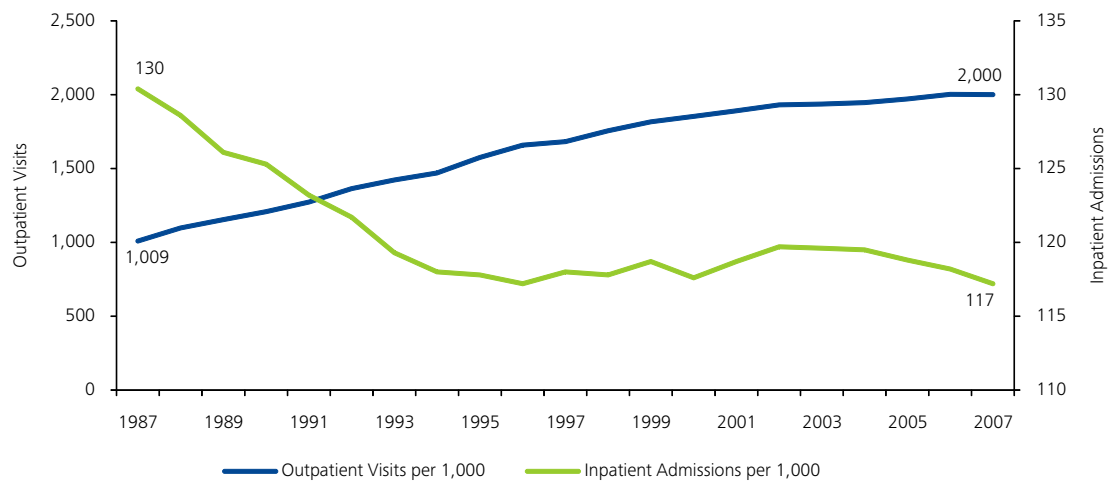
Exhibit 4.3: Inpatient Utilization, Health Care (1987-2007)



Source: Avalere Health Analysis of American Hospital Association Annual Survey Data

7 Labor productivity is defined by the Bureau of Labor Statistics as industry GDP/labor hours. For additional information on this metric, please reference the Methodology section (see page 193).
 8 Avalere Health analysis of American Hospital Association Annual Survey data, 2007, for community hospitals. U.S. Census Bureau: National and State Population Estimates, July 1, 2007.
 9 Fortney, John, et al, "Are Primary Care Services a Substitute or Complement for Specialty and Inpatient Services?," Health Research and Education Trust, vol. 40 (5 Pt 1); October 2005.
 10 Ashton, Carol, et al, "Hospital Use and Survival among Veterans Affairs Beneficiaries," New England Journal of Medicine, 349:17, October 23, 2003.

Exhibit 4.4: Inpatient to Outpatient Hospital Shifts, Health Care (1987-2007)



Source: Avalere Health Analysis of American Hospital Association Annual Survey Data

complexity and sheer volume of transactions in this industry presents a significant opportunity for efficiency gains, digitization of information such as patient records, although gaining momentum, is still not widespread.

Stock Price Volatility¹¹

There is an inherent paradox in the Health Care industry with regard to stock price volatility. Although the regulatory environment has provided relative protection from the Big Shift, it has not kept stock prices stable. Interestingly, while the pattern of Health Care stock volatility mirrors that of the U.S. economy, it is consistently higher.

In the past year, the volatility of all U.S. stocks—including Health Care—has risen to new highs. For Health Care stocks, this reflects not only concerns about the underlying economy, but also the level of uncertainty surrounding potential Health Care reform as well as changes in enrollment resulting from increased unemployment. If and when Health Care reform legislation is passed, market analysts will evaluate the likely impact on the sub-sectors,

as well as how capable Plans and Providers are of adjusting to the new market. Depending on the scope of reform, Health Care firms may need to drastically alter operational practices, possibly abandon long term strategies, and adopt methods that will help them accelerate toward change and innovation. Until legislation is passed or defeated and implementation approaches are understood, we expect Stock Price Volatility to continue at these unprecedented heights.

Firms

As consumers take more control of their health and demand new health offerings from a broader set of stakeholders, the Health Care industry has expanded beyond just Providers and Plans to include “edge” providers, such as health clubs, spas, homeopathy, natural food retailers, acupuncture, and specialized programs (such as smoking cessation). This burgeoning market is estimated at over \$300 billion in 2008,¹² which is equal to approximately one-fifth of what was spent on hospital,

¹¹ Stock price volatility is defined as the average standard deviation of daily stock price returns over a given year. For additional information on this metric, please reference the Methodology section (see page 193).

¹² Deloitte Wellness Market analysis, June 2009.

physician and nursing home/home health services during the same year.¹³ Although the implications of these changes may not be immediately visible, a subtle takeover of portions of the Health Care market is underway. In another change to the “core,” Plans may begin focusing on more robust data management. Over time, by eliminating some traditional core functions such as claims processing (adjudicating claims at the point of service instead), Plans may shift their focus to gleaning insight from the massive amounts of utilization and price information that they accumulate. Better data management could provide better coordination of care or help consumers make more informed medical decisions.

The Firms metrics measure the impact of intensifying competition and more powerful consumers and talent. Four metrics were evaluated in the Firms portion of the Impact Index. Of these, we highlight two metrics: *Asset Profitability and Firm Topple Rate*.

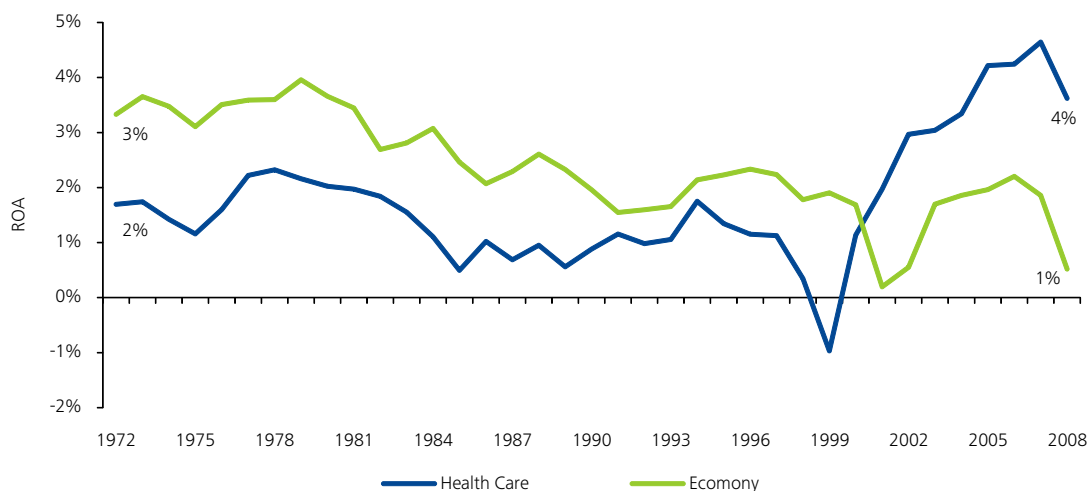
Asset Profitability¹⁴

ROA for the entire U.S. economy has fallen to almost one-quarter of 1965 levels. While overall, the performance

of U.S. companies is deteriorating, the performance of the Health Care industry runs contrary to that trend.

Before discussing ROA trends in Health Care, however, it is important to note the unique financial dynamics in the industry and how that may affect acquisition of assets. Unlike other industries, the Health Care industry operates as a fairly closed system between Plans and Providers. Providers, who are almost wholly dependent on Plans to maintain sufficient revenue streams, are reluctant to adopt new technologies unless payers are willing to reimburse those items. In general, there are two types of technologies that Providers adopt: 1) clinical technologies which can be reimbursed almost immediately through billing corresponding usage codes, or 2) information management technologies which may bring efficiency and other benefits to the organization, but which are not reimbursed directly by payers. Clinical technologies may include the latest EKG or MRI machines, robotic devices that enable minimally-invasive brain surgery, or machines that facilitate the latest biosurgery techniques coupled with biomaterials to speed up healing times, whereas information systems may manage patient information

Exhibit 4.5: Asset Profitability, Health Care (1972-2008)



Source: Compustat, Deloitte Analysis

13 Center for Medicare and Medicaid Services, National Health Expenditure Projections 2008-2018.

14 Asset profitability is defined as total return on assets (net income / total assets). For additional information on this metric, please reference the Methodology section (see page 193).

across machines or databases, or they may increase efficiencies and accuracy for various functions such as coding or outcomes analytics.

Although firms' approaches to adopting clinical and information technology has traditionally differed (largely due to reimbursement-related reasons), shifts are occurring that are bringing these two types of technology closer together. Advancements in processing power, declining technology costs and expanding internet capabilities are facilitating the value proposition for technology-assisted Health Care models.¹⁵ The increased focus on patient safety and satisfaction, clinical care quality and asset cost effectiveness are significantly impacting how information from clinical systems can best be utilized. It is estimated that adoption of clinical information systems could eliminate two million adverse drug events (ADE) and more than 190,000 hospitalizations per year, and could save the U.S. Health Care system as much as \$44 billion per year in reduced medication, radiology, laboratory and ADE-related expenses.¹⁶ In today's market, clinical technologies that support care delivery and monitoring in a more disconnected (and possibly disruptive) way are emerging; one example is with remote monitoring devices that send vital biometric data from a patient's home to their constantly moving, ever-mobile physician. This convergence of clinical and information technology has created very effective devices that store critical clinical information used for treatment, analytics and decision-making purposes.

With increasing cost pressures and an uncertain future, both Plans and Providers must be selective when procuring new assets and incorporating them into daily operations. To further hinder the adoption of new information management technologies, the reimbursement contracts between Providers and Plans are usually set in yearly or multiple-year increments; new information management technologies or services acquired during the contract period will not receive additional reimbursement. For

Plans, financial volatility impacts their ability to acquire new information technology assets, which translates to less incentive for the industry to quickly purchase these new assets. In many cases, this explains the waves of investment—Plans and Providers are slow to acquire new technologies until they are adequately convinced of their necessity and benefits and have the means to purchase those assets.

Contrary to the larger economy's plummet from 3.3 percent to just 0.5 percent ROA, the Health Care industry's average ROA increased from 1.7 percent in the early 1970s to 3.8 percent in 2008, more than doubling. Health Care's upward trend in ROA began after a sharp ROA dip in the late 1990s, most of which occurred in the Providers' space. While assets remained relatively steady during this period, Providers saw a sharp decline in net income, going from a gain of \$1.3 billion in 1997 to a \$5.8 billion loss in 1999. These numbers reflect severe losses in a few firms, such as Integrated Health Services, Inc. (IHS), a firm specializing in skilled nursing facilities. IHS went from \$137 million net income in 1998 to a \$2.25 billion loss in 1999.¹⁷ IHS's results stemmed from multiple causes, including significant changes to their Medicare reimbursement structure that came with the Balanced Budget Act of 1997.¹⁸ During this decade, the Health Care industry has seen a sharp rise in ROA. There is not one explanation, but rather several factors that account for this, such as the marked increase in net income for some of the larger players, a high activity of mergers and acquisitions, low overall investment relative to net income increases, and other significant one-time events.

The asset composition of Plans versus Providers varies greatly. Health insurance was not really prevalent until the 1950s and 1960s, and during those first years, Plans operated with minimal infrastructure and few assets. Historically, a Plan's operations were based on a knowledge-rich model—that is, their key "assets" are people and information. As such, the ability of Plans to

15 Deloitte Center for Health Solutions, *Connected Care: Technology-enabled Care at Home*, 2009.

16 Deloitte Center for Health Solutions, *Promoting Physician Adoption of Advanced Clinical Information Systems*, 2009.

17 Ben Werner, "IHS slide worries investors. (Integrated Health Services Inc.'s stock price plummets)," *Baltimore Business Journal*, October 1, 1999. <<http://www.accessmylibrary.com/article-1G1-57622116/ihs-slide-worries-investors.html>>.

18 10-K/A SEC Filing, filed by INTEGRATED HEALTH SERVICES INC, May 2, 2000. <<http://sec.edgar-online.com/integrated-health-services-inc/10-ka-amended-annual-report/2000/05/02/Section11.aspx>>.

perform well is most often tied to three capabilities: 1) risk underwriting prowess, 2) strong provider network management, and 3) a robust and effective medical utilization management program. These key capabilities may not have previously required significant investment in technology, but that has changed dramatically. Today we are seeing greater reliance on an investment in information technology as Plans must quickly store, harness, calculate and manage expansive amounts of medical information and data. The IT assets required to support these capabilities have undoubtedly changed the asset composition of Plans.

Interestingly, the ROA of Providers has fluctuated a great deal over the years. Provider assets, such as large-scale accounting systems, electronic medical records, and complex robotic surgery machines, are very expensive and often take years before they are used to their full potential. This can lead to a short term dip in ROA. These mostly administrative technologies may take years to implement, and even then, providers may not reap the benefits of their new systems for another six to 18 months.

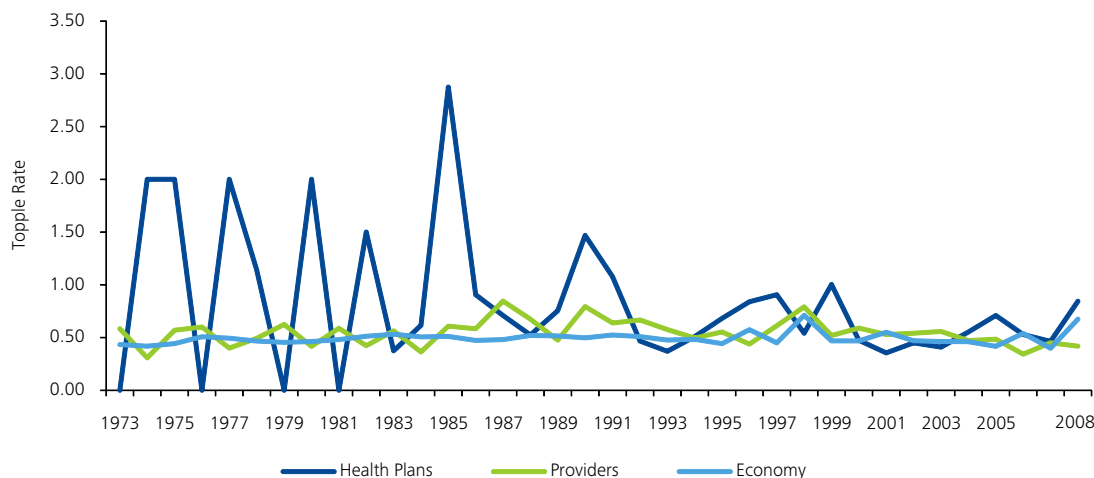
Firm Topple Rate¹⁹

The Firm Topple Rate for Health Care firms exceeds that of most other industries, indicating a high degree of transition and change. The volatility in the industry’s rankings may be driven by the volume of mergers and acquisitions, as was the case during the 1970s. For example, Sierra Health Services, which ranked in the top quartile for most of the past five years, was purchased by United Health Care (UHC) in 2008 to help UHC expand its geographic presence. In 1986, there were 134 independent Blue Cross Blue Shield plans across the U.S. Today, after significant consolidation, only 39 individual Plans exist. Although none of the BCBS plans rank as top performers (based on ROA) since a number of them are still not-for-profit entities, they are indicative of the level of consolidation that is more likely to be driving the high Firm Topple Rate in Health Care than is rank shuffle.

People

The People metrics measure the impact of technology, open public policy, and knowledge flows on consumers and talent, including executives. This driver consists of four metrics. Of these, we highlight three: *Consumer Power*, *Brand Disloyalty*, and *Returns to Talent*.

Exhibit 4.6: Firm Topple of Sub-sectors, Health Care (1973-2008)



Source: Compustat, Deloitte Analysis

¹⁹ Firm Topple Rate is defined as the annual rank shuffling amongst firms. For additional information on this metric, please reference the Methodology section (see page 193).

It is impossible to ignore the fact that some of the most significant developments in the Health Care industry are being driven by consumers. More specifically, patients are wielding greater power that comes from better information and a variety of choices in Providers, treatment options, and care delivery models. In an effort to enhance overall health and well-being, and in response to the effects of cost-sharing and price sensitivity, consumers are taking matters into their own hands.

Consumer Power²⁰ and Brand Disloyalty²¹

Patients now have unprecedented access to research that allows them to have more well-informed discussions with their physicians and even to challenge diagnoses or recommended treatments. Well-established sites (such as WebMD) provide information about diseases, symptoms, and treatment options. Increasingly, patients are accessing such information via computer, or instantly, via the many medical applications that can be uploaded to mobile devices, such as the 5-Minute Emergency application, which provides consultative information for over 6,000 clinical problems.

The rise of consumer branding, predominately through direct-to-consumer advertising using television or Internet ads, is another sign of patients' improved decision-making power. Historically, Health Care organizations have not focused on branding. Now, some Health Care companies are taking note of patients' decision-making power and are making efforts to persuade them to purchase their services. Kaiser Permanente actively sought to improve its image as a health plan and provider through its "Thrive" campaign. In Deloitte's 2009 Survey of Health Care Consumers, the "Thrive" campaign ranked in the top 10 percent for recognized Health Care advertising, and data shows that the campaign has changed consumer perceptions overall.²²

One key characteristic of the health insurance market keeps a check on consumer power: the two-tiered purchasing structure for health coverage. Many consumers are wholly

dependent on their employers for insurance options. That is, the employers first choose the products that they will offer to their employees, and then employees select their coverage from those proffered options. Therefore, while Consumer Power in Health Care is generally on the rise, it is still limited by the market and the situation.

Patients have options for Health Care today that expand beyond the traditional list of local hospitals and clinics. Alternative medicine, medical tourism, and clinics embedded in big box retailers ("retail" clinics) are legitimate care delivery options that did not exist just a decade or two ago. Deloitte's 2009 survey referenced earlier also found that in the past year, 13 percent of respondents reported using a retail clinic. In fact, seven out of ten visitors cited that they had existing relationships with a community physician, yet preferred retail settings since they are less expensive and more convenient. Deloitte estimates that by 2010, approximately six million Americans will travel abroad for medical care. Medical tourism coupled with the movement of scientific and creative talent is creating fresh centers for Health Care and health discovery in places like Dubai, Brazil, India and Singapore. Domestically, retailers like Walmart have opened dozens of clinics across multiple states to treat common illnesses and address routine medical concerns. These are becoming legitimate alternatives to traditional medical establishments and represent real choices in Health Care.

The rise in physician specialists and subspecialists provides additional choices for patients. Years ago, cancer patients may have sought treatment from a general oncologist, whereas today they might see a specialist in bone cancer or prostate oncology.

Returns to Talent²³

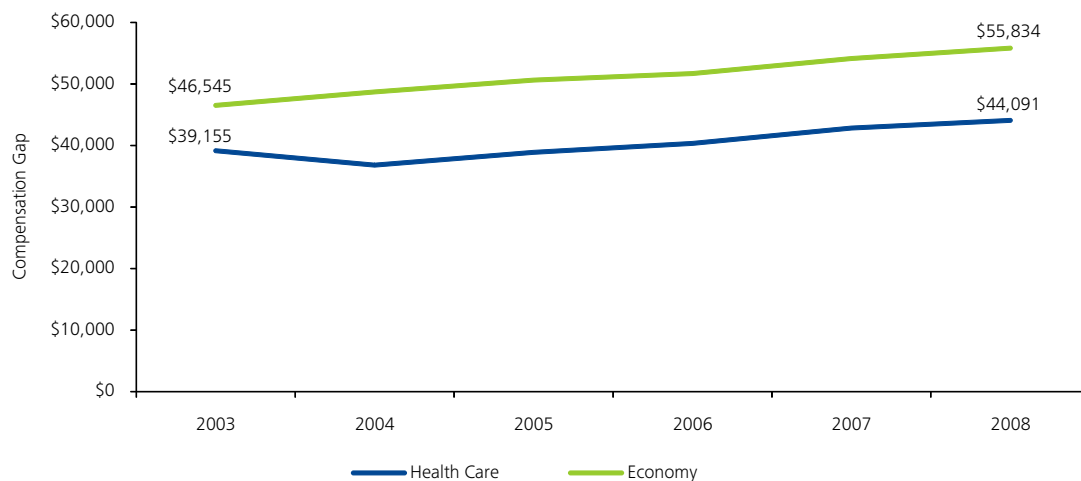
Health Care in the U.S. is extremely complex, with a maze of relationships among Plans, Providers, consumers, and regulatory agencies. Because of this, higher level positions and physician roles require a great deal of

20 Consumer Power scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

21 Brand Disloyalty scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

22 Deloitte Consumerism Survey, 2008.

23 Returns to Talent is defined as the compensation gap between the creative class and non-creative class as measured by data from the Bureau of Labor Statistics and categorized by Richard Florida's Rise of the Creative Class. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 4.7: Returns to Talent, Health Care (2003-2008)

Source: U.S. Census Bureau, Richard Florida's "The Rise of the Creative Class", Deloitte Analysis

training, specialization, and experience. This limits the pool of qualified individuals who can successfully assume executive-level positions in Health Care organizations.

As is the case with the general economy, the gap between the compensation of the creative and noncreative workforce within the Health Care industry is widening, although it is lower than in the general economy. Executive and physician salaries are a significant portion of the Health Care economy. With continued pressure from regulators and the public to reduce executive pay and control excessive physician costs, we might expect the compensation gap to decline. However, as the Health Care market evolves and the need for job specialization increases, the compensation gap may continue to increase. More physicians are choosing sub-specialties over primary care positions—in part reflecting the fact that starting salaries for sub-specialties can be double those of primary care physicians. To fill the need for primary care providers,

other groups of professionals, such as nurse practitioners, are moving into those roles.

It is not surprising that the compensation gap in Health Care is lower than in other industries. Other industries are comprised of at least a few Fortune 500 firms, where compensation for top executives is orders of magnitude higher than that of factory workers. Most hospital CEOs, and some, but not all, Plans' CEOs command less salary than the CEO of a Fortune 500 company, while even the lower-level Health Care staff still require some level of specialization and skills (e.g., insurance provisions, medical terminology, claims processing knowledge) that command higher pay. Shortages in many Health Care skill sets (e.g., coding) result in salaries that are relatively higher than those for general "noncreative" workers in other industries. Labor shortages may continue to impact the compensation gap in the years ahead, as vacancy rates in many Health Care positions currently range from five to 18 percent.²⁴

²⁴ Halvorson, George. *Health Care Will Not Reform Itself*. (Kentucky: Productivity Press 2009.)

Another interesting trend is the movement of physicians into Plans. As the battle between Plans and Providers intensifies over topics such as medical necessity, Plans are finding it more effective to have a physician conducting oversight on the care delivered by Providers. Plans (especially for-profit ones) can offer higher salaries and better career advancement opportunities than those found in the general practice of medicine, attracting physicians to move out of clinical roles and into administrative ones.

Flows

Knowledge flows—which occur in any fluid, social environment where learning and collaboration can take place—are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access. Today, however, the value of what one knows at any point in time diminishes quickly, and success is defined by how readily one can integrate new information to improve an organization. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to rapidly refresh your knowledge stocks.

The sources and uses of information in the Health Care industry have changed a great deal over the past several decades. A system that has traditionally been hierarchical and isolated is becoming more collegial and open:

- The majority of patients (59 percent) seeking Health Care information use the Internet first and physicians second.²⁵
- One-third of adults consult other consumers online for Health Care decisions.²⁶
- Professional associations, such as the American Health Information Management Association, are creating communities of practice explicitly for the purpose of drawing attention away from special interest groups and toward emerging issues and members' interests.²⁷
- The upcoming national adoption of ICD-10 will expand the list of diagnoses from 9,000 to over 150,000,

thereby providing an entirely different level of data—one in which Plans will have access to far more detail about how patients are seen and the types of treatments they are receiving.

In many instances, patients are taking the lead in leveraging new sources of information and knowledge flows to their advantage. An equally strong catalyst for increased knowledge flows may be looming on the horizon: impending Health Care regulation. As the reform debate begins to materialize into potential legislation, the industry may soon face regulatory measures that facilitate data standardization, increased information transparency and administrative simplification.

The Flow Index is comprised of eight metrics for the U.S. economy. Of those we highlight two for Health Care: *Inter-firm Knowledge Flows* and *Worker Passion*.

Inter-firm Knowledge Flows²⁸

In the Health Care industry, knowledge stocks—the repository of information on hand—are of greater importance than in many other sectors. The stock of knowledge required by doctors and nurses is acquired over a much longer period of time than in many other professions. On average, doctors spend four years in medical school followed by three to seven years in residency and specialization prior to practicing. Similarly, Health Care administrators must have intimate knowledge of regulatory requirements and complex administrative procedures in order to do their jobs effectively.

In the Big Shift, while knowledge stocks will still provide a minimum level of proficiency, they may not be sufficient: people and institutions will likely need to extend their knowledge by connecting with others in the Health Care industry.

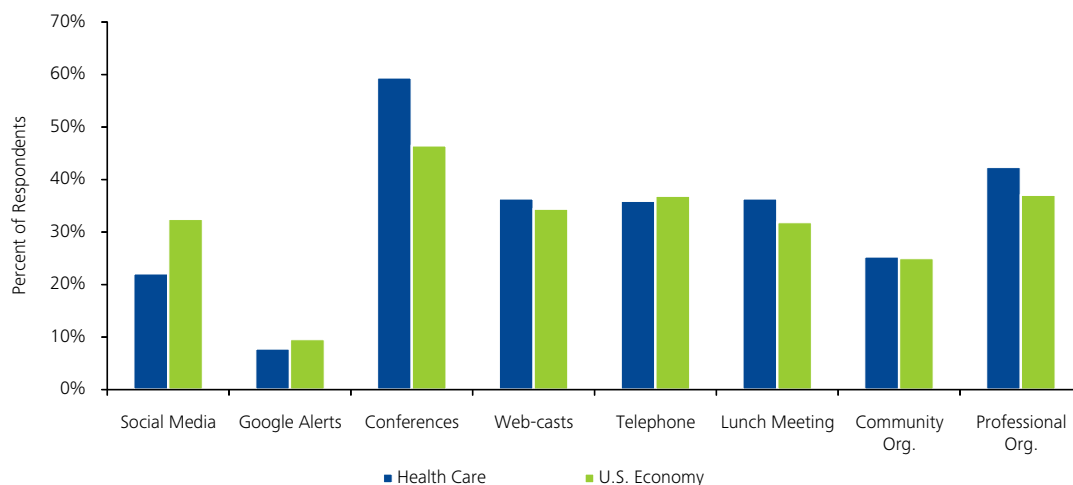
Participation in formal knowledge flows, such as conferences and professional organizations is already substantially higher in Health Care than in the broader economy (see Exhibit 4.8). Most conferences and

25 "How America Searches: Health and Wellness," iCrossing, a digital marketing company, January 2008.

26 "JupiterResearch Finds That a Third of Online Users Turn to Social and One-to-One Media for Health Information," Business Wire, March 5, 2007

27 American Health Information Management Association web site, 2003. <http://www.transformingknowledge.info/case_studies/AHIMA_case.html>.

28 Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 4.8: Participation in Inter-firm Knowledge Flows, Health Care (2008)

Source: Deloitte Survey and Analysis

professional organizations are based on the physician or staff's area of specialization (such as the American Academy of Orthopedic Surgeons or the Health Care Billing and Management Association).

While these activities do increase knowledge flows, the functional segregation limits cross-pollination of ideas between the various sub-sectors and specialties. Despite having strong traditional knowledge flows, the Health Care industry currently lags in embracing newer, virtual flows, especially those that would cross functional boundaries. Doctors have virtual communities—such as SERMO—exclusively for physicians, and patients have their own virtual forums—such as the over 1,400 Google groups related to health in September 2009. Although these online communities are performing well and growing every day, intersections between these networks are still rare.

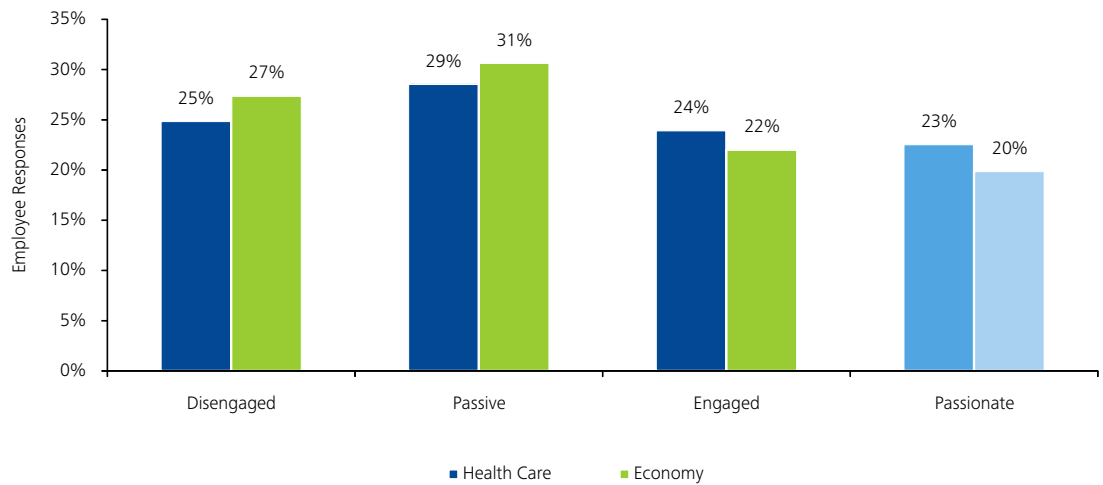
Worker Passion²⁹

Passionate workers are hard to come by, especially for large organizations, yet it is passionate workers who are most likely to engage in knowledge flows, pursue new sources of information, and learn new skills.

Health Care professionals appear to be among the most passionate about their profession, although over 50 percent are disengaged or passive (see Exhibit 4.9). One likely explanation for higher worker passion in Health Care is the sense of helping others and of giving something back to the community felt by many in this industry. It is important to note that there are likely differences in Worker Passion levels between the Plans and Provider sub-sectors, with potentially higher average levels of passion in the Providers' space due to the nature of direct patient care.

²⁹ Worker Passion scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion, which measures how passionate employees are about their jobs. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 4.9: Worker Passion, Health Care (2008)



Source: Deloitte Survey and Analysis

The Health Care industry faces significant barriers to change; harnessing workers’ passion is critical. Some organizations are already moving forward to tap into workers’ passion to address significant issues in Health Care today. For example, some hospitals have implemented bonus pools that are allocated based on peer feedback. Doctors are encouraged to share new ideas with one another and are rewarded through the bonus system. While such a system addresses knowledge sharing within an institution rather than between institutions, it is a step toward fostering collaboration. Innovation collaboratives, such as the one facilitated by the Institute for Health Care Improvement (IHI), provide opportunities for institutions to share and learn from one another. The success of their “100,000 Lives” and “5 Million Lives” campaigns to protect patients from incidents of medical harm are a testament to the power of collaboration and collective learning across a community of like-minded hospitals.³⁰ Providers as well as Plans will need to continue to innovate and push boundaries in these areas.

information and knowledge sharing in the Health Care industry. These bills are intended to both reduce costs and improve the quality of Health Care in the U.S. by promoting the sharing of information and knowledge.

Thanks primarily to regulation-based barriers to entry and inherently high switching costs, competition in the Health Care industry has been limited, and the sector has largely been shielded from the effects of the Big Shift that are roiling other industries. While others experienced significant deterioration in return on assets, Asset Profitability in the Health Care sector has more than doubled over the past four decades. Disruptive changes are gaining momentum—Health Care reform in Washington and a consumer empowered by unprecedented access to Health Care information—that will likely reshape the industry and change the strategies of its participants. Successful companies will adopt new technologies and knowledge-driven business models to benefit themselves and their customers.

As this report is being published, the U.S. federal government has legislation pending that would mandate

³⁰ Institute for Health Improvement web site, 2009. <<http://www.ihi.org/IHI/Programs/ImprovementMap/>>

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to the lack of data availability and inadequate data quality.

Metric Definitions and Sources³¹

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

	Metric	Description	Source
Impact	Markets	Stock Price Volatility	Average standard deviation of daily stock price returns over a given year Center for Research in Security Prices ("CRSP")
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition Compustat
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms
	People	Consumer Power	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty
Returns to Talent		Compensation gap between the Creative Class and Non-Creative Class BLS; categorized by Richard Florida's Rise of the Creative Class	
Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms Deloitte survey administered through Synovate	
	Worker Passion	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs	

³¹ For additional information on this metric, please reference the Methodology section (see page 193).

Industry Definition: Health Care

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Health Care industry is no exception. With the help of industry experts, we divided this industry into two sub-sectors: Plans and Providers. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. Because data from 1965-1972 was from a very small number of companies and not truly indicative of market dynamics, our sub-sector analysis for this industry begins in 1972. The selected sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
Plans	6324	Hospital & Medical Service Plans
Providers	8000	Services - Health Services
	8011	Services - Offices & Clinics of Doctors of Medicine
	8050	Services - Nursing & Personal Care Facilities
	8051	Services - Skilled Nursing Care Facilities
	8060	Services - Hospitals
	8062	Services - General Medical & Surgical Hospitals
	8071	Services - Medical Laboratories
	8082	Services - Home Health Care Services
	8090	Services - Misc Health & Allied Services, NEC
	8093	Services - Specialty Outpatient Facilities

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Executive Summary

Since 1972, financial performance in the U.S. Insurance industry,¹ as measured by average return on assets (ROA), has suffered a steady and significant drop from 2.6 percent average return in 1972 to negative 1.1 percent in 2008. Excluding 2008, for which the return for Life Insurance was a disastrous negative 1.5 percent as a result of the financial crisis, the industry's decline was still significant, from 2.6 percent to 0.9 percent.

The industry experienced the decline in profitability despite relatively stable levels of Competitive Intensity. While Competitive Intensity doubled for the economy as a whole over the past 35 years, in the Insurance industry it remained relatively constant and slightly declined in the past decade.

Underlying the industry's poor financial performance were high capital and regulatory requirements for Insurance companies, a lack of innovation (in process and distribution as well as product), and competition from financial

products, such as 401K accounts, coming from outside the industry. All of these factors drove down industry profitability.

While the lower Competitive Intensity of the Insurance industry has helped shield it from some Big Shift forces, increased competition from outside the industry and other developments will impact competition in the future. The first force bringing change to the industry is public policy manifested through potential regulatory changes.² Lower barriers to entry could result if regulation and oversight shift to the federal level (or a hybrid of federal and state). The purpose of federal regulation is to provide more uniform oversight, particularly over those companies with systemic risk. Having one federal regulatory body rather than up to 50 state regulatory bodies would make it easier to license a new company and allow it to compete by bringing new products to market. On the other hand, the proposed regulatory changes could also increase capital requirements, which would likely increase barriers to entry. To further complicate matters, there is also proposed

1 The following sub-sectors were included in the Insurance industry for this study: Property and Casualty and Life Insurance.

2 Travis B. Plunkett, "Insurance Regulation Overhaul," Congressional Testimony by CQ Transcriptions, July 28, 2009.

legislation that would make the Insurance industry subject to antitrust rules, which some believe could encourage additional competition.

Proposed requirements for commission disclosure—which are being considered in several states—could affect the market in several ways, including movement away from commissioned sales agents toward direct channels. Similar legislation in the U.K. led to more transparency, simpler products, and more direct sales, suggesting a potential increase in Competitive Intensity.

The second force is changing demographics. Consumers are gaining power and becoming more involved in the purchasing process. They are becoming less loyal to brand, no longer trusting name alone as an indicator of quality, particularly in the Property and Casualty (P&C) sub-sector. As Gen X and Gen Y become an increasingly powerful customer segment, they will likely demand transparency in price, service, and features—with more direct competition being the probable result.

Additionally, insurers are struggling to attract top talent to the industry and are dealing with issues arising from an aging workforce (e.g., loss of institutional memory as workers retire). These difficulties in attracting talent and recruiting a fresh workforce to the industry may inhibit future growth and innovation in the industry.

Third, technology has had, and will continue to have, a differentiating impact on the industry's performance. When comparing top and bottom performers in the industry, the key difference may be more aggressive adoption of the digital infrastructure. Some firms have exploited technological advances to disintermediate agents and brokers and transform the customer experience. Firms on the "edge" are exploiting smartphone technology to link agents, customers and companies and employing advances in financial economics and computing power for more sophisticated financial and risk management. Effectively deploying technology to better connect with the customer could result in a greater performance gap between the top and bottom performers over time.

Markets

The Markets metrics measure the impact of technological platforms, open public policy, and knowledge flows on market-level dynamics facing corporations. For the Insurance industry, this category consists of two metrics: *Competitive Intensity* and *Labor Productivity*.

Competitive Intensity³

The Insurance industry's Competitive Intensity has remained relatively constant over the past 35 years, and actually decreased slightly in the past decade, while the economy as a whole became more competitive. In 2008, Insurance was less competitive than all but four other industries studied: Aerospace and Defense; Automotive; Health Care; and Retail.

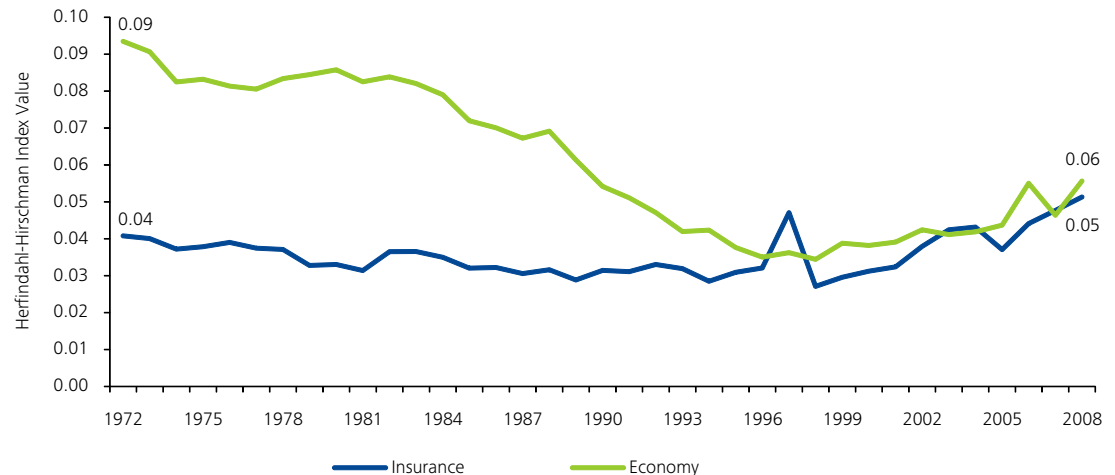
The Insurance industry has had relatively steady competition relative to other industries in part because

of the relatively high barriers to entry (for Insurance companies, not for the broker sub-segment). Companies must meet licensing and minimum capital requirements in addition to solvency and reporting requirements regulated by state insurance departments. In contrast, the Broker sub-segment has low barriers and frequent new entrants.

Further, unlike the Financial Services industry, which is regulated federally, the Insurance industry is currently regulated at the state level. Insurance companies must comply with numerous sets of state regulations, often with varying requirements. Many states also have different premium rate structures. These sometimes burdensome requirements result in some companies limiting their efforts to select markets rather than pursuing customers nationally.

There are, however, developments that could lead to increased competition in the Insurance industry. The first

Exhibit 5.1: Competitive Intensity, Insurance (1972-2008)



Source: Compustat, Deloitte Analysis

³ Competitive Intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in sector concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competitive intensity. For additional information on this metric, please reference the Methodology section (see page 193).

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

is the possibility of shifting the traditional state regulation and supervision of Insurance companies to the federal government, or combining the authority of both the states and the federal government. This could make it slightly easier for new competitors to enter the market, since it would, *inter alia*, alleviate the administrative burdens associated with complying with multiple state regulations. The attractiveness may be offset, however, by a strengthening of other barriers to entry for this industry, such as the minimum capital and solvency requirements.

In addition, several state insurance departments are considering commission disclosure requirements. Passage of such a requirement will drive down commissions on the more expensive products. Companies will be challenged to design products, as well as pricing and compensation plans, which have a clearer value to the consumer. Value may come from the service and delivery components of the offering rather than the product itself. Competition centered on compensation would translate into price competition. Similar requirements in the U.K. resulted in simpler product designs and more direct sales.

Another important development is the recently proposed "Insurance Industry Competition Act" which seeks to repeal a limited exception to the federal antitrust laws that permits statistical agents to collect and validate data, and allows Insurance companies to use aggregated loss data and to form inter-company pools to provide high-risk coverage. The bill was introduced (but not passed) in 2007 and was re-introduced in 2009 (and currently sits in committee). Bill supporters argue that this legislation would promote greater competition within the industry, and prevent "collusive behavior" between the dominant Insurance companies.⁴ If this or similar legislation were enacted, Insurance companies would likely have to find new ways to differentiate themselves from their competitors.

Differentiation is not easy; many Insurance products are homogeneous, and, particularly in the P&C sub-sector, have become highly commoditized. Overall, there have been few new products or markets in recent years. Indeed, the last product to drive significant new purchases of Life

Insurance was Universal Life, introduced in the early 1980s. Most of the innovations since have been minor, and as annuity carriers added features to compete with other financial institutions, they tended to gain only temporary advantage.

While limited product innovation may appear to be a failure of the industry, it is important to acknowledge the forces pushing insurers away from innovation. Regulations provide the public confidence necessary for the industry to operate, but they also inhibit product innovation. For example, because auto coverage is mandated by statute, changes to policy design will have little effect upon aggregate industry sales. Even though the market size remains relatively constant, firms still develop products to increase market share, but regulations limit the range of products developed because of required provisions, approval by regulatory bodies, and capital requirements. Further, the lack of intellectual property protections for those who create new products also discourages product innovation. Companies can easily mirror each other's successful products; second-to-market is a common strategy. The benefits of product innovation are easily captured by competitors who duplicate successful products once consumers show interest.

There has, however, been some innovation in the distribution channels in recent years, particularly in the P&C personal lines. While the industry relies in large part on insurance agents to market its products, the Internet has facilitated a shift toward reaching out to customers directly. Certain companies, such as Progressive, have marketed price as their key differentiator. These companies have a significant Internet presence and maintain websites that allow customers to easily compare prices and policy coverage, and ultimately purchase coverage directly. For Life Insurance, where sales are often relationship-based and require more customer education, the Internet has played a smaller role in allowing direct contact with customers. Nonetheless, there is untapped potential for market expansion; 56 million households do not own an individual life insurance policy.⁵ Many are in the middle market that could be reached via innovations in the customer experience (the product, the sale, the

⁴ "Senate, House Get Bipartisan Bills to Repeal Insurance Antitrust Immunity," *Insurance Journal*, February 15, 2007.

⁵ "Life Insurance Ownership Study: Facts About Life," LIMRA International, 2005.

underwriting, the delivery, the servicing), including transparency in coverage and price. Such innovations could have the first impact on overall sales since Universal Life. The 76 million near- or at-retirement baby boomers present another significant opportunity for Life Insurance companies, although there is stiff competition from other financial institutions.⁶

Unlike product innovation, the lack of innovations in delivery and service, particularly in Life Insurance, cannot be blamed on regulation, but on a lack of technology to implement innovative processes or to facilitate the customer buying experience. The expense of maintaining the older technology which is supporting in-force blocks of business may preclude the sizeable investments needed to develop new technology for delivery and service innovation to connect with agents and customers.

Finally, there has been a concerted effort on the part of banks and other financial institutions to gain market share within the Insurance industry. While their success has been varied and there are still significant barriers to entry, these new competitors will likely continue to make headway. In the meantime, they have spurred some innovation, such as in annuity products where Life Insurance companies began to offer guarantees that minimize customer risk.

Labor Productivity⁷

The Bureau of Labor Statistics does not calculate Labor Productivity for the Insurance industry, so we have not compared this industry's labor productivity to that of other industries, or to the economy as a whole. We have relied on secondary data, where applicable, to shed some light on Labor Productivity, and on how we believe the industry is performing.

The Insurance industry is labor-intensive and has generally not experienced major breakthroughs in back-office automation; however, there are some differences between the P&C and Life Insurance sub-sectors. The P&C sub-sector has increasingly turned to technology to improve Labor Productivity. P&C companies are using the Internet to reach customers directly and to facilitate agent/customer relationships; this trend will likely continue.

By contrast, while the days of the door-to-door insurance salesman are gone, use of the Internet to reach customers directly is not as widespread or effective in the Life Insurance sub-sector. Due to the nature and complexity of the products, Life Insurance companies, as well as commercial P&C underwriters, still rely heavily on agents to interact with customers and explain and sell policies. Nonetheless, technology could play more of a role in supporting agents' needs for information and explanations on complex products.

P&C insurers have also begun to use underwriting models and software that automatically analyze and rate insurance applications; this improves underwriting while reducing the need for manual labor. They are also using technology to make communications easier among sales agents, adjusters, and insurance carriers.⁸ These automated underwriting methods are just beginning to gain traction with Life Insurers.

Both sub-sectors still require significant numbers of workers to handle policy administration and claims processing, and both sub-sectors are investing in financial models and the related talent to support the models. The growing importance of strong financial expertise may result in a larger financial workforce as well as a competitive advantage for those companies which excel at developing that expertise.

Firms

The metrics in the Firms category measure performance of Insurance companies in relation to the economy, as well as to competitors within the industry. The metrics include *Asset Profitability*, *ROA Performance Gap*, and *Firm Topple Rate*.

The Firms metrics broadly support the notion that Insurance is a relatively slow-moving industry and one that has been somewhat shielded from the Big Shift. The industry as a whole has had limited growth. Performance in Life Insurance has deteriorated at a steeper rate than that of P&C. Life insurance companies' demutualization

⁶ Terry Schwadron, "76 Million Reasons to Reconsider What is Typical for Those Over 60," *The New York Times*, April 11, 2006.

⁷ Labor Productivity is defined by the Bureau of Labor Statistics as industry GDP/ labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

⁸ "Life Insurance Ownership Study: Facts About Life," LIMRA International, 2005.

and competition with alternative investment products have all pressured profitability.

Asset Profitability⁹

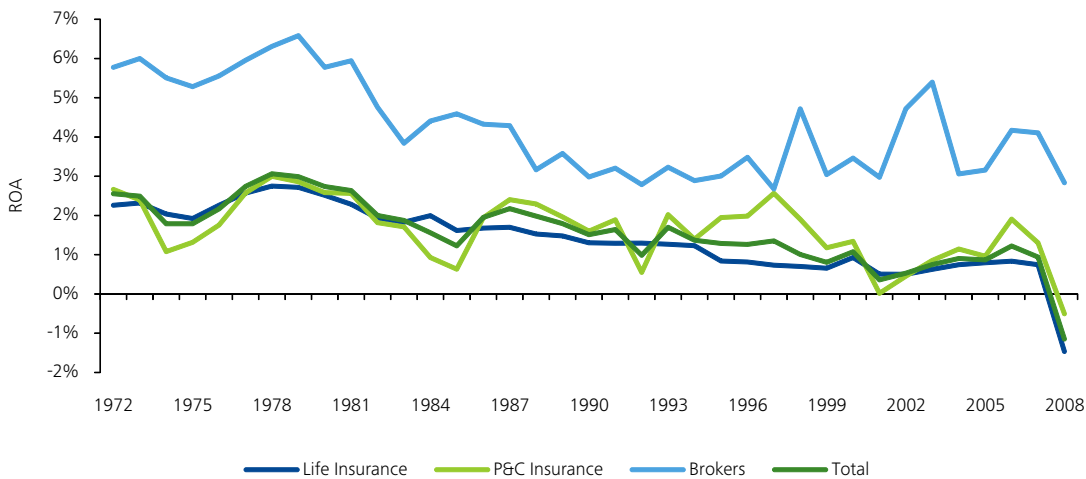
Industry-wide profitability has declined from 2.6 percent average return in 1972 to negative 1.1 percent in 2008. Excluding 2008—when the capital-intensive industry was particularly affected by the financial crisis—average ROA still decreased from 2.6 percent to 0.9 percent. Because the Insurance market is well-established, firms have difficulty driving significant changes in aggregate performance. The introduction of new products, processes, or managerial techniques has tended to gain market share for one firm at the expense of another, rather than develop new markets. This seeming inability to grow the market keeps pressure on profitability.

There are several reasons for the industry’s slow growth and deteriorating profitability. First, insurance is an old concept. One of the advantages to living in groups is the ability to spread the random fortune of the individual across the group; that is, essentially, insurance. Contracts resembling modern insurance policies originated hundreds of years ago. Although earlier forms of “insurance,” such

as the fund created by Scottish monks to support widows and children, the fire policies offered by America’s first Insurance company, and the marine insurance to secure merchant vessels in the Mediterranean, would not be competitive in today’s market, they served the same basic function as their modern analogs: pooling risk.

While insurers have been slow to develop products that are materially different from the past, it would be unfair to blame the slow growth of the industry entirely on lack of product innovation. Insurance more closely resembles a need than a want. Consumers enjoy the sense of security when their possessions and families are protected, but a high-end insurance policy does not spark the same excitement as, say, a luxury sports car. Many insurance products have endured because of, rather than despite, their unexciting abilities to meet the need for security with relative efficiency. Insurance products, even the simplest forms of Life Insurance, can seem complex; thus, simplicity and familiarity are virtues when selling to customers who are uncertain about their needs or the options available to meet them.

Exhibit 5.2: Asset Profitability of Sub-sectors, Insurance (1972-2008)



Source: Compustat, Deloitte Analysis

9 Asset Profitability is defined as total return on assets (net income / total assets). For additional information on this metric, please reference the Methodology section (see page 193).

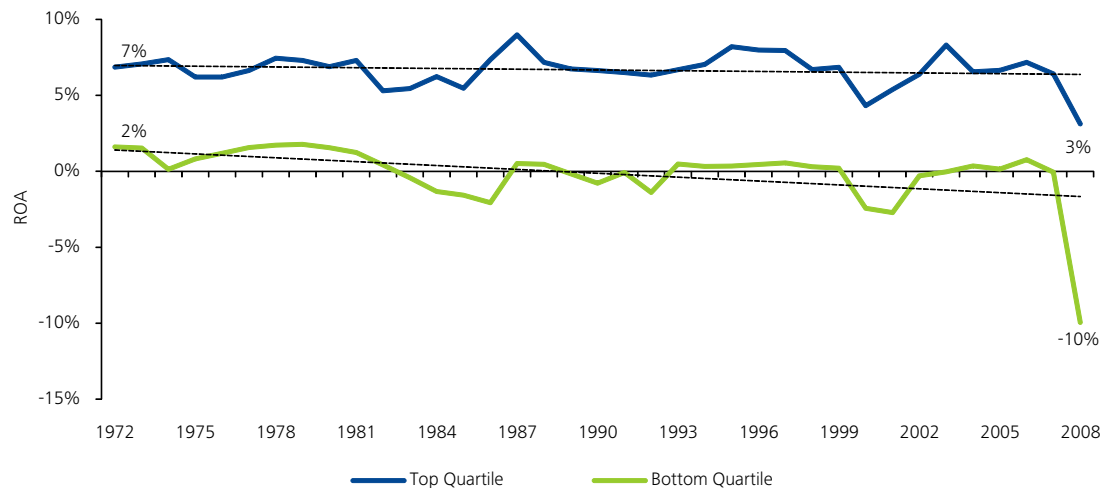
Despite the challenges inherent to the industry, there is potential for growth. While much of the P&C business is fixed to the demand for the underlying assets, many individuals do not carry enough insurance on the assets they own. Only about one-third of the U.S. population owns individual life insurance (roughly constant since World War II),^{10, 11} and many have not saved enough for retirement. It is unclear the extent to which people are underinsured or underinvested because the existing products do not suit them, but this underinsured, underinvested population represents an opportunity for innovation. Insurance companies that solve the problem of educating this market and providing convenient, cost-effective sales and delivery could achieve breakthrough growth in additional P&C, Life Insurance and Retirement products. Innovation would be better focused on education, sales and delivery rather than on product. As long as people continue to need protection and help saving for retirement, Insurance will continue to play an important role in society.

ROA Performance Gap¹²

Over the past four decades, the Insurance industry's ROA Performance Gap has increased only slightly, with top performers and bottom performers experiencing similar peaks and valleys. In 2008, however, the bottom performers experienced a much more severe deterioration than the top performers.

Although it is only a slight trend, it is interesting when compared to more fluid industries. For example, the ROA Performance Gap in the Technology industry is much larger and has experienced spikes in recent years that are not comparable to anything within the Insurance industry. Analyzing the Life Insurance and P&C sub-sectors separately, however, reveals two different trends. The ROA Performance Gap in Life Insurance has actually decreased since the 1970s, with top performers deteriorating more than bottom performers. The gap has widened in the past few years.

Exhibit 5.3: Asset Profitability Top and Bottom Quartiles, Insurance (1972-2008)



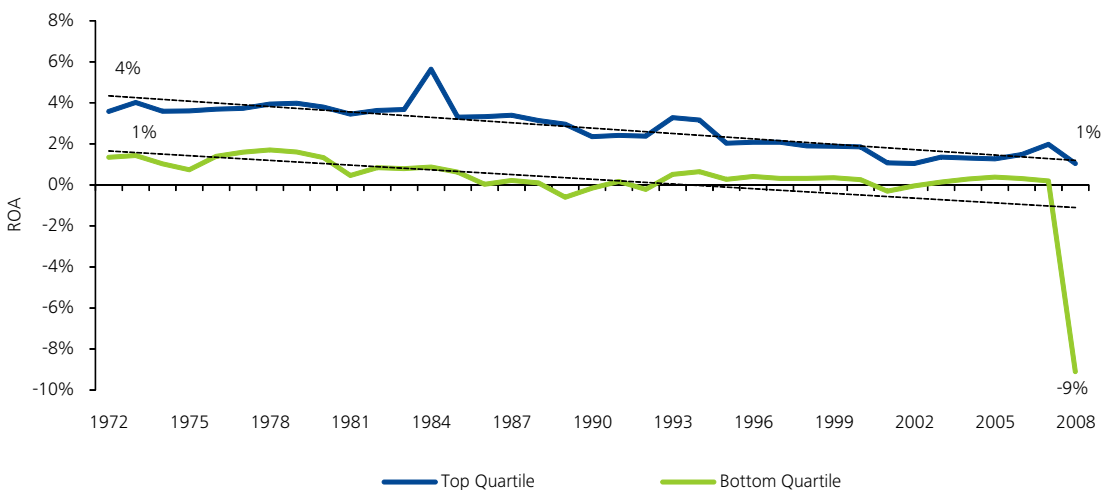
Source: Compustat, Deloitte Analysis

10 "U.S. Individual Life Insurance Trends," LIMRA International.
 11 "Trends in Life Insurance Ownership among U.S. Individuals," LIMRA International.
 12 ROA Performance Gap is defined as the gap in return on assets between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

The Performance Gap in P&C is more consistent with the general economy and Insurance industry as a whole, with the widening gap being driven by the deteriorating performance of the bottom quartile. As described previously, the

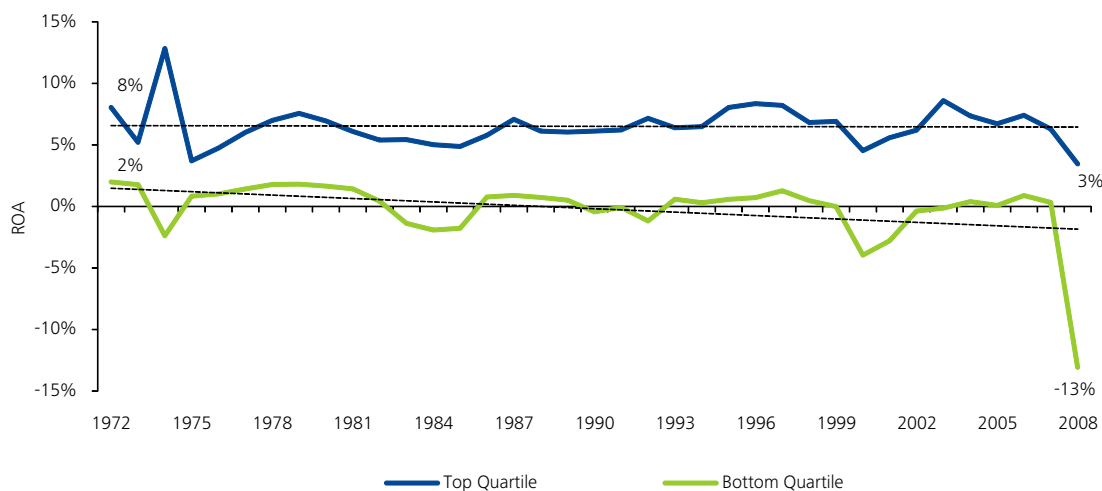
Insurance industry is relatively stable; regulatory barriers to entry and innovation slow the pace of change. The absence of disruptive forces results in smaller performance gaps than elsewhere in the economy.

Exhibit 5.4: Asset Profitability Top and Bottom Quartiles of Life Insurance Sub-sector, Insurance (1972-2008)



Source: Compustat, Deloitte Analysis

Exhibit 5.5: Asset Profitability Top and Bottom Quartiles of P&C Insurance Sub-sector, Insurance (1972-2008)



Source: Compustat, Deloitte Analysis

However, the ROA Performance Gap does indicate that some firms have been able to outcompete others at the margin, particularly in P&C. Successful firms have capitalized on technology to generate higher returns, for example, using technology to greatly streamline and improve the performance of manually intensive paper processes such as underwriting, claims processes and administration, or employing advances in financial economics and computing power for more sophisticated financial and risk management. While technological advances in the back office may improve performance for some firms, the experience of other industries suggests that those gains will be short term.

Firm Topple Rate¹³

The rate at which companies lose their ROA leadership positions has been increasing since the early 1970s for both Life Insurance and P&C. One potential reason life insurers have had more difficulty maintaining their ROA leadership is their greater dependence on an increasingly volatile stock market, particularly for companies with large variable product exposure. In addition, consolidation

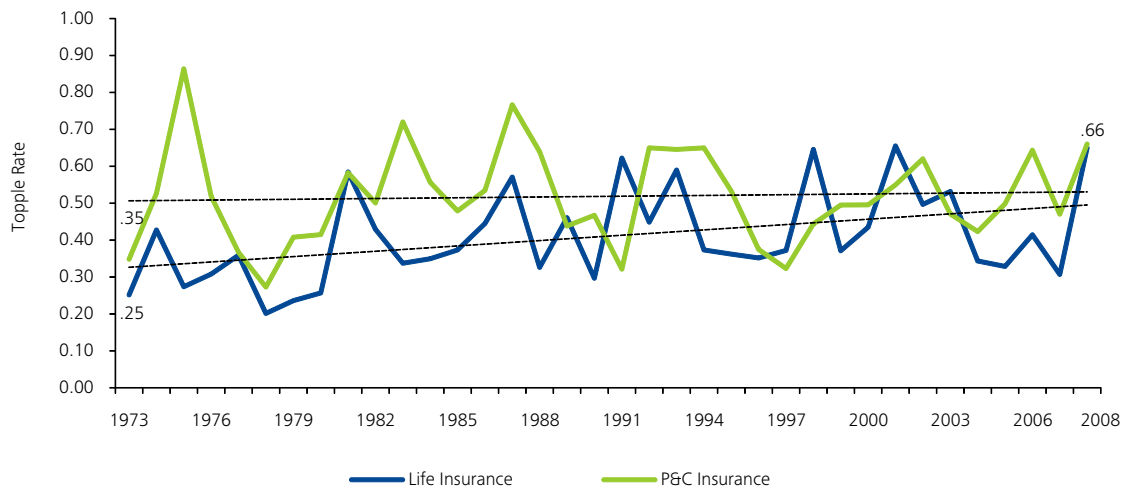
in the Life Insurance sub-sector, particularly among life reinsurance companies, has affected the recent Firm Topple Rates.

In the P&C sub-sector, rank shuffling is influenced by the underwriting cycle and its impact on the particular company. As companies attempt to expand into new geographies and lines of business, they can be more vulnerable to new risks. Similar to Life Insurance companies, P&C companies go into and out of the top quartile, but the Firm Topple Rate has been higher by nearly 50 percent for most of the study period. This performance volatility is driven by the fact that there are more regional and niche companies in the P&C sub-sector.

People

The People metrics measure the impact of technology, open public policy, and knowledge flows on consumers and talent, including executives. This driver consists of two metrics: *Consumer Power* and *Brand Disloyalty*.

Exhibit 5.6: Firm Topple of Sub-sectors, Insurance (1973-2008)



Source: Compustat, Deloitte Analysis

¹³ Firm Topple Rate is defined as the annual rank shuffling among firms. For additional information on this metric, please reference the Methodology section (see page 193).

Consumer Power¹⁴

Traditional Insurance distribution channels left little power or choice in the hands of the consumer. Typically, the captive or independent agent who served the customer managed the selection process. Ultimately, the customer's choice was limited to the options presented by the agent and was not necessarily a true reflection of the options available in the marketplace.

Exhibit 5.7: Consumer Power by Category, Insurance (2008)

Consumer Category	Consumer Power
Search Engine	70.9
Snack Chip	70.7
Broadcast TV News	70.2
Banking	70.1
Restaurant	69.7
Soft Drink	69.5
Home Entertainment	69.1
Pain Reliever	69.0
Hotel	68.8
Magazine	68.8
Insurance (Home/Auto)	68.4
Computer	68.0
Automobile Manufacturer	67.3
Athletic Shoe	66.8
Department Store	66.3
Mass Retailer	65.9
Household Cleaner	65.9
Investment	65.8
Wireless Carrier	65.6
Grocery Store	65.5
Airline	65.4
Cable/Satellite TV	63.1
Gaming System	62.5
Gas Station	61.6
Shipping	61.3
Newspaper	54.0

Source: Deloitte Survey and Analysis

The widespread use of the Internet over the past decade has shifted power to the consumer. Consumers can compare a variety of Insurance products and pricing online, with many insurers also offering the option to purchase coverage online. The shift in Consumer Power has been greatest in statutory and commoditized products such as automobile, homeowners and term life insurance. Compared to that of other consumer categories, Consumer Power related to the auto/home segment is relatively high, although certainly not the highest. The variety of competitors that offer statutory and commoditized products to consumers further supports shift in power. Low-cost providers have positioned themselves to compete for the consumer dollar primarily on price.

Insurers have used the shift in Consumer Power to attempt to disintermediate agents and brokers. Many insurers that traditionally relied on the agent channel as the primary means of distribution have begun to market directly to consumers and have developed supporting channels (e.g., the Internet) to meet consumer needs. To remain competitive, agents have created online capabilities such as InsWeb and Quotesmith (now Insure.com). Compared to traditional brick-and-mortar agencies, these online agents tend to release quote information for all available options, which ultimately drives greater transparency in pricing for the consumer.

While low switching costs and convenient access to alternatives drives Consumer Power for statutory and commoditized Insurance products, Consumer Power is weaker for more complex Insurance products. Whole and variable life, annuities, retirement products and commercial P&C insurance remain complicated enough that the consumer typically wants the expertise of an agent or broker.

¹⁴ Consumer Power scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

It remains to be seen if Consumer Power will continue to grow with the availability of information and products via the Internet. The insurance consumer base is currently driven by the WWII and baby boomer generations. These generations typically prefer face-to-face interactions with an insurance agent and are less comfortable with Internet-based purchases. Generations X and Y are on the cusp of becoming the preferred target market for insurers, and this demographic's comfort level with Internet-based purchasing is significantly higher. Gen Y, for example, relies on family, friends and co-workers for advice, but they want readily available research data and frequently want to purchase online. It is possible that the comfort level of Generations X and Y with online transactions will extend to the purchase of complex Insurance products as their needs evolve. Currently, most consumers still purchase those products face-to-face, and the Life Insurance sub-sector, for the time, retains the power.

Brand Disloyalty¹⁵

Brand Disloyalty metrics for the Insurance industry indicate that disloyalty for the auto/home segment is higher than average among other industry sectors. Given the statutory, commoditized nature of the products involved and the low switching costs for customers to move among competitors, a higher level of disloyalty is to be expected. Consumers can easily compare pricing on the Internet, and most major auto/home insurers enable customers to purchase coverage online. As levels of consumer loyalty have changed, more insurers are focusing on price competitiveness as the focal point of their marketing message, with some insurers making cost the main value proposition. In response, traditional, service-oriented insurers such as State Farm and Allstate now consistently highlight competitive pricing in their marketing. Brand Disloyalty is lower for Life Insurance. The investment nature of many Life Insurance products, coupled with the more burdensome administrative processes and direct surrender penalties for changing insurers, creates an inherently "sticky" product for life insurers.

Flows

Knowledge flows—which occur in any social, fluid environment where learning and collaboration can take place—are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to rapidly refresh knowledge stocks.

Eight metrics were evaluated in the Flow Index for the U.S. economy-level analysis of the Shift Index. Of those we highlight two metrics: *Inter-firm Knowledge Flows* and *Worker Passion*.

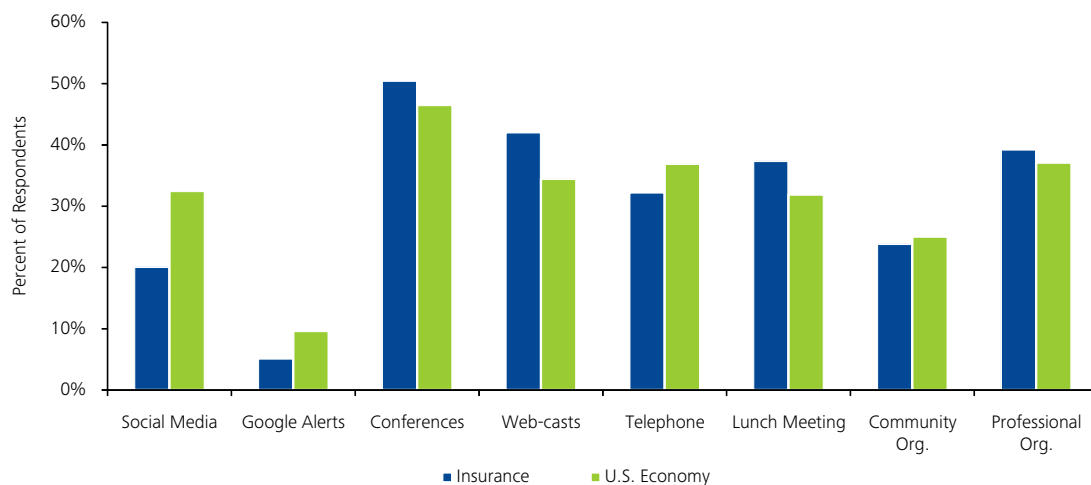
Inter-firm Knowledge Flows¹⁶

Employees in the insurance Industry rank 8th of 14 industries in Inter-Firm Knowledge flows, as defined by participation in activities like social media, webcasts, professional organizations, conferences, and lunch meetings.

The Insurance industry is about average in terms of Inter-firm Knowledge Flow; however, Insurance workers tend to participate in more traditional means of interaction such as conferences, lunch meetings, and professional organizations. The majority of the conferences are industry-based, such as those sponsored by Property Casualty Insurers of America, LIMRA/LOMA/ACLI/SOA (life insurance companies), NAILBA and IIABA (Life Insurance brokers and Independent agents), and RIMS (risk management, brokers and companies), or profession-based such as those sponsored by the Insurance Accounting and Systems Association (IASA). The industry

¹⁵ Brand Disloyalty scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

¹⁶ Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion, which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 5.8: Participation in Inter-firm Knowledge Flows, Insurance (2008)

Source: Deloitte Survey and Analysis

still relies heavily on the interpersonal interactions on which it was founded. Company sponsorship and financial support for conferences and professional organizations is standard in the industry and is likely to continue for the foreseeable future. It should be noted that knowledge stocks are very important in Insurance companies, probably more so than in many other industries. Policies sold many years ago still need to be understood and supported, and pricing is based on analyses of historical data.

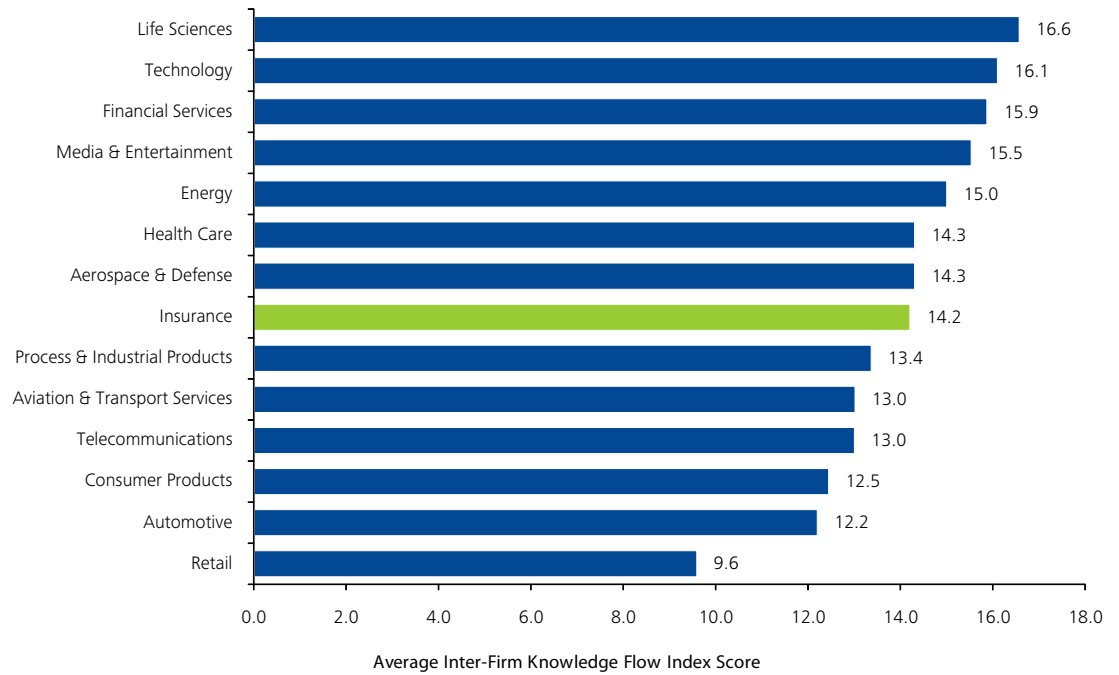
The use of technology (e.g., social media and Google Alerts) to support inter-firm knowledge flow is notably lower among insurance workers than in the U.S. economy overall. Much of this reluctance can be explained by the older age of the workforce (a group known to be less open to adopting new technology). Additionally, most companies were structured such that a large portion of the workforce (e.g., claims, administration and customer

support) may have felt that they had little to gain from seeking inter-firm knowledge and were likely less interested in new trends for knowledge exchange.

However, progressive companies are piloting social networking initiatives as they prepare for Gen Y leaders. For example, it is more likely that service innovation will result from customer-facing employees talking to those who design the process and that enhanced underwriting guidelines will result from informal conversations with claims adjusters. Large insurers are looking at web capabilities, collaboration and social networking to make sure that they are ready for Gen Y employees, customers, and agents.¹⁷

¹⁷ Katherine Burger, "Insurers Proceed on Social Media with Caution," *Insurance & Technology*, October 12, 2009.

Exhibit 5.9: Inter-firm Knowledge Flow Index Score, Insurance (2008)



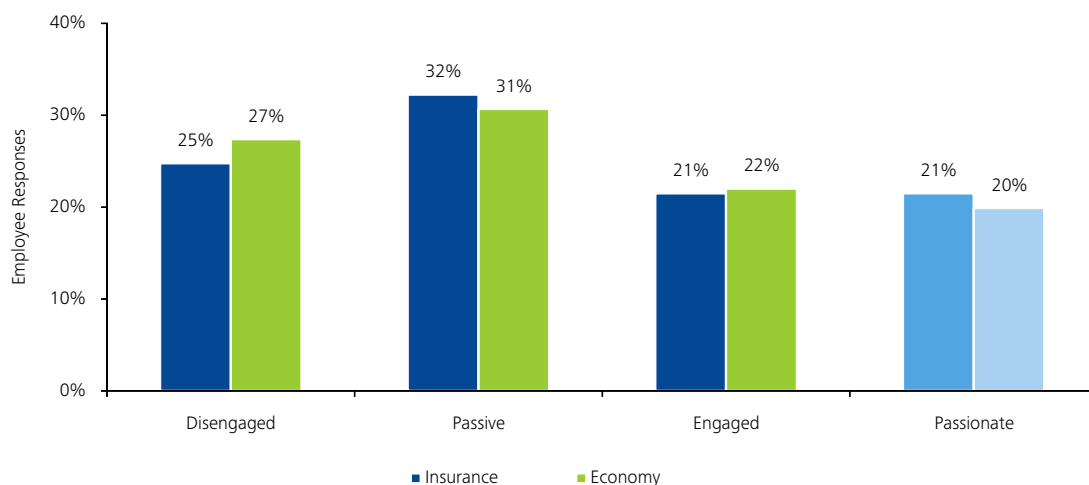
Source: Deloitte Survey and Analysis

Worker Passion¹⁸

Twenty-two percent of Insurance industry respondents are passionate about their work (about the same as the overall economy). Respondents represent all levels in the industry, so it is unclear which workers are most engaged. Certain financial positions which have become more important and more challenging in recent years and the broker sub-segment, with its sales work and commission-based compensation, tend to attract people who are passionate about their work.

The majority of Insurance industry respondents (56 percent) indicated of their current situation that they “were not currently in [their] dream job, but were happy with [their] company.” Insurance companies, while not considered as exciting as other financial services companies, are generally thought to be good places to work. Working conditions are good, pay and benefits are competitive, training is available and a culture of promoting from within creates opportunities for advancement.

¹⁸ Worker Passion scores were calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion, which measures how passionate employees are about their jobs. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 5.10: Worker Passion, Insurance (2008)

Source: Deloitte Survey and Analysis

Nonetheless, companies in this industry should explore ways to engage a portion of the nearly 80 percent of employees who are not passionate about their work in a way that awakens their passions. Increased Worker Passion is associated with increased knowledge flows and improved performance. Insurance companies will need Gen-Ys who are passionate about their work to tackle the challenges around the customer experience and reach new demographics that insurers will face in the future.

The Insurance industry has experienced a steady decline in profitability despite being less competitive than many U.S. industries. While regulation has limited

competition, it has also tended to limit innovation, and P&G products in particular have become commoditized such that companies differentiate primarily on price. The changing demographics of the consumer base has further exacerbated the profit pressures as brand and relationships lose value with Gen X and Y. Pending regulatory changes may soon change the competitive environment and spur companies to redesign products and rethink pricing and compensation plans. The adoption of technology to redefine traditional business processes and transform the customer experience has differentiated top performers from bottom performers in the past and will continue to be a source of advantage for Insurance firms.

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to the lack of data availability and inadequate data quality.

Metric Definitions and Sources¹⁹

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics ("BLS")
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	Compustat
		ROA Performance Gap	Gap in return on assets (ROA) between firms in the top and bottom quartiles	
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms	
	People	Consumer Power	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty	
Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate	
	Worker Passion	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs		

¹⁹ For additional information on this metric, please reference the Methodology section (see page 193).

Data from 1965-1972 was from a very small number of companies for these industries and therefore not truly indicative of market dynamics.

Industry Definition: Insurance

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Insurance industry is no exception. With the help of industry experts, we divided this industry into two sub-sectors: Life Insurance and P&C Insurance. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. Because data from 1965-1972 was from a very small number of companies and not truly indicative of market dynamics, our sub-sector analysis for this industry begins in 1972. The selected sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
Life Insurance	6311	Life Insurance
P&C Insurance	6331	Fire, Marine & Casualty Insurance
	6351	Surety Insurance
	6361	Title Insurance
	6399	Insurance Carriers, NEC

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Media & Entertainment

Ed Moran and Gyula Kangiszer

Don't be distracted by declining DVD sales or falling CPMs: Identifying the fundamental challenges and opportunities facing media & entertainment companies

Executive Summary

Since 1965, financial performance in the U.S. Media and Entertainment (M&E) industry,¹ as measured by average return on assets (ROA), has fallen steeply, from 7.0 percent to negative 4.4 percent, despite gains in Labor Productivity.

M&E's decline in financial performance appears to be primarily the result of intensified competition, as with nearly all the industries discussed in this report. Competitive Intensity in the industry more than doubled in the 43-year time period we studied, as firms struggled to come to terms with new entrants, newly powerful consumers, and a wide range of online substitutes for traditional media and entertainment products. Customers benefited enormously from growing options at lower prices. Talented workers also made gains relative to firms.

Underlying these factors is the inexorable pace of technological change. Most recently, the rise of the Internet has posed a particularly tricky set of challenges for M&E companies. While the Internet at first seemed to provide an enticingly economical way of reaching consumers and marketing one's wares, the Web soon evolved into a threatening means of exchanging pirated

goods, a free distribution channel over which M&E companies had no control, and a driver (or at least an enabler) of new consumer preferences (like downloaded individual songs, video on computers instead of TVs, and books read on screens as opposed to paper).

More recently, the Internet has evolved into a means for consumers to circumvent the broadcast networks and cable companies to quench their seemingly limitless thirst for video entertainment, and as a place where former consumers are now making and sharing their own entertainment. Customers now spend unprecedented amounts of time enjoying content that has been created by amateurs; perhaps just as important, they also spend large amounts of their time creating content of their own, in the form of videos, online reviews, blog entries or Facebook updates.

The pain is not limited to more mature sub-sectors like Publications & Print, Cable & Broadcasting, or Advertising. Even new forms such as interactive gaming are challenged by the Internet. The emergence of browser-based and cell phone-based gaming, for instance, threaten to make the expensive, fiercely fought battles over gaming console market share moot.

¹ The following sub-sectors were included in the Media and Entertainment industry for this study: Advertising; Cable & Broadcasting; Electronic Information; Film & Entertainment; Films/Recreation; Publications & Print; and Recorded Music.

A more subtle issue at work is that the Internet enjoys almost unprecedented critical mass. No other distribution platform has ever enjoyed the sheer scope that the Internet enjoys today. Unregulated and untaxed, the Internet is also difficult to compete with and has a tendency to economically steamroll pre-existing markets that evolved in protected and government-granted backwaters.

M&E has historically been an industry characterized by strong regulation. Radio, television, cable, and satellite operators exist only through government-granted licenses, and record companies and movie studios were protected by copyright laws. Without these protections, and when confronted by a consumer empowered by time-shifting, place-shifting, and very low distribution and search costs, M&E companies find themselves in threatening, uncharted waters. The combination of being regulated while competing against unregulated competitors is increasingly difficult to counter.

And although the Internet has been the most recent (and a singularly powerful) driver of this pain and disruption, the industry has in fact been buffeted by a series of longer-standing technological revolutions that set the current stage. Digitization, enormous electronic storage, plummeting processing costs, and Moore's law have all

conspired since at least the advent of the videocassette recorder to nibble away at the legacy business models, and often, the profitability of M&E companies.

There is good news, too. The U.S. still is a net exporter of media and entertainment,² the M&E industry has proven consistently adept at creating content that people want, people have a newfound ability to consume media in more places and more often throughout their days, an enormous number of people are now connected globally and are able to consume entertainment, and wholly new categories like video games have emerged. Indeed, these facts can be used to show that some parts of the M&E ecosystem may be entering a new golden age. Augmented reality, 3-D enjoyment of video content, and networked virtual worlds, all nascent at this point, arguably have the potential to emerge as engaging new platforms that will attract millions or billions of new consumers, and drive almost unimaginable new innovations, products, services and revenue opportunities. New technologies and social media permit potentially far more effective and targeted marketing practices, and brands have never had greater opportunities to interact with their present and future consumers through social software and via collaboration marketing.

2 To the tune of about \$13.6 billion in trade surplus; "Economic Impact of the Motion Picture & Television Industry on the United States," Motion Picture Association of America, April 2009.

Some suggest that many of the challenges facing M&E will resolve when the economic cycle rises again, or when new regulatory schemes are imposed. Indeed, M&E corporate executives and Wall Street analysts alike carefully track advertising spending, and are sanguine that the worst is over in that critical sector. Our analysis indicates, however, that while some challenges may reverse themselves, other fundamental trends portend long term conditions that will not improve until executives adopt dramatically different approaches to their businesses, focusing on value-creation and value-capture. These profound long term changes present both significant challenges and opportunities for forward-looking M&E executives but are being obscured by cyclical and short term events.

M&E companies face several major challenges going forward: dealing with a depressed global economy, managing business volatility, navigating new regulatory landscapes, meeting new consumer demands, accessing and developing talent, and effectively expanding their companies as global competition becomes more intense. We believe that there is a disproportionate focus on the

cyclical challenge, and a lack of appreciation of the other more pervasive shifts. When the economic cycle improves, and consumers spend more freely and advertising revenues improve, the significant issues of managing volatility, navigating new regulatory systems and new consumer behaviors, developing talent and competing globally will emerge as the thorny issues demanding immediate attention. These issues are deep-rooted, fundamental forces that show no signs of abating. How M&E companies attack those remaining challenges will be what sets apart the winners from the rest.

It is not all cause for concern: significant opportunities await the companies that can discern, and exploit, these shifts. For instance, stronger brand loyalty for certain beleaguered sub-sectors points to a brighter future for some M&E companies. Using data-driven analyses of market-level, firm-level and people-level drivers over decades-long periods, we will examine those long term forces below, and cast light onto what are often dimly considered drivers of current conditions, and explore what future states are likely to be.

Markets

A useful place to begin the analysis of these longer-term trends is by looking at the impact of new technological platforms, open public policy, and knowledge flows on M&E companies. For M&E the key metrics in the Markets category include *Competitive Intensity* and *Labor Productivity*.

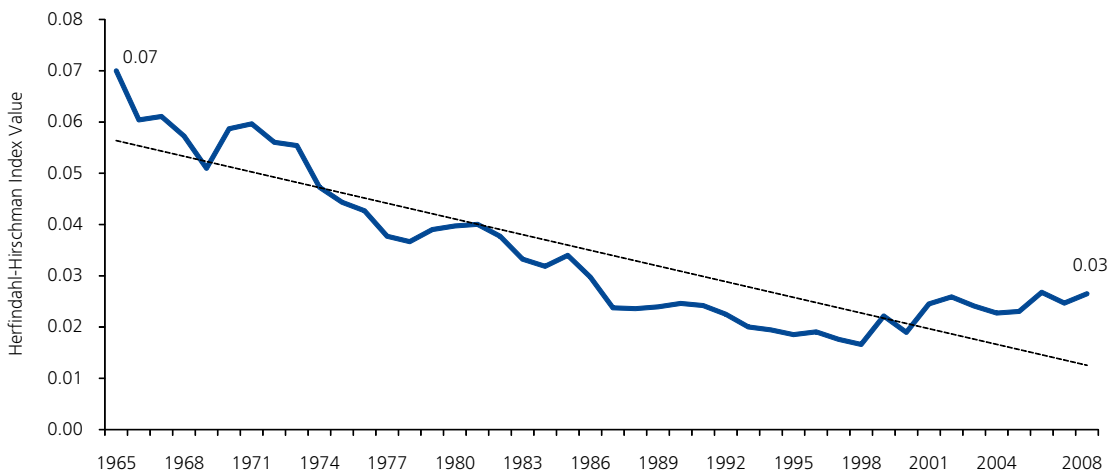
Competitive Intensity³

Within the M&E industry, concentration has decreased by more than half since 1965, from 0.07 on the Herfindahl-Hirschman Index (HHI) in 1965 to 0.03 in 2008, leading to increased Competitive Intensity.

Although the HHI is, in some regards, a good measure for competitive intensity in the M&E industry, the HHI

only captures the competitiveness on one axis (that of market share jockeying by leading companies). The HHI doesn't capture several key aspects of what is taking place in the M&E sub-sectors. These include the appearance of substitutes and new kinds of competition (such as user-generated content) that are not like classical firm-based competition. The HHI also does not capture the splintering of time and attention against which the M&E companies must compete (e.g., Millennials spending time playing games on their mobile phones instead of watching TV, or consuming multiple forms of entertainment simultaneously). The HHI also does not capture the competition of firms outside of the M&E sub-sectors, which are typically not considered to be competitors, although their companies are vying for the same consumer attention, time and dollar. For instance, consumers texting their friends for hours at a time, playing games on their

Exhibit 6.1: Competitive Intensity, Media & Entertainment (1965-2008)



Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

³ Competitive Intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

cell phones, or spending hours updating their social networking pages, were not competitive forces that legacy M&E companies (like cable operators or magazine publishers) had to worry about even a decade ago. These characteristics of the contemporary M&E marketplace heighten the Competitive Intensity captured by the HHI. Several sub-sectors of M&E have been regulated to provide greater choices to customers by promoting competition while protecting talent. For instance, newspapers and studios need to carefully manage union cost structures that limit their strategic options; cable companies and broadcasters must abide by limits regarding geographic footprint, ownership, and censorship. Younger sub-sectors like satellite radio or the Internet are less regulated, providing new opportunities and challenges.

Companies that capitalize on the Internet often take advantage of the stark lack of regulation associated with it. For instance, rules regulating online advertising are only now under development, and consumers regularly avoid paying sales tax for web-based M&E content. Rules limiting same-market ownership of certain media properties and rules limiting foreign ownership historically have dampened Competitive Intensity; Competitive Intensity will surely rise now that the Internet eases many of these limitations.

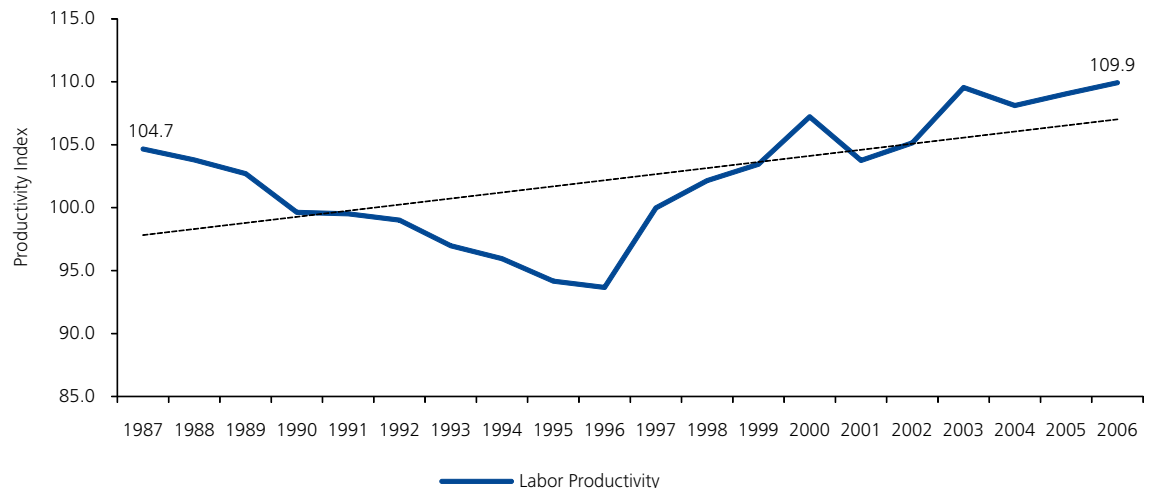
Labor Productivity⁴

Within the M&E industry, labor productivity grew at a 0.3 percent CAGR from a value of 104 in 1987 (1997 = 100) to 110 in 2006. Notwithstanding this increase, the M&E industry experienced some of the slowest productivity growth among all industries.

Looking more closely into the sub-sectors, we can see why overall labor productivity across the M&E industry has lagged other industries. First, M&E companies such as magazines, games, TV, movies, and music rely on creative talent to develop an intangible deliverable known as “entertainment.” Creating entertainment in the sense of a classic movie, hit song, or engrossing book is not a standardized production process that can be tweaked for performance improvement through fewer steps, cheaper inputs, or greater use of technology. Without the creative spark, proper talent and emotional connection with an often fickle customer, these efforts fail, regardless of the technology or processes deployed.⁵

Therefore, it is not surprising that creative labor is not improving its productivity as fast as non-creative workers who can optimize routine production processes through ever faster machines or improved technology.

Exhibit 6.2: Labor Productivity, Media & Entertainment (1987-2006)



Source: Bureau of Labor Statistics, Deloitte Analysis

⁴ Labor Productivity is defined by the Bureau of labor statistics as industry GDP/ labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

⁵ To appreciate the difficulty of consistently delivering commercially successful entertainment, consider that in 2009, Paramount Studios released a movie that delivered \$817 million in revenue, as well as a movie that delivered only \$90 million in revenue.

Where steps are taken to increase Labor Productivity in the M&E industry, the steps are limited and do not touch the key creative competencies. For instance, many M&E companies have outsourced less-important steps in the animation process to third parties, retaining control over more critical activities like story and character development. Companies that have leveraged technology in this regard to the highest degree—like Pixar with its completely computer-generated films—have done so not to lower costs, but to create realistic effects impossible with human-drawn images. As a result of these innovations, growing consumer expectations increase the demand for even more time-consuming (and human-driven) special effects. While greater use of high technology raises the entertainment value in many cases, there is no corresponding improvement in worker productivity. We would venture to guess that it took many more man-hours to produce the fully computer generated images of *Toy Story* than the manually-drawn images of the original *Snow White* movie.

Firms

In the Firms category we consider *Asset Profitability* in the M&E industry, comparing it to other available measures of firm performance.

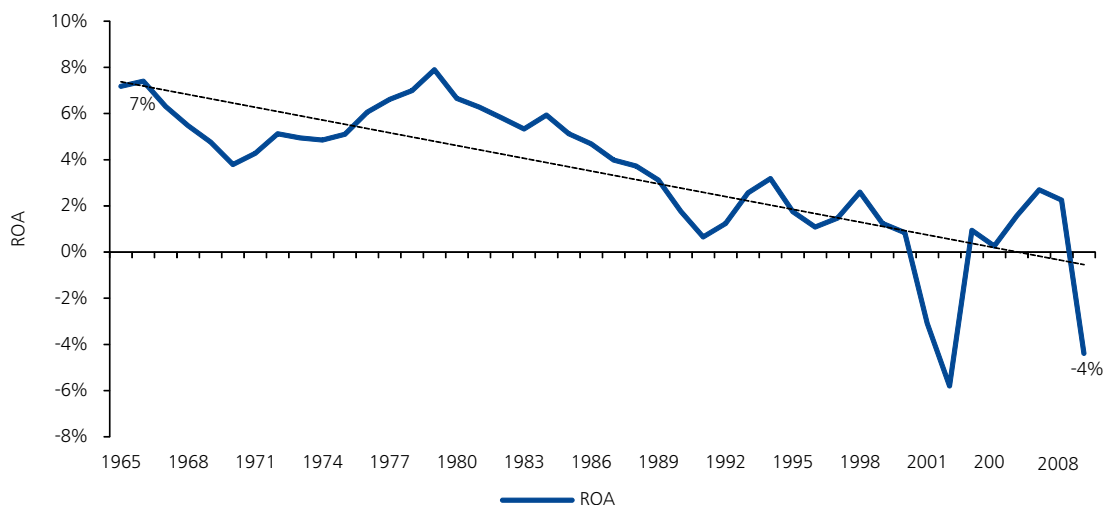
Asset Profitability⁶

Looking at the Asset Profitability of M&E companies over the past 40-plus years, we see that average return on assets (ROA) in the industry has fallen from 7.0 percent to -4.4 percent from 1965 to 2008. This parallels a similar long term decline in virtually every other U.S. industry as well.

During this 40-year period, the nature of M&E companies' assets has changed dramatically. As the asset composition diagram illustrates, the relative proportion of "intangibles" (such as intellectual property and goodwill) has steadily increased since 1965 to become the single largest asset classification today (see Exhibit 6.4).

Before we attempt to understand what the deteriorating ROA metric might mean for the future of M&E, we should consider whether ROA is a good measure of performance in the M&E industry. Based on our analysis and other data, we believe that ROA is not a particularly useful metric for evaluating M&E companies' performance. Indeed, many of the key productive assets of M&E companies do not show up on the balance sheet. For instance, gifted script writers, the ability to develop a compelling story, or the ability of managers to pick "hits" are off balance sheet items.

Exhibit 6.3: Asset Profitability, Media & Entertainment (1965-2008)



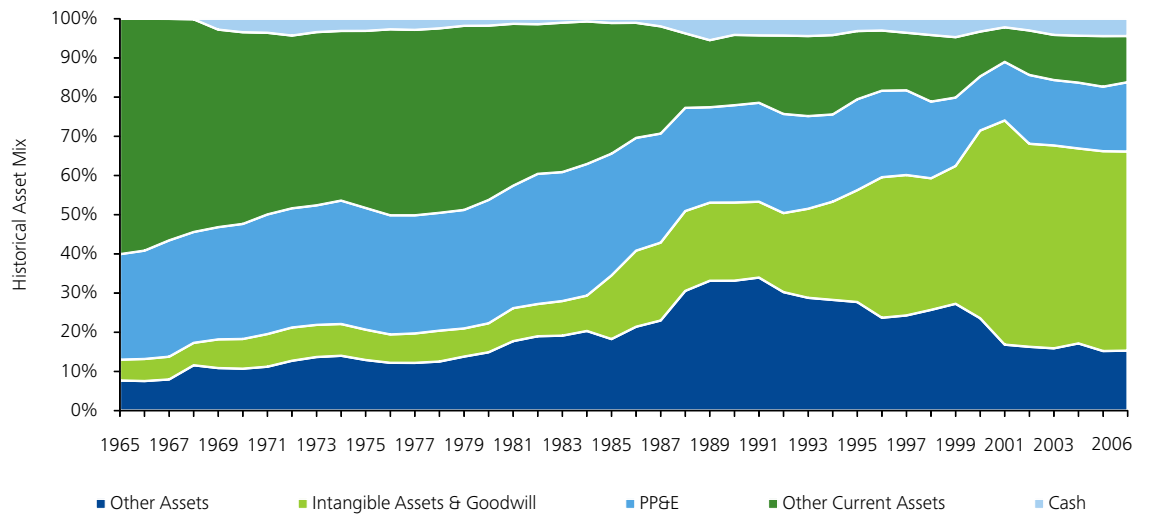
⁶ Asset Profitability is defined as total return on assets (net income/total assets). For additional information on this metric, please reference the Methodology section (see page 193).

Source: Compustat, Deloitte Analysis

Indeed, Wall Street analysts typically look at a number of metrics other than ROA to evaluate the performance of M&E firms. However, return on equity (ROE)—the rate of return enjoyed by common stock owners as a result of

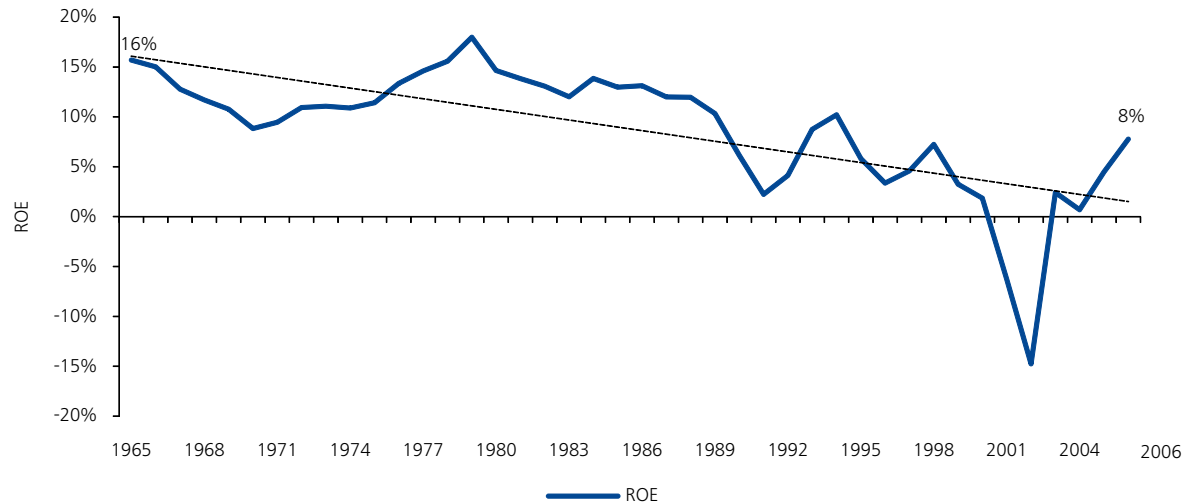
their investment—a widely-used profitability ratio) shows a deterioration similar to, if not more drastic than, ROA decline (see Exhibit 6.5) over the past 40 years. In contrast, as we see from the following two exhibits, M&E companies

Exhibit 6.4: Historical Asset Mix, Media & Entertainment (1965-2006)



Source: Compustat, Deloitte Analysis

Exhibit 6.5: Return on Equity, Media & Entertainment (1965-2006)

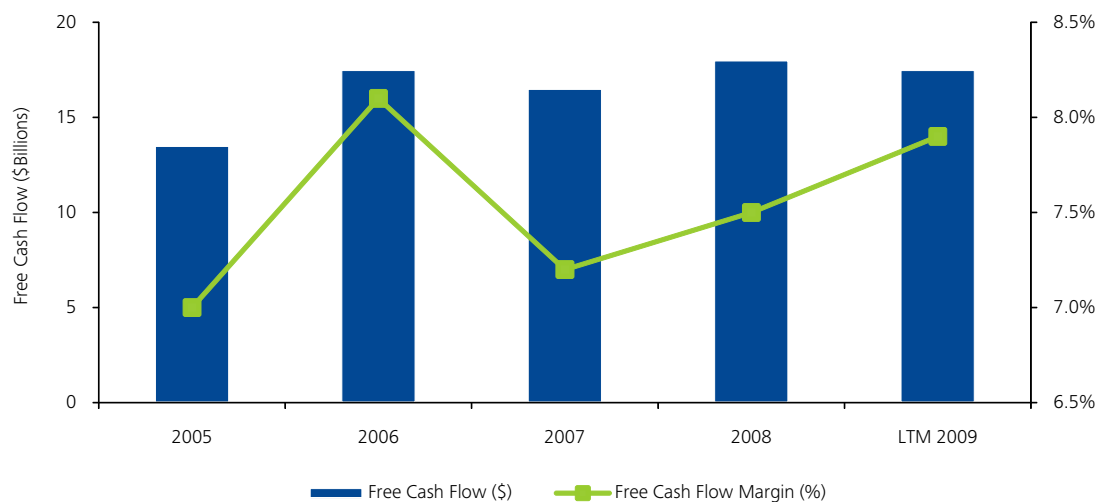


Source: Compustat, Deloitte Analysis

still enjoy significant free cash flows and margins notwithstanding (see Exhibits 6.6 and 6.7) their long term downward trend in ROA and ROE.

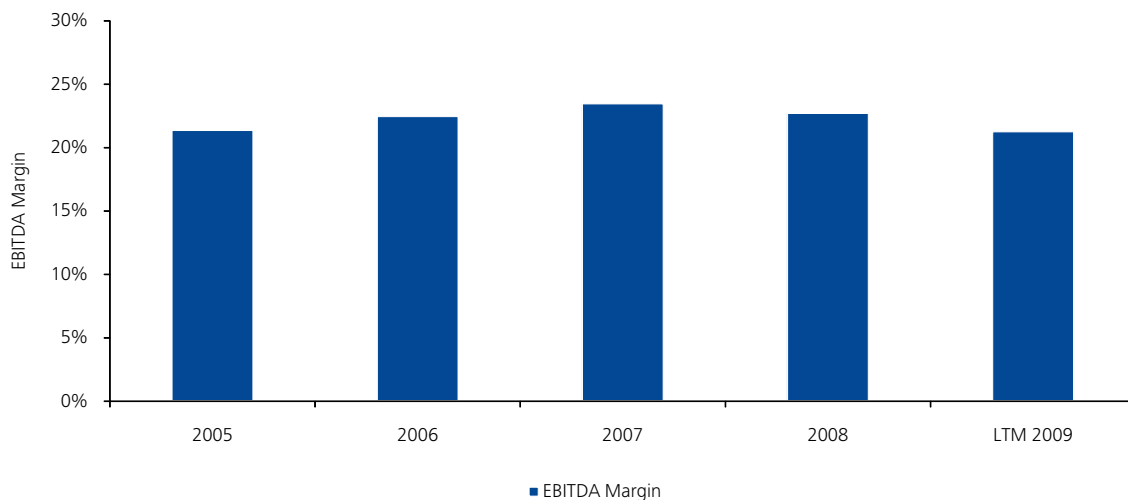
Exhibit 6.8 summarizes the most recent distribution of analysts' recommendations, indicating that the vast majority of M&E firms are evaluated as "stable," and only about 10 percent have received a "negative" rating.

Exhibit 6.6: Free Cash Flow & Margin, Media & Entertainment (2005-2009)



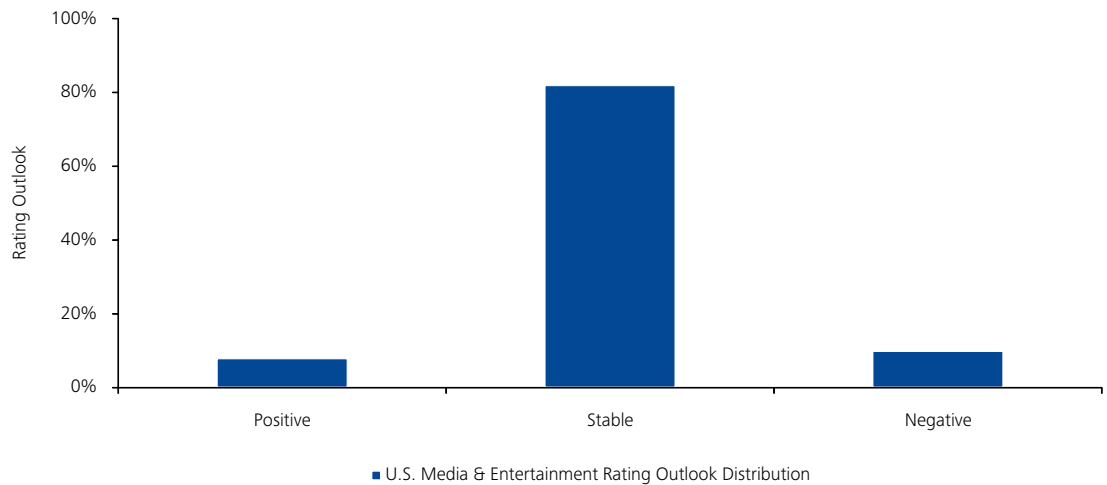
Source: Company Reports and Fitch Ratings

Exhibit 6.7: EBITDA Margin, Media & Entertainment (2005-2009)



Source: Company Reports and Fitch Ratings

Exhibit 6.8: Rating Outlook Distribution, Media & Entertainment



Source: Fitch Ratings

Looking at this financial performance, and the stability of M&E stocks in the midst of a deep economic recession, investors may still favor those firms that have demonstrated the capability to develop the same intangibles across multiple platforms or channels (TV, movies, information, music, games and theme parks) that appeal to a wide range of consumers. The ability to consistently convert intangibles into media that consumers will purchase, regardless of consumption device or platform, will clearly be an important competency going forward, as will the ability to do it more efficiently than one's peers.⁷ One key differentiator for leading firms is the ability to identify, develop and exploit franchises that provide ongoing revenue streams across multiple platforms.

People

The People category metrics consists of three metrics: *Consumer Power*, *Brand Disloyalty*, and *Returns to Talent*. These metrics measure the impact of technology, open public policy, and knowledge flows on consumers and talent.

Consumer Power⁸

The Consumer Power metric measures the value captured by consumers in their interaction with M&E companies. In

a world disrupted by the Big Shift, consumers continue to wrest more power from companies. The following M&E categories are included in this metric: broadcast T.V. news, newspaper, cable/satellite T.V., and magazine (highlighted in bold in the chart). This metric can be viewed in two ways: first, as an absolute measure of consumers' power with regard to companies' power (i.e., if the Consumer Power number for a consumer category is higher than 50, the consumer believes that he or she has more power in the relationship); or second, in a relative fashion by identifying in which categories consumers believe they possess more power in comparison to other categories.

Given Consumer Power is above 50 in all categories, it is clear that consumers consider themselves more powerful than the companies in the broadcast T.V. news, newspaper, cable/satellite T.V., search engine, and magazine categories. This sentiment supports the findings of other research⁹ and agrees with the observation that new technologies like the Internet, digital media, and mobile devices have democratized consumers' use of media and entertainment products.

A number of factors drive increasing Consumer Power in the M&E industry, including the sheer availability of information, content that consumers can now find on

7 Although one might argue that converting a script into a movie is no more difficult in principle than converting iron ore into steel, we believe that the likelihood of success in one case is far more uncertain than the other. In the iron ore case, one can develop processes that yield in a statistically-predictable fashion, and at a known price point, a certain amount of finished steel from a certain amount of iron ore. The more times the cycle is run, the better the predictability becomes. Clearly that is not the case with developing a movie, where inputs (screenplay, actors, etc.) and outputs will vary dramatically from cycle to cycle.

8 Consumer Power scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

9 Deloitte's State of the Media Democracy Survey, Third Edition.

Exhibit 6.9: Consumer Power by Category, Media & Entertainment (2008)

Consumer Category	Consumer Power
Search Engine	70.9
Snack Chip	70.7
Broadcast TV News	70.2
Banking	70.1
Restaurant	69.7
Soft Drink	69.5
Home Entertainment	69.1
Pain Reliever	69.0
Hotel	68.8
Magazine	68.8
Insurance (Home/Auto)	68.4
Computer	68.0
Automobile Manufacturer	67.3
Athletic Shoe	66.8
Department Store	66.3
Mass Retailer	65.9
Household Cleaner	65.9
Investment	65.8
Wireless Carrier	65.6
Grocery Store	65.5
Airline	65.4
Cable/Satellite TV	63.1
Gaming System	62.5
Gas Station	61.6
Shipping	61.3
Newspaper	54.0

Source: Deloitte Survey and Analysis

the Internet, and low switching costs from one source of digital entertainment to another.

In the past, M&E companies enjoyed a great degree of control over content distribution—control that is rapidly eroding. This shift in power has influenced M&E companies' behavior in profound ways. Some companies have responded to this increase in Consumer Power by attempting to control access to their content through

Exhibit 6.10: Brand Disloyalty by Category, Media & Entertainment (2008)

Consumer Category	Disloyalty
Hotel	70.1
Airline	69.9
Home Entertainment	69.0
Mass Retailer	68.0
Department Store	65.9
Grocery Store	63.6
Automobile Manufacturer	62.7
Computer	61.7
Cable/Satellite TV	61.4
Shipping	60.0
Gas Station	59.5
Restaurant	58.5
Insurance (Home/Auto)	57.8
Athletic Shoe	57.2
Wireless Carrier	56.5
Gaming System	55.3
Banking	54.6
Household Cleaner	54.5
Search Engine	53.4
Investment	53.3
Snack Chip	51.5
Pain Reliever	51.4
Broadcast TV News	49.4
Magazine	45.2
Newspaper	42.3
Soft Drink	40.9

Source: Deloitte Survey and Analysis

litigation, digital rights management systems, and “walled gardens.” Unfortunately, these tactics have often resulted in customer alienation and have created opportunities for competitors to enter the market.

Other companies have responded by raising the importance and visibility of industrial design in their consumer electronics to create demand for their attractive products. Others have focused on ease-of-use, convenience,

selection, or inclusion of candid customer reviews to differentiate themselves with increasingly powerful customers.

Brand Disloyalty¹⁰

The Brand Disloyalty metric is another measure of value captured by consumers. As we see from this metric, consumers report the greatest Brand Disloyalty in the M&E industry with regard to home entertainment equipment and their cable/satellite TV. service. Conversely, consumers report greatest brand loyalty to broadcast T.V./news, magazines and newspapers. In fact, consumers report that they would continue to buy specific magazines even if cheaper alternatives existed, and that, notwithstanding the recession, they would not consider switching their newspaper, magazines or broadcast T.V./news choices.¹¹ One likely explanation is that the customer appreciates the fact that the information is hard to get elsewhere and particularly targeted to them as these three categories are often limited in terms of geography or topic (e.g., broadcast news is designed for the geographic broadcast footprint). While the delivery channel is important for anytime-anywhere access of information and entertainment, consumers are more loyal to content.

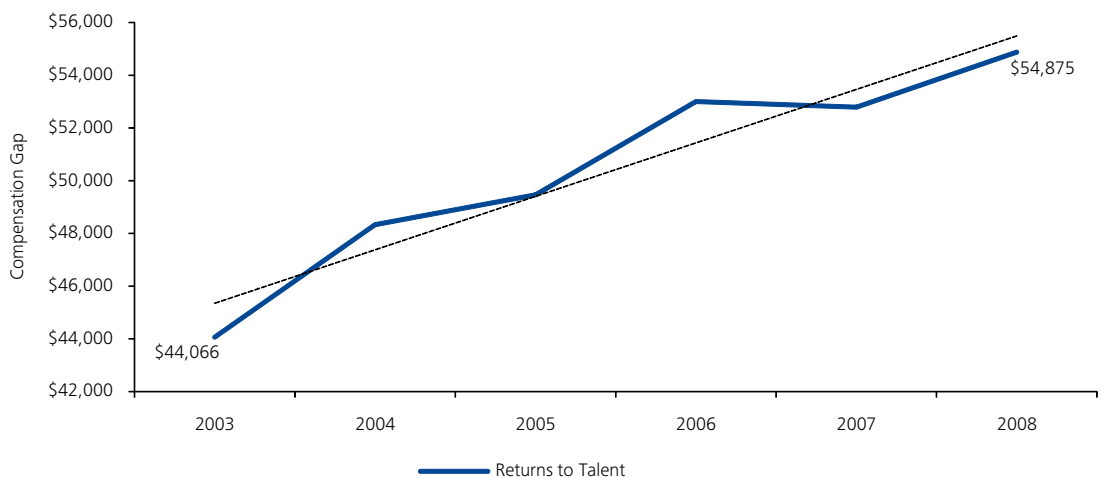
Returns to Talent¹²

The Return to Talent metric examines the differential in fully loaded compensation between the most and least creative professions. The metric is a proxy for the value captured by talent.

M&E is an unusual industry in that it involves creative talent in two capacities—both as an input and as an output. While the M&E industry requires creative people to help create the content, market it and monetize it, it also contends with talent as an output (the stars and personalities it helps to create). Accordingly, the Returns to Talent metric is especially important for the M&E industry.

Given the injection of new technologies like video editing software, music production technology, and new means of creating copy and art for advertising, demand for highly trained employees has risen, and job descriptions and roles have been evolving rapidly. There has also been a long term shift in M&E from simple salaries to participation in a project's success or failure. Furthermore, many M&E creative workers are members of unions, and as such do not feel particularly beholden to any one employer.

Exhibit 6.11: Returns to Talent, Media & Entertainment (2003-2008)



Source: US Census Bureau, Richard Florida's "The Rise of the Creative Class", Deloitte Analysis

10 Brand Disloyalty scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

11 This finding is also consistent with three years of data collected in Deloitte's State of the Media Democracy Survey. More than 70 percent of Media Democracy respondents, polled annually over the past three years, stated that they continue to read printed magazines, even though they know they can find the same information online.

12 Returns to Talent is defined as the compensation gap between the creative class and non-creative class as measured by data from the Bureau of Labor Statistics and categorized by Richard Florida's *Rise of the Creative Class*. For additional information on these metrics, please reference the Methodology section (see page 193).

While the compensation gap between most and least creative professions within M&E has increased for the past five years, this gap is less than the same gap for all U.S. workers except in 2006. In comparison, the compensation gap in Technology and Life Sciences industries has been consistently and significantly (over \$10,000) higher than that for the U.S. economy.

Flows

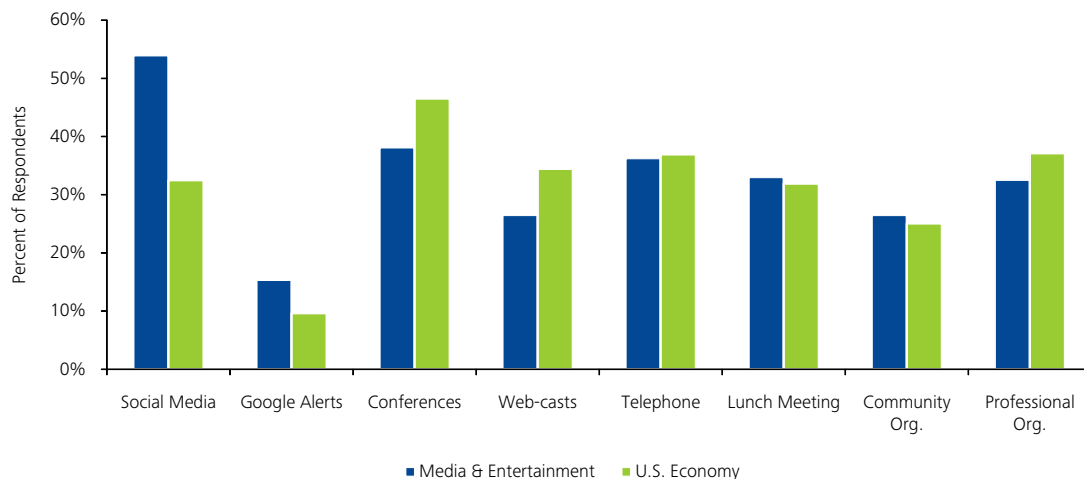
Knowledge flows—as opposed to knowledge stocks—are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access, whether in the form of copyrighted content like a cartoon character or unique knowledge about how to produce certain kinds of compelling media. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes, and the more challenging it is to sustain interest in a particular media property given the wide range of options competing for attention. In this world, success hinges on the ability to participate in an array of knowledge flows in order to rapidly refresh knowledge stocks.

For the Media and Entertainment industry, we highlight two relevant Flow metrics: *Inter-firm Knowledge Flows* and *Worker Passion*.

Inter-firm Knowledge Flows¹³

Our surveys found that most M&E workers are participating in Inter-firm Knowledge Flows. In an industry where popular interest in personalities and topics rises and falls unpredictably and tapping into the next “hit” topic is of paramount importance, it is no wonder that M&E workers rely on social media, Google alerts, and lunch meetings to keep up to date on what others know. Indeed, the use of social media tools like Twitter by celebrities such as actor Ashton Kutcher and musician John Mayer are well-documented in the popular media. Our analysis probably overlooks some important activities that facilitate knowledge flow and are unique to the industry. For instance, the many awards (and awards ceremonies) given for media and entertainment in all of its forms (Pulitzers, Oscars, Emmys, Grammys, etc.) provide clear insight into what the audiences value, which people are able to consistently deliver engaging content, what success looks like, and how others might emulate that success. This awards culture, and the almost obsessive industry analysis

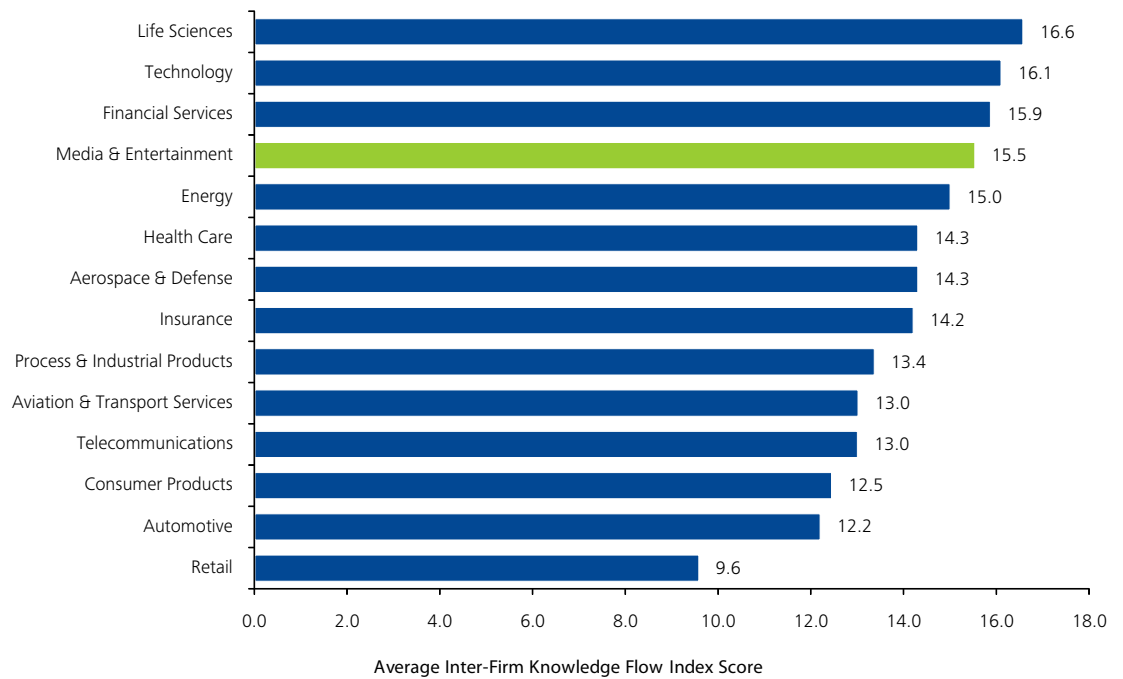
Exhibit 6.12: Participation in Inter-firm Knowledge Flows, Media & Entertainment (2008)



Source: Deloitte Survey and Analysis

13 Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion, which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 6.13: Inter-firm Knowledge Flow Index Score (2008)



Source: Deloitte Survey and Analysis

of why some people win them and some do not, is itself a vast inter-firm information flow that influences the strategies and behavior of others in the industry.

Blogs and newsletters also serve an important role in the M&E industry, providing breaking news as well as matching job opportunities with people with specific expertise. There is also a small community of consultants, lawyers and other service providers who are well-known within the various M&E sub-sectors for having significant experience dealing with Hollywood studios or advertising agencies or musicians, and who serve as a conduit for information flows. With the rapid changes in technology and the widespread impacts of digitization, workers in the M&E industry must not only stay informed, but must be able to turn information into insight by building on collective knowledge shared by several players of the ecosystem. Since M&E sub-sectors are often geographically concentrated (film in Hollywood and advertising in New York City, for instance), talent often moves from one firm

to another over the course of a career, enhancing inter-firm knowledge transfer.

As we noted previously, consumers are gaining the advantage by way of proliferating choices in content type, distribution platform, and pricing model. In this competitive M&E landscape, employees and other talent are similarly gaining advantage over their M&E employers in that the ability to create entertainment or to engage with an audience is increasingly in demand; this power is reflected primarily in higher wages. Given the importance of harnessing knowledge flows for creating value, it seems that consumers and workers alike have better figured out how to capitalize on knowledge flows than the firms themselves.

Media and entertainment firms clearly need to better understand, and more directly exploit, these knowledge flows. For instance, there is no reason why the companies themselves could not use social software (such as wikis,

14 The 2009 Deloitte Tribalization of Business Study indicates, for instance, that most enterprises route what they are learning from online communities and social media primarily through the corporate marketing function. Although the knowledge flows being acquired may also include insights relevant to customer service, product development, partner management and employee development, these functions typically have minor or attenuated access to the knowledge flows, significantly limiting the value that the firm can derive from them.

blogs and virtual communities) in broader, more relevant and better managed ways to tap into greater knowledge flows.¹⁴ If firms could better capture what customers thought was "great entertainment" through social media, they could reclaim some of the monetary value that they are currently sharing with the highly-paid creative professionals they employ. Management could then reward employees in ways other than cash compensation (e.g., by granting greater artistic freedom to produce better content) while enjoying lower wage expenses.

The fact that "creative" and "business" executives at M&E companies often exist in separate spheres only exacerbates the failure of the general enterprise to profit from knowledge flows. Through their own information flows, "creatives" continue to get smarter about how to create profitable entertainment, while the "business" leaders fall further behind in understanding how value is created at their companies because they typically tap into completely different knowledge flows to do their jobs.

Worker Passion¹⁵

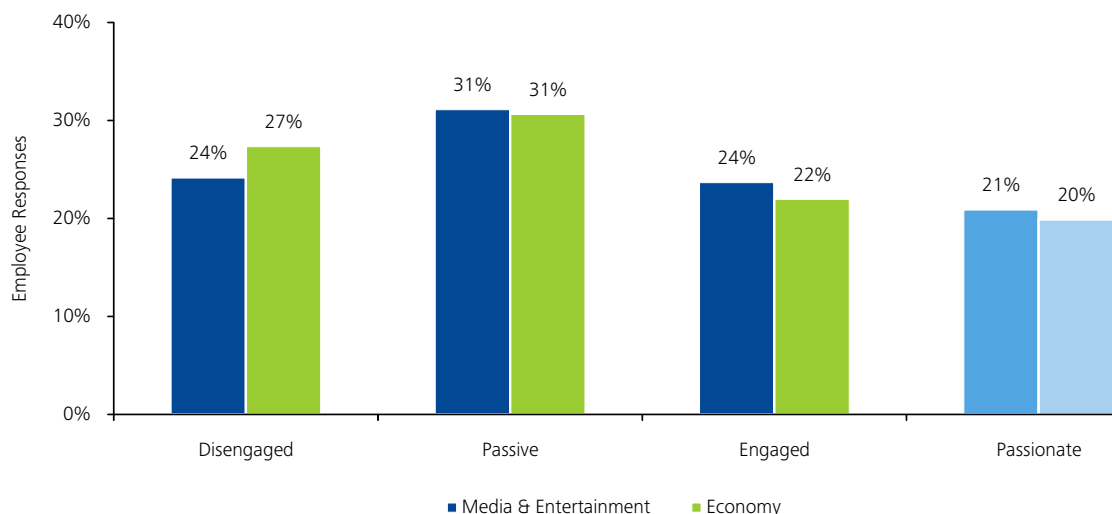
The Worker Passion metric measures the worker's level of engagement in the current job, but it is not differentiated among the major forms of employment. Working in

a union role, in a corporate support position or as a freelancer may provide very different levels of flexibility and satisfaction.

Employees in the M&E industry are more passionate about their jobs, and less disengaged with their jobs, than the typical American worker.¹⁶ This is bolstered by survey results that show markedly more M&E workers consider themselves in their dream job at their dream company than the rest of American society.

While it seems intuitive that workers in the M&E industry would be more passionate than the U.S. average, the differences are smaller than one would expect. Forty percent of M&E employees are in their dream job (compared to 32 percent across all industries), but only 29 percent are at their dream company (compared to 24 percent across industries). Overall, 80 percent of M&E employees reported being happy compared to 70 percent five years ago. However, M&E employees are less happy than employees in the rest of the economy, 85 percent of whom reported being happy in 2008 and 76 percent in 2003. One possible explanation is the technological changes and cost-cutting programs that are increasingly impacting roles which have experienced only minimal

Exhibit 6.14: Worker Passion, Media & Entertainment (2008)



Source: Deloitte Survey and Analysis

¹⁵ Worker Passion scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion, which measures how passionate employees are about their jobs. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

¹⁶ While M&E companies enjoy a relative advantage in Worker Passion when compared to other industries, absolute Worker Passion is notably low overall. Indeed, only 20 percent of American workers surveyed were passionate about their jobs. This highlights a significant opportunity for M&E companies to make relatively modest investments and to reap material increases in Worker Passion.

Exhibit 6.15: Survey Responses, Media & Entertainment (2008)

Which of the following statements best describes your current situation?		M&E		U.S.	
1	I'm currently in my dream job at my dream company	62	29%	765	24%
2	I'm currently in my dream job, but I'd rather be at a different company	23	11%	267	8%
3	I'm not currently in my dream job, but I'm happy with my company	87	40%	1,695	53%
4	I'm not currently in my dream job and I'm not happy at my company	43	20%	474	15%
		215		3,201	

Which of the following best describes your situation five years ago?		M&E		U.S.	
1	I was in my dream job at my dream company	58	27%	744	23%
2	I was in my dream job, but I wanted be at a different company	26	12%	277	9%
3	I was not in my dream job, but I was happy with my company	67	31%	1,358	42%
4	I was not in my dream job and I was not happy at my company	64	30%	822	26%
		215		3,201	

Source: Deloitte Survey and Analysis

change over the past many years. The finding that respondents were inclined to move to another company even if they presently had a “dream job” underscores worker mobility in the M&E industry and portends continued Inter-firm Knowledge Flows as these employees move about.

The passion of M&E workers for their jobs is an encouraging sign for the industry. Having employees who believe they are in their dream job is an enviable position for any employer; that almost a third of them are not enamored with their company (see above) is more disconcerting. Given the obvious importance of the “human element” in picking the next hit and transforming intangible ideas into elaborate products (e.g., movies, video games, and books), this data represents both an opportunity and a challenge for M&E companies. The companies that begin building programs to enhance knowledge exchange and concomitant employee development will likely improve their retention of these passionate, creative workers. We are already seeing evidence of this at some M&E companies where gifted employees are permitted to cycle through other functions and pursue further development internally

so that they do not seek greater development opportunities at a competitor.

The M&E industry has experienced significant technologically-driven change and increased competitiveness and suffered a steep decline in asset performance as a result. New devices, new platforms and new technologies have fundamentally changed the way consumers think about entertainment, changing both the nature of content as well as the ways in which it is consumed, and opening the doors to competition from outside the industry, including from consumers themselves. Significant opportunities await the companies that can discern, and exploit, these shifts. Augmented reality, 3-D enjoyment of video content, and networked virtual worlds arguably have the potential to engage millions or billions of new consumers, and drive new innovations, products, services and revenue opportunities. New technologies and social media permit potentially far more effective and targeted marketing practices, and brands have never had greater opportunities to interact with their present and future consumers than through social software and collaboration marketing.

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to the lack of data availability and inadequate data quality.

Metric Definitions and Sources¹⁷

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics (“BLS”)
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	Compustat
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	
	People	Consumer Power	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	
		Returns to Talent	Compensation gap between the Creative Class and Non-Creative Class	BLS; categorized by Richard Florida’s Rise of the Creative Class
Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate	
	Worker Passion	Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs		

¹⁷ For additional information on this metric, please reference the Methodology section (see page 193).

Return on Equity (Net income / Total Equity) has been included alongside ROA to add additional insights into the profitability of the industry.

Industry Definition: Media & Entertainment

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Media & Entertainment industry is no exception. With the help of industry experts, we divided this industry into seven sub-sectors: Advertising; Cable & Broadcasting; Electronic Information; Film & Entertainment; Films/Recreation; Publications & Print; and Recorded Music. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. These sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
Advertising	7310	Services - Advertising
	7311	Services - Advertising Agencies
Cable & Broadcasting	4832	Radio Broadcasting Stations
	4833	Television Broadcasting Stations
	4841	Cable & Other Pay Television
Electronic Information	7374	Services - Computer Processing & Data Services
Film & Entertainment	7812	Services - Motion Picture & Video Tape Production
	7819	Services - Allied to Motion Picture Production
	7822	Services - Motion Picture & Video Tape Distribution
	7829	Services - Allied to Motion Picture Distribution
Films/Recreation	7830	Services - Motion Pictures Theaters
Publications & Print	2711	Newspapers: Publishing or Printing
	2721	Periodicals: Publishing or Printing
	2731	Books: Publishing or Printing
	2732	Book Printing
	2741	Misc. Printing
	2750	Commercial Printing
	2761	Manifold Business Forms
	2780	Blank Books & Looseleaf
	2790	Self Service Industries for the Printing Trade
Recorded Music	3652	Phonograph Records & Prerecorded

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Retail

Stacy Janiak, Melissa Bishop, and David Cosloy

Innovating and diversifying to appeal to the ever-changing consumer

Executive Summary

Since 1965, the financial performance of the Retail industry,¹ as measured by average return on assets (ROA), has fallen 60 percent, from 6.6 to 3.1 percent, despite labor productivity increases that outpaced many other industries studied.

During the four-plus decades studied, technology affected this industry by modernizing the supply chain and introducing e-commerce. Technology has also been a key driver of the growing bargaining power of consumers. Technology-driven changes in Consumer Power and Brand Disloyalty have squeezed retailers, driving down performance even as consolidation within the industry has decreased Competitive Intensity.

In the Retail industry, the effective use of existing and emerging technologies has been and continues to be a differentiator. Technology affects almost all aspects of the industry, from designing and manufacturing products that are in demand, to moving products efficiently through the supply chain, to providing consumers with more ways to purchase goods (online, through mobile devices, etc.), to collecting and analyzing sales and consumer data and anticipating future behavior. Although retailers

are constantly challenged by the costs of investing in new technology, especially in economic downturns, not investing is not a viable choice. Most large retail organizations have recognized the benefits to be gained from technology, and as a result, investment in retail technologies has risen dramatically over the last decade, in many cases for the first time since the introduction and widespread adoption of the bar code scanner.²

However, it appears that the majority of these investments have been focused on increasing productivity. Perhaps in the rush to invest in productivity, some retailers have taken their eyes off the customer. The Retail industry has so far lagged in adopting customer-facing and business intelligence technologies, and the investments made have not always been accompanied by the managerial innovations needed to make them effective. Particularly with respect to data, which can be captured from dozens of sources (in-store devices, loyalty card transactions, etc.), few organizations have mastered the process of translating individual pieces of data into information, then transforming information into knowledge, or intelligence, and, finally, converting intelligence into superior performance and competitive advantage. Data will continue to present a challenge for retailers as the capacity

¹ The following sub-sectors were included in the Retail industry for this study: Mass Merchants, Department Stores, and Grocery Stores, among other sub-sectors. While these sub-sectors differ in some ways, they share many common characteristics. As such, this report will focus on overall Retail industry performance, citing examples from a variety of sub-sectors.

² Ingrid Seroppan, "Growth in Retail IT Spending Leaps to Nine Percent," AMR Research, March 18, 2004.

to store information grows. To be successful, retailers will need to refocus on technological investments to meet the needs of increasingly savvy consumers as well as capitalize on channels and data that allow for a more customer-centric approach.

With the rise of e-commerce giants like Amazon and widespread use of the Internet by consumers, the Retail industry faces new challenges to growth and profitability. The rationale for how and why people shop has morphed over the last few decades, and consumers have never had more choices, or information about their choices, than they do now. For the better part of the past forty years, retailers have relied on expanding their traditional asset base—stores, distribution networks and warehouses—as the basis for success. Even amid a flurry of M&A activities and real estate investments, retailers tended to focus on geographic expansion as a means of growth. This historical method of growth through the expansion of domestic stores no longer appears to be a sustainable strategy. U.S. markets have become saturated, and, as online channels gain momentum, even the concept of the “store” is not what it used to be. Recent data suggests that retailers can still successfully expand their presence; however, they will do it in new ways such as experimenting with different formats and channels that allow them the flexibility to change

direction and align their product and service offerings with specific consumers.

In an industry where success is measured by the ability to connect with the consumer, the Retail industry is a model for the relevance of analyzing the forces of the Big Shift. The intrinsic need for retailers to profitably do business, combined with the potential for harnessing technology to create business intelligence, will continue to complicate the retail environment over the next several years. In this report, in addition to industry performance, we will highlight emergent trends focused on improving ROA through diversification and innovation. There are trends we are seeing on the “edge” of this industry that are indicative of the changes we may soon see in the “core.” These trends range from capturing data points on the full shopping experience with in-store devices to operating multiple channels, concepts and formats targeted to specific customer segments in specific markets. Retailers need to find ways to engage relevant “edge” participants to discover early windows into the developments that will end up transforming the industry.

Markets

The Markets metrics measure the impact of new technological platforms, open public policy, and knowledge flows on market-level forces affecting retailers. For the Retail industry, this driver consists of two metrics: *Competitive Intensity* and *Labor Productivity*.

Competitive Intensity³

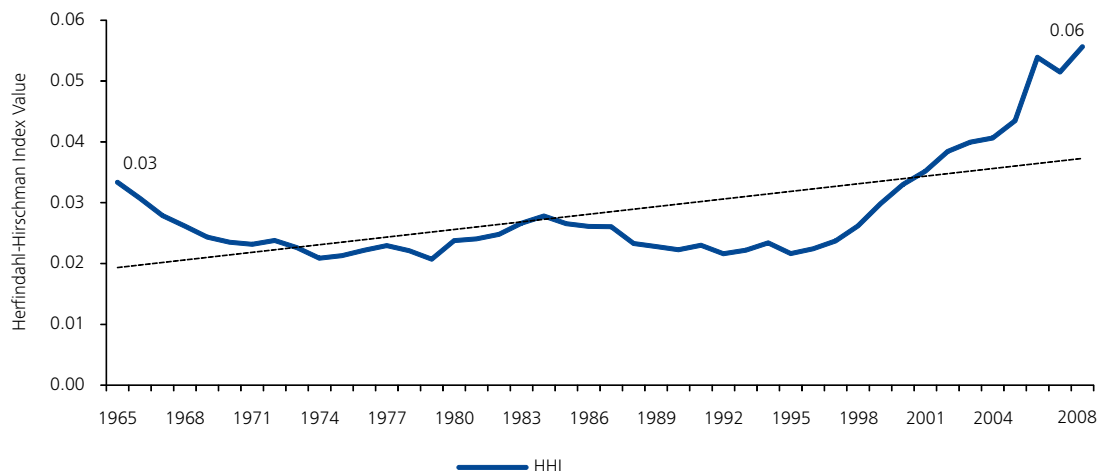
Over the period of 1965 to 2008, the Retail market has experienced significant consolidation (see Exhibit 7.1).

From 1965 through 1980, economic growth and suburban expansion fuelled an increase in the number of retailers. During this time, brick-and-mortar stores proliferated in response to the growth of cities and suburban areas. However, by the early 1980s the trend was in the opposite direction, as the industry became more concentrated. What caused the industry first to fragment and then to consolidate? This question can best perhaps be answered

by the rise of big-box retailers and, more specifically, by the remarkable rise of what is still today's retail Goliath: Walmart. Walmart began as a retailer in the late 1960s and early 1970s, bringing a wide variety of low-priced goods to rural areas; the underserved geographic edges that had been overlooked by the leading retailers of the day. As the company matured, it continued to focus on low prices and low costs while expanding its store locations. During the 1980s, the company began making supply chain innovations that enabled it to replenish goods from manufacturer to stores faster than most other retailers. Ultimately, Walmart established the most extensive distribution network in the U.S. as many other retailers struggled to remain competitive. The company remains perhaps the single most influential retailer in history.

Then, from 1990 to 1996, the industry experienced another period of increased competition, coinciding with the rise of the Internet. The Internet provided a means for smaller start-ups to connect directly with the consumer

Exhibit 7.1: Competitive Intensity, Retail (1965-2008)



Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

³ Competitive Intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

to provide goods and services, without requiring a large amount of capital to establish a robust supply chain. In 1997, Amazon became the first online retailer to reach one million customers.⁴ Amazon and other “dot-coms” transformed the industry’s traditional operating model by maintaining a low asset base. With only a distribution center and access to shipping capability online, retailers dedicated most resources to targeting customers and providing them with a unique and positive online experience.

Eventually, Amazon did expand its asset base by building a warehousing and order-fulfillment capability big enough to offer services to third-party sellers including large companies such as Target Corporation. Interestingly, Amazon leveraged Walmart’s expertise in logistics by hiring a number of key executives to build its infrastructure. While the dot-com success was relatively short-lived, the impact of online technology took hold in Retail. As Internet use became engrained into the daily lives of most Americans, established Retail players were forced to embrace the Internet as a new channel for marketing and

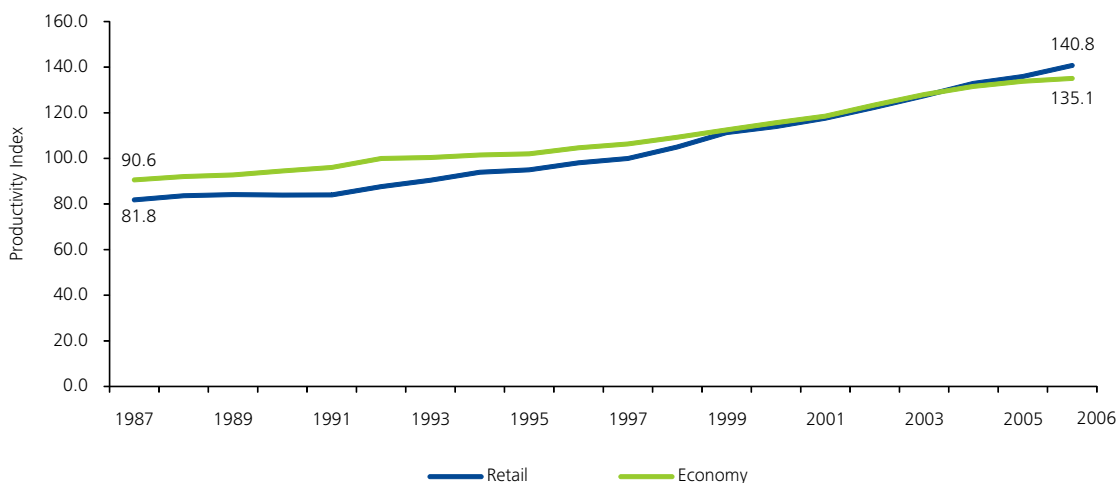
distributing goods to a more intelligent marketplace. The “multi-channel” concept took on greater significance as retailers developed different sales and distribution tactics for the different parts of their business—stores, catalog, online, etc.

The past decade has brought another period of consolidation in the Retail industry. Decreasing margins and an expanded competitive landscape forced weak performers out, and brought new players, including many non-U.S.-based companies, into the market. Most recently, the global economic recession has driven the increased elimination of retailers. With overall consumption down, retailers have been pressured to achieve wide-scale cost reduction; those unable to use technology effectively to combat shrinking margins have been acquired or have succumbed to bankruptcy.

Labor Productivity⁵

Labor productivity grew moderately in the Retail industry during the last two decades, reflecting technological innovations and growing pressure on firms to reduce costs

Exhibit 7.2: Labor Productivity, Retail (1987-2006)



Source: Bureau of Labor Statistics, Deloitte Analysis

- 4 “Amazon.com, Inc.,” Funding Universe, <<http://www.fundinguniverse.com/company-histories/Amazoncom-Inc-Company-History.html>>.
- 5 Labor productivity is defined by the Bureau of Labor Statistics as industry GDP/ labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

and maintain margins. Within the Retail industry, Labor Productivity grew at a rate of three percent compound annual growth rate (CAGR) from 1986 to 2006 (see Exhibit 7.2).

Underlying the industry's rapid advances in Labor Productivity were supply chain and point-of-sale innovations. "Smart" supply chain technologies enable companies to move items from production to point-of-sale quickly, and with greater accuracy, as intelligently configured systems allocate orders and shipments. Labor Productivity has also been bolstered by outsourcing, particularly for customer service operations and other routine processes that are not a retailer's desired core capability. The overseas migration of call centers has reduced the costs to manage such processes. This trend is likely to continue as retailers look for cost-savings measures in the face of fluctuating consumer demand.

Firms

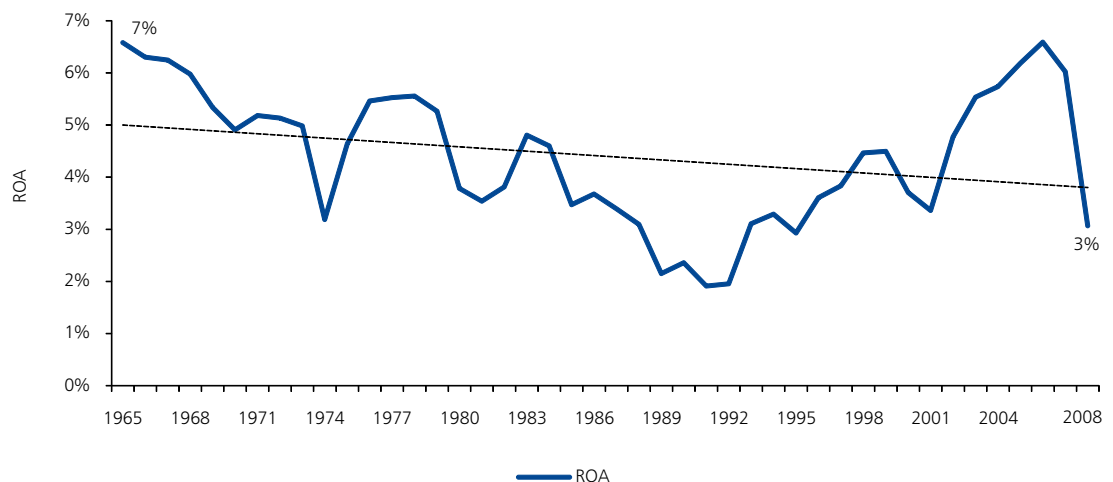
The Firms metrics measure the performance of companies in relation to the economy and compared to competitors within the same industry. This driver consists of three metrics: *Asset Profitability*, *ROA Performance Gap*, and *Firm Topple Rate*.

Asset Profitability⁶

From the 1960s to the early 1990s, many companies invested in brick-and-mortar stores as the basis for bringing their products to market. This coincided with the growth of suburban communities and the rise of the "shopping mall." To operate these expanded sets of stores, retailers established regional and national networks of warehouses and distribution centers. Perhaps to be expected, as they expanded their fleet of trucks, warehouses, stores, and inventory, the Retail industry experienced decreasing Asset Profitability (see Exhibit 7.3).

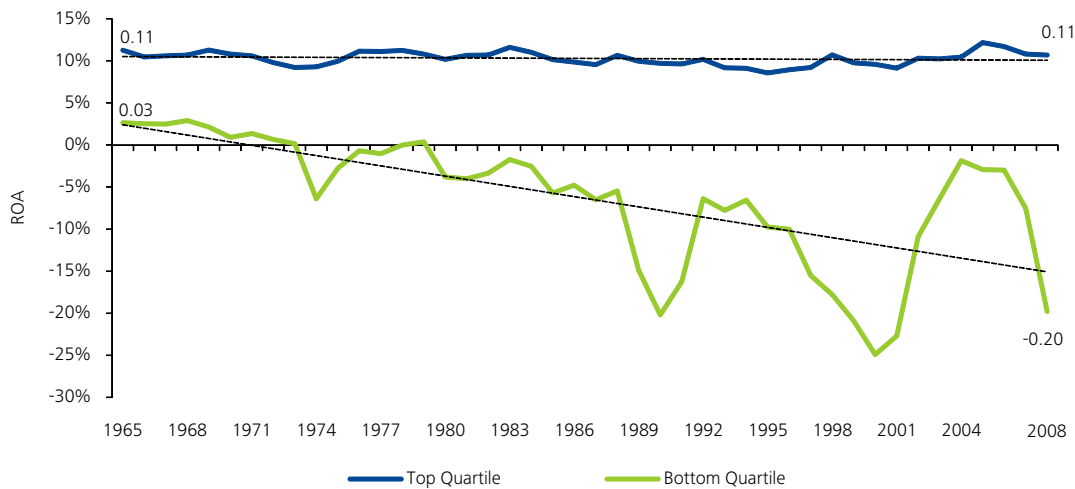
As described in the Markets section, the increasing accessibility of the Internet in the 1990s changed the Retail landscape. Although there were costs associated with the online channel (e.g., web and e-commerce technology, user experience measurements, fulfillment centers), the Internet did not require a company to greatly increase its existing asset base. Retailers could focus on a select number of strategically placed warehouses, which, along with a call center, could handle distribution, product returns, and customer issues. This strategy required fewer assets overall while also providing additional income, both of which increased ROA.

Exhibit 7.3: Asset Profitability, Retail (1965-2008)



⁶ Asset Profitability is defined as total return on assets (net income/total assets). For additional information on this metric, please reference the Methodology section (see page 193).

Source: Compustat, Deloitte Analysis

Exhibit 7.4: Asset Profitability Top and Bottom Quartiles, Retail (1965-2008)

Source: Compustat, Deloitte Analysis

Despite the moderate success of the industry during the 1990s and the success of specific individual retailers, average ROA in Retail has fallen from 6.6 percent to 3.1 percent from 1965 to 2008. Around 2006 before the global economic crisis, Retail ROA began a decline which sharpened in 2007. Decreasing net income and increasing total assets drove the decline. In response to a seemingly endless economic boom, retailers reverted back to traditional expansion methods (e.g., stores), even while competition led to decreasing sales. During this period, a few large retailers also focused on expanding overseas in developing markets. While the opportunity for growth in these markets is real, retailers perhaps neglected the need to make domestic operations more productive and profitable.

ROA Performance Gap⁷

The Retail industry as a whole is experiencing declining ROA; however, bottom performers are deteriorating at a much faster rate and thus driving the overall ROA Performance Gap. The ROA for top performers is relatively steady (see Exhibit 7.4). While there may be exceptions, it appears that bottom performers have not been able to reengineer and bounce back, but have rather worsened over time and ultimately failed. The recent economic crisis compounded problems for the bottom-performing retailers; however, the causes of poor performance were likely present before the recession hit. In many cases, these performance issues can be traced back to a lack of innovation and diversification, two traits necessary to succeed in today's Retail market.

⁷ ROA Performance Gap is defined as the gap in return on assets between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

Firm Topple Rate⁸

Top performers are not immune to changes in position in the Retail industry. The Firm Topple Rate has increased nearly 30 percent from 1965 to 2008 (see Exhibit 7.5). This metric indicates that leaders, once they reach the top quartile, are not maintaining their leadership.

One reason for the increasing topple rate has to do with a grim reality in the Retail industry: consumers are fickle. What they choose to buy, especially as it pertains to non-necessity purchases, is difficult to predict. What constitutes a “trend” and what is “in” is heavily subjective, not to mention personal, and there is an abundance of styles and choices available. Unlike some other industries, Retail is often more art than science. That said, some retailers manage to remain at the forefront of the industry by focusing on innovation (in approach, format, process, technology, etc.) and diversification from traditional channels.

Will their innovations drive down the topple rate in the Retail industry? Only time will tell.

People

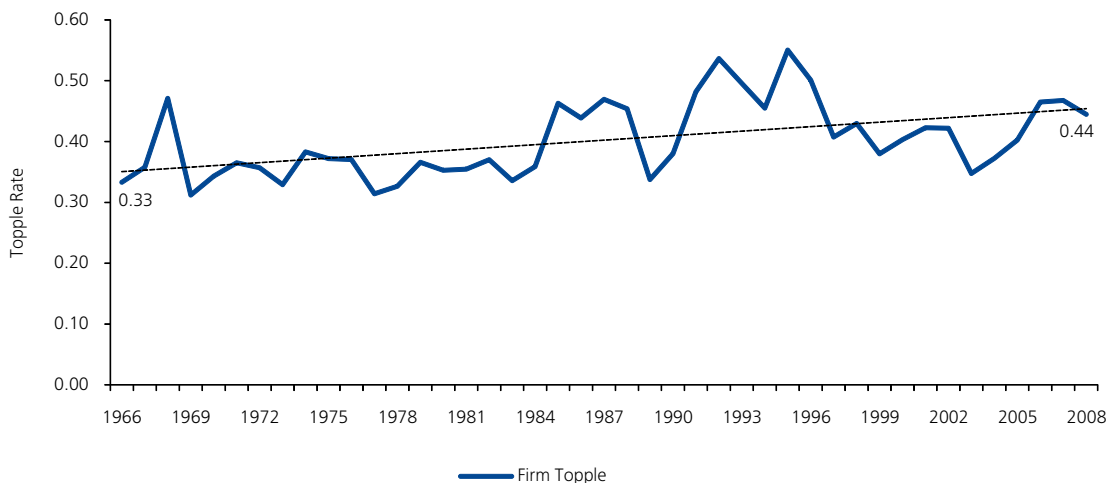
The People category for the Retail industry consists of two metrics: *Consumer Power* and *Brand Disloyalty*. These metrics reflect the growing power of consumers and the declining influence of brands.

Consumer Power⁹

The Consumer Power metric measures the value captured by consumers. In a world disrupted by Big Shift forces, consumers continue to wrestle more value from retailers, and predicting consumer behavior is becoming increasingly difficult. Thanks to the Internet, consumers can shop globally and have a wider choice of and information about vendors, products, and services (see Exhibit 7.6), as well as lower switching costs. This proliferation of choices for the consumer is leaving retailers with a weaker grasp of customer needs.

Because of this proliferation of choices, it is harder for retailers today to meet customer demand and retain customers while keeping them brand loyal. Some companies are making strides to become more relevant to their consumers, whether by trying to better understand

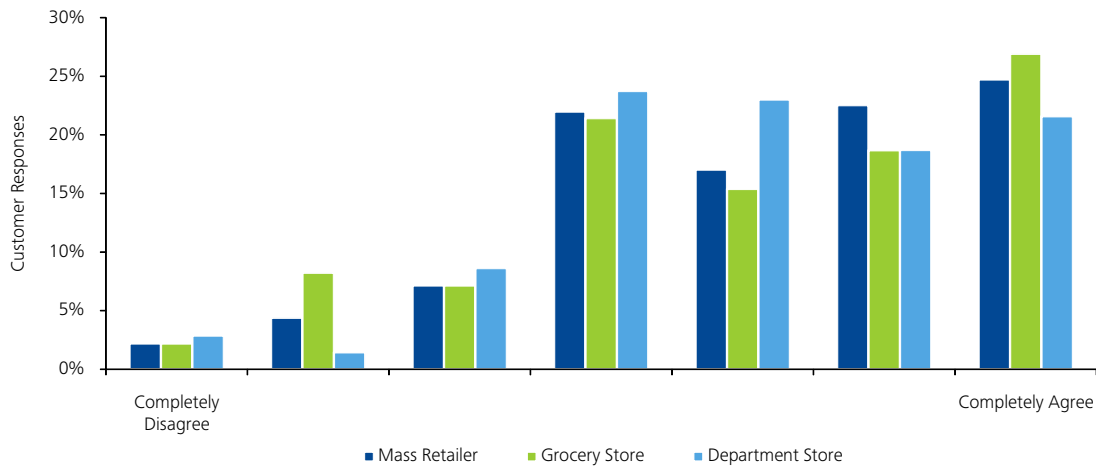
Exhibit 7.5: Firm Topple, Retail (1966-2008)



Source: Compustat, Deloitte Analysis

8 Firm Topple Rate is defined as the annual rank shuffling amongst firms. For additional information on this metric, please reference the Methodology section (see page 193).

9 Consumer Power scores were calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

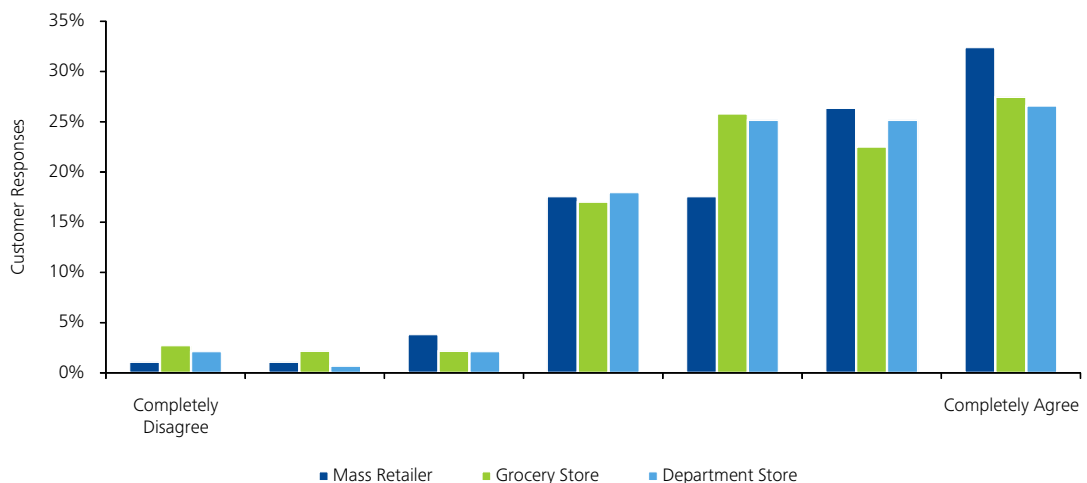
Exhibit 7.6: Customer Responses to “There are a lot more choices now in the category than there used to be,” Retail (2008)

Source: Deloitte Survey and Analysis

their needs through the analysis of purchase data, or adapting store formats to suit a specific consumer segment. A top 100 retailer, for example, is engaged in multiple initiatives to better serve the local demographic and gain more control over the often transitory consumer. They are reformatting stores to cater to a more affluent clientele, reworking their product mix, creating stores that better meet the needs of minority populations and, finally, experimenting with a store design more suitable for urban areas—building up rather than out.

Ideally, retailers should help generate the preferences of their customers, using marketing messages to influence

and trigger excitement about what they buy. Unfortunately, retailers often fail at getting their messages across to customers. They fail to communicate the tangible benefits of a product, and the consumer is left disinterested or confused, waiting for the simple message that causes the consumer to say, “I want this product from this retailer.” In this regard, real-time customer data and customer loyalty programs are important for retailers trying to analyze, understand, and predict consumer behavior. By recognizing that a good deal more could be done to improve, online and in-store retailers still have the potential to rein in the ever-more-powerful consumer.

Exhibit 7.7: Customer Responses to “I have tried other brands in the past and am willing to try new brands going forward,” Retail (2008)

Source: Deloitte Survey and Analysis

Brand Disloyalty¹⁰

There is less loyalty to retailers' brands today (see Exhibit 7.7). Historically, consumers relied on the retailer's brand as their greatest signal of quality; however, with the abundance of information available today, consumers are less dependent on brand as the signifier of quality.

Consumers can get information about quality and service, as well as product reviews and product/price comparisons, from a myriad of websites. New forms of "social search" even allow consumers to poll their social network for recommendations and reviews.

Some retailers are exploring ways to use technology and new information sources to reach specific types of customers. Younger generations, for example, may respond well to connecting via iPhone applications. According to an article in the *Wise Marketer*, "Brands are hardly keeping up with consumer expectations now, and every day consumers are adopting and devouring the latest technologies and innovations, hungry for more. The smart marketers of 2010 will identify and capitalize on unmet expectations, and those brands that understand where the strongest expectations are will be the ones that survive and prosper, recession or otherwise. Also, social

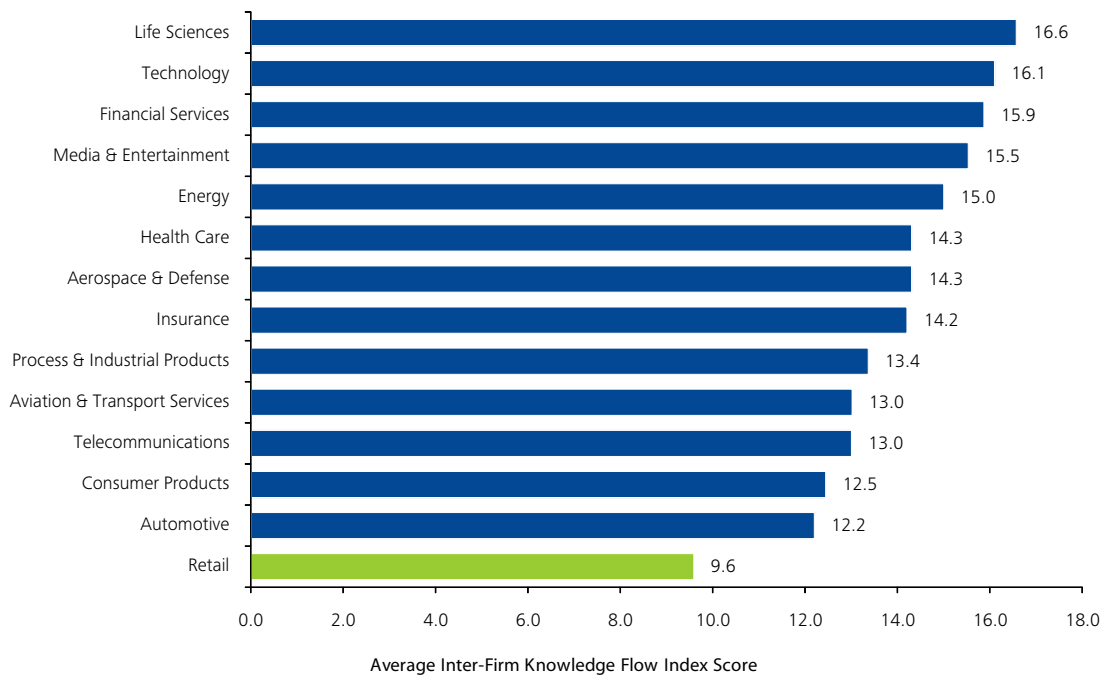
networking and the free exchange of information outside of the brand space can only increase. Expect more web sites using Facebook Connect to share information, and more companies becoming active members of LinkedIn, and you can expect Twitter users to spend more money online than those who don't tweet."¹¹

Flows

Knowledge flows, which occur in any environment where learning and collaboration can take place, are quickly becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks, proprietary resources that no one else could access. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes. In today's environment, success may hinge on the ability to participate in a growing array of knowledge flows in order to rapidly refresh your knowledge stocks. The Flows category for the Retail industry consists of two metrics: *Inter-firm Knowledge Flows* and *Worker Passion*.

¹⁰ Brand Disloyalty scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

¹¹ "Ten Brand & Marketing Trends for 2010," *Wise Marketer*, October 5, 2009.

Exhibit 7.8: Inter-firm Knowledge Flow Index Score, Retail (2008)

Source: Deloitte Survey and Analysis

Inter-firm Knowledge Flows¹²

In a survey of employees at various organizational levels from store employees to corporate executives, Retail ranked last out of all U.S. industries evaluated for average participation in Inter-firm Knowledge Flows (see Exhibit 7.8). While the Retail industry has large trade groups that promote activities in the industry, we can only speculate why Retail still lags in Inter-firm Knowledge Flows (see Exhibit 7.9).

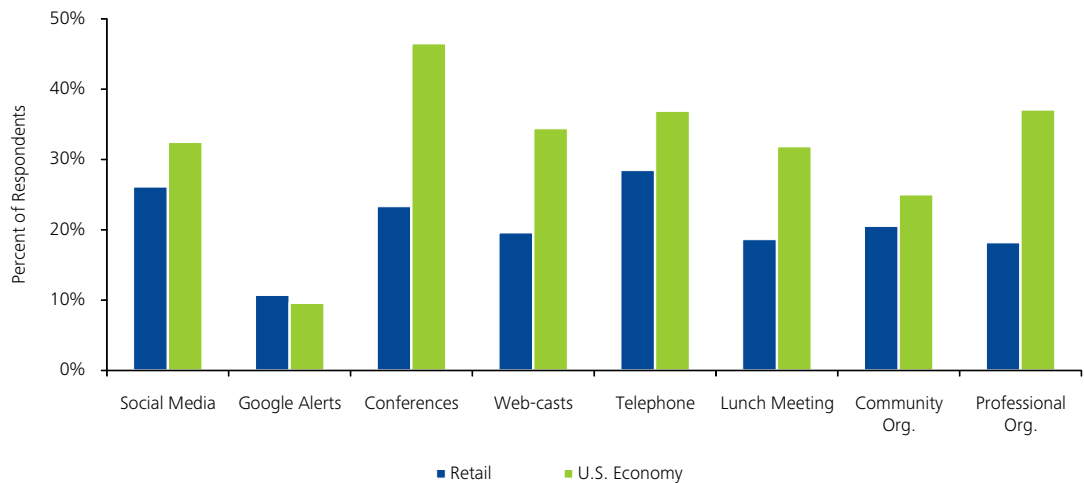
One explanation is that retailers believe that proprietary resources offer a competitive advantage which could be compromised should retailers share more openly. Perhaps it is also because retailers tend to focus tactically—displaying and moving seasonal inventory—and otherwise running the business. Therefore, they may not have the time or inclination to interact with other retailers to leverage best practices or brainstorm strategies.

With so many reasons not to participate in Inter-firm Knowledge Flows, why should retailers reconsider? They might be missing out. Consider the employee exchange program between Google and Procter & Gamble (P&G).¹³ This example suggests that there is a unique benefit to knowledge flows and, ultimately, financial benefits to be gained from the exchange of information among companies in related industries. Although retailers may have valid objections to knowledge flows among direct retail competitors, retailers can still benefit from finding other organizations, including going outside the industry, to engage in knowledge-sharing activities. The key is to find an organization that is a leader in its own industry and has relevant knowledge to share.

For Google and P&G, the idea of the employee swap gained momentum when P&G's then global marketing officer expressed concern that one of the biggest initiatives

¹² Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

¹³ Ellen Byron, "A New Odd Couple: Google, P&G Swap Workers to Spur Innovation," Wall Street Journal, November 19, 2008.

Exhibit 7.9: Participation in Inter-firm Knowledge Flows, Retail (2008)

Source: Deloitte Survey and Analysis

in the company's laundry-soap history—a switch to smaller bottles with a more concentrated formula—did not include enough of an online search-term marketing campaign. Google data revealed that online searches for the word “coupons” rose about 50 percent in a 12-month period. For Google, the team expects to learn from P&G about the importance of disciplined processes and consumer insights. Finally, Google job-swappers have started adopting P&G's lingo; that is, product packaging first needs to “stop” a shopper, “hold” the shopper long enough to read the label, and “close” by getting the shopper to put the product in the cart.

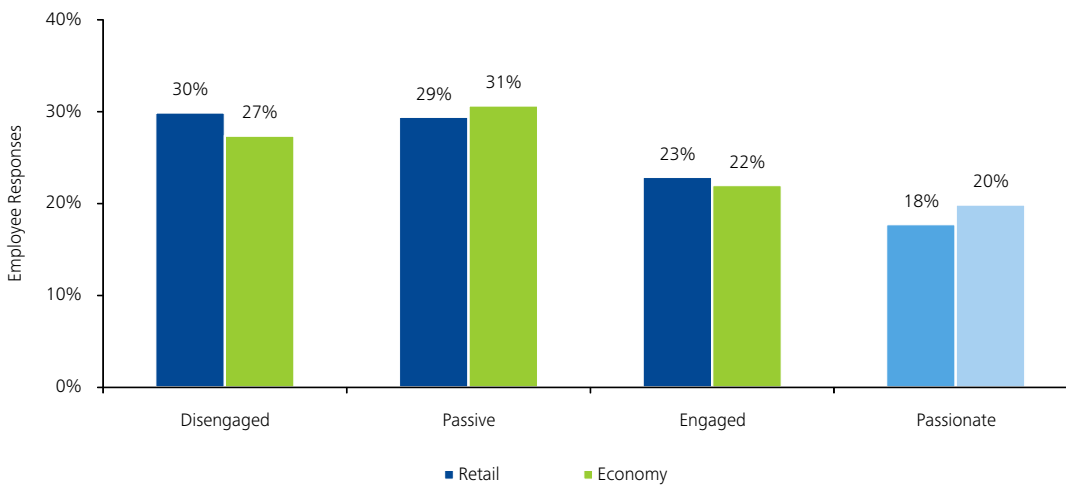
As firms compete for new ways to deliver value, they will increasingly need to weave the customer into every facet of experience creation. Firms that confront and overcome their own hidden assumptions, or that develop means by which they make a profit, by bringing in outsiders who look at the world in a very different way, may find unsuspected insight into their customers.

Worker Passion¹⁴

Employees are the greatest asset and revenue generator for retailers, but they also are one of the largest operating expenses.

Talent has a significant impact on retail performance, and programs are in place to increase returns from talent. For retailers, employee attraction, retention and development are among their greatest issues. Turnover in the sector remains very high, especially when compared to other industries. Many retailers have adopted programs to identify store personnel who have a high potential and could transition to leadership roles. It is increasingly important to attract the right folks who can lead the company long term, match people's unique backgrounds and interests to the company's focus and jobs needs, and ensure that individual employee's needs are recognized. Perhaps a larger concern for retailers is the percentage of employees who are not engaged in their jobs (see Exhibit 7.10). Increasingly workers want to make their passions their professions and the firms that succeed will be those that can instill and amplify the passion of their employees. Employee disengagement is dangerous for a retailer as the customer conversion rate will certainly go down with disengaged employees.

¹⁴ Worker Passion scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion, which measures how passionate employees are about their jobs. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 7.10: Worker Passion, Retail (2008)

Source: Deloitte Survey and Analysis

While many companies focus their efforts on improving engagement amongst the creative talent, they must not lose sight of their non-creative talent. Companies should look for ways to increase participation in knowledge flows and improve worker passion across both of these categories of employees alike, as employees within all levels of the organization can fuel efficiency and innovation and improve financial performance.

Too often, customers report being told what they wanted could not be done rather than obtaining a potential solution for how it could be done. If they receive friendly and helpful customer service, customers will likely return.¹⁵ Companies seeking to engage the workforce can align rewards and recognition to motivate employees, as well as offer training that will help employees serve the customer and ultimately receive career advancement opportunities.

However, even the most motivated employees will not be enough if employees are not actually empowered to serve the customer. Policies and processes must support employees' relationships with the customer. Focusing on quality of product and service rather than price will

ultimately increase customer satisfaction more than a promotion. Employees and customers will benefit from involving their best customers to improve the business experience.

Technological advances and the widespread use of the Internet have shifted customer beliefs and behavior, and the Retail industry has not always kept pace. Asset Profitability has declined even as the industry has experienced significant consolidation. The ubiquity of e-commerce and the increasing power of the consumer to choose among a vast array of alternatives will continue to complicate the retail environment, challenging growth and profitability over the next several years. The retailers that successfully expand their presence will do it in new ways: experimenting with different formats and channels that allow them the flexibility to change direction and align their product and service offerings with specific consumers. In an industry where success is measured by the ability to connect with the consumer, retailers must do more to harness technology, generating business intelligence out of customer and product vendor interactions to create value.

¹⁵ Customer service representatives would be included in the "non-creative class" based on Richard Florida's definitions.

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to the lack of data availability and inadequate data quality.

Metric Definitions and Sources¹⁶

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics ("BLS")
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	Compustat
		ROA Performance Gap	Gap in return on assets (ROA) between firms in the top and bottom quartiles	
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms	
	People	Consumer Power	Calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
Executive Turnover		Measures executive attrition rates as reported by Liberum Research	Liberum Research Management Change	
Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate	
	Worker Passion	Calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion which measures how passionate employees were about their jobs		

¹⁶ For additional information on these metrics, please reference the Methodology section (see page 193).

Industry Definition: Retail

The Retail industry includes companies within a grouping of Standard Industrial Classification codes (“SIC”) as outlined below:

Sub-sector	SIC Code	SIC Description
Retail	5200	Retail - Building Materials, Hardware, Garden Supply
	5211	Retail - Lumber & Other Building Materials Dealers
	5271	Retail - Mobile Home Dealers
	5311	Retail - Department Stores
	5331	Retail - Variety Stores
	5399	Retail - Misc. General Merchandise Stores
	5400	Retail - Food Stores
	5411	Retail - Grocery Stores
	5500	Retail - Auto Dealers
	5531	Retail - Auto & Home Supply Stores
	5600	Retail - Apparel & Accessories Stores
	5621	Retail - Women's Clothing Stores
	5651	Retail - Family Clothing Stores
	5661	Retail - Shoe Stores
	5700	Retail - Home Furniture, Furnishings & Equipment Stores
	5712	Retail - Other
	5731	Retail - Radio, TV & Consumer Products Stores
	5734	Retail - Computer & Computer Software Stores
	5735	Retail - Record & Pre-recorded Tape Stores
	5900	Retail - Misc. Retail
	5912	Retail - Drug Stores and Proprietary Stores
	5940	Retail - Misc. Shopping Goods Stores
	5944	Retail - Jewelry Stores
	5945	Retail - Hobby, Toy, & Game Shops
	5960	Retail - Non-store Retailers
	5961	Retail - Catalog & Mail-Order Houses
	5990	Retail - Retail Stores, NEC

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Technology

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Realizing the power of innovation, change, and connectivity

Executive Summary

The Technology industry¹ has long been a dominant source of innovation and inspiration in the U.S. economy. From 1965 through 2008 the industry has grown from \$9.8 billion in annual revenues to over \$1.3 trillion (with a CAGR of over 12 percent). Throughout that period, businesses and consumers have benefited from exponential improvements in computing power, bandwidth, storage, and software enablers that drive today's real-time search, global connectivity, and automation of the world's most complex processes.

Yet the rapid growth in technology revenues has coincided with even greater growth in the underlying assets. As a result, return on assets (ROA) for the Technology industry as a whole has declined nearly 70 percent from 9.8 percent to 3.3 percent between 1965 and 2008 despite significant gains in Labor Productivity.

More than in any other industry, the innovative spirit of entrepreneurs has sparked continuous advancement, while venture capital funding has provided the means to build ideas into businesses. From 1995 to 2008, the Technology industry received between 20 to 40 percent of

all annual venture capital investments (in terms of dollars and number of transactions), which is significantly more than any other industry.² The successful ventures have been richly rewarded as the Technology industry had the highest number of venture-backed M&A transactions and initial public offerings (IPOs).

As a result, a virtuous cycle exists: entrepreneurs and investors strive to add value and create wealth by developing technologies, and businesses and consumers benefit from continued technological advancements. Throughout this cycle, the industry, investor and influencer ecosystems create value in advance of profits. However, as the Technology industry and companies within it continue to evolve, they are not immune to the Big Shift forces that must be addressed if the industry itself is going to sustain growth and prosperity.

- Over the last decade, industry players have struggled to deliver against the requisite scale of near-term revenue and earnings expectations through organic activities alone. Many have augmented organic growth with costly acquisitions. In addition, when companies have been unable to elevate investor expectations of the future, they have engaged in share buy-backs. Neither of these

¹ The following sub-sectors were included in Technology industry for this study: Software Publishing, Internet Service Providers, Search Engines, Semiconductor & Circuit Manufacturing, Circuit Board & Electronic Component Manufacturing, Recordable Media Manufacturing

² PricewaterhouseCoopers/National Venture Capital Association, *MoneyTree™ Report Data*: (New York: Thomson Reuters, 2009).

activities has generated sustainable returns in excess of the underlying asset base.

- The quest for riches drives competition; Competitive Intensity in the Technology industry has magnified over five-fold from 1965 to 2008.
- Competition creates churn that has amplified the gap between winners and losers, resulting in high Firm Topple Rates.
- While the Technology industry has benefited from the highest Labor Productivity gains in the U.S. (CAGR of 19.4 percent from 1987 to 2006), it is also burdened with the largest gap in Returns to Talent—the difference between the highest and lowest paid employees.

Despite paying a premium for talent, executive turnover in the Technology industry is roughly three times that of the broader economy. Furthermore, 30 percent of employees in the industry say they are disengaged with their current jobs, a figure which is 10 percent higher than that for the overall U.S. economy.

So, what is an industry with declining returns, intense competition, and a costly but disengaged work force with high turnover to do in order to maintain its allure as the

hotbed for growth, innovations and productivity? While there is not a single solution to the challenges, this report profiles the evolving forces shaping the Technology industry and highlights opportunities for technology companies to enhance their prosperity by applying necessary innovations to their own business models, including:

- Leverage the increasing pervasiveness and performance of the digital infrastructure to further enhance internal efficiency, but more importantly exploit scalable collaboration networks that extend far beyond a company's own four walls.
- Augment the creation of enormous data warehouses that maintain exponentially increasing amounts of data by developing architectures that support the flow of knowledge.
- Create environments where performance improvement accelerates as more participants join, and reduce the dependence on internal assets by creating platforms for 3rd parties to play complementary roles in expanding markets and accelerating product development cycle times (e.g., consider the multitude of applications created on top of the iPhone).

Markets

The Markets metrics reflect the market-level impact of Big Shift trends. Exponential improvements in the core digital infrastructure, continuous focus on innovation, low barriers to entry, and the globalization of business models and talent have led to a steady increase in competitive intensity, labor productivity, and stock price volatility in the Technology industry. We highlight two metrics for the Technology industry: *Competitive Intensity* and *Labor Productivity*.

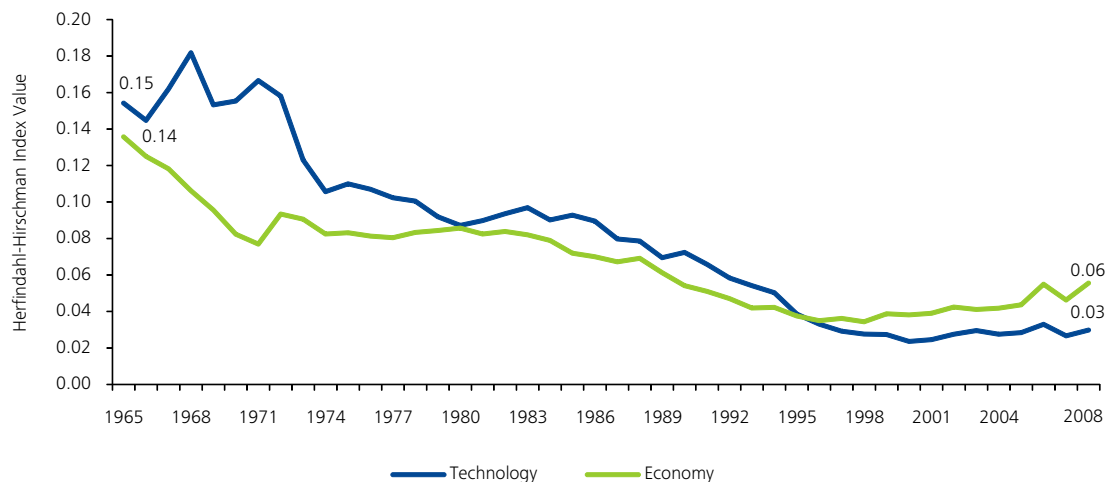
Competitive Intensity³

Competitive intensity within the Technology industry has magnified over five-fold from 1965 to 2008 and is 86 percent greater than in the rest of the economy in 2008.

The constant stream of technology-focused entrepreneurs and venture investments fuel growth and product and

service innovation. Once an advantage is obtained, it may be short-lived, as other firms and venture funding pursue efforts to develop even better technology.⁴ In the early 1980s, venture capital played a pivotal role in the evolution of the Technology industry. Fast forward to 2009 and venture capital continues to be a driving force in the Technology industry as today, eight out of 10 people employed in the software development industry work for companies with venture-backed roots.⁵ Venture capital continues to be a driving force in the Technology industry. Technology industry competition increased when the move from proprietary to open architecture standards allowed companies to compete horizontally across technology stacks. Today, increasing access to data, voice, and video on any device, anywhere, with seamless transition across networks continues to drive change and growth. New technology-driven business models are enabling companies like Apple, Google, Microsoft, and Facebook to capture a significant share of incremental communication and media

Exhibit 8.1: Competitive Intensity, Technology (1965-2008)



3 Competitive Intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in sector concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

4 Charles A Fine, *Clock Speed*, (Cambridge: Perseus Publishing, 1998).

5 "Venture Impact: The Economic Importance of Venture-Backed Companies in the U.S.," Global Insight, 5th Edition, 2009.

Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

revenues. Similarly there is an increasing “blurring of the lines” in the industry as non-traditional players and start-up companies enter the industry, create disruption, and increase customer choice and buying power.

No other industry so clearly demonstrates the value of innovation combined with the effects of low barriers to entry. In just 10 years, Google has grown from a concept to the world’s seventh most valued brand,⁶ with \$21.8 billion in 2008 revenues and \$175 billion in market capitalization at the time of print. Non-tech industry stalwarts like DuPont and Caterpillar, each with decades-long histories of success, have market caps of only \$36 billion and \$30 billion, respectively.

Yet just when it appeared Google would bury its competitors and expand its dominance into new markets, Microsoft launched a new search engine, Bing, and has begun to recapture market share. At the same time, Cuil (a search engine founded by a former Google employee), announced a new technique that enables search and indexing at three times the number of sites Google can, at a fraction of the cost.

The story is similar across all Technology sub-sectors. Companies must grow via reinvention or other means of expansion, or languish and fade away. As industry veterans

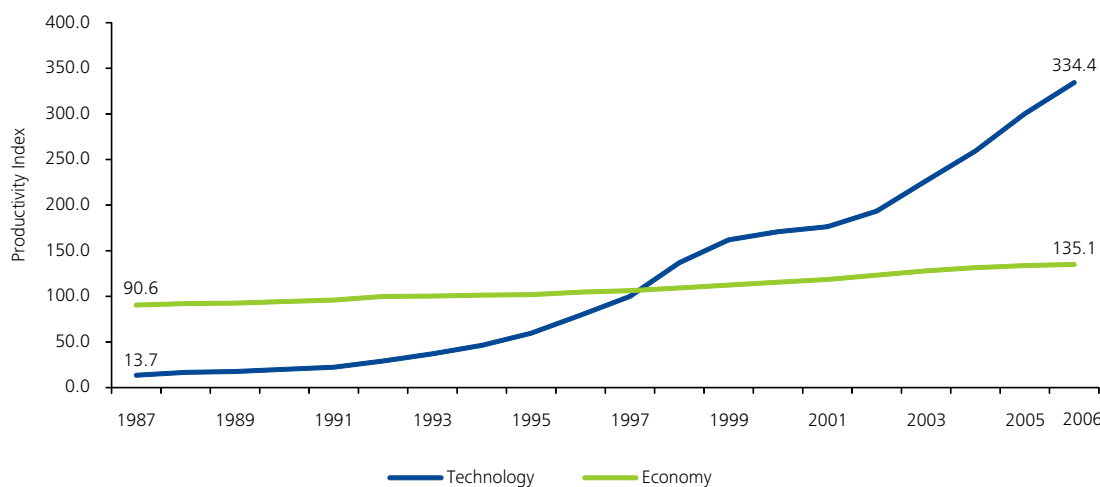
like Sun Microsystems fade, newer players like VMware rise. Oracle and IBM have evolved and prospered through a constant stream of acquisitions that extend their reach into new revenue pools. Apple, on the other hand, has organically reinvented itself. Over the last five years Apple has grown revenues from \$8.3 billion to \$34.5 billion, and its market capitalization has increased by nearly 850 percent during that time period. As such, there is no single path to success but rather multiple paths all based on the need to evolve and grow amidst the ever-more-competitive landscape.

Labor Productivity⁷

The Technology industry has delivered significant labor productivity improvement over the past two decades. From 1987 to 2006, Labor Productivity within the Technology industry grew at a 19.4 percent CAGR, leading all other industries in the U.S. The metric might even understate the true improvements in productivity because it does not capture the increasing performance consumers receive at the same price. For example, today’s technology products have exponentially higher capabilities than they did just five years ago, at a fraction of the cost.

While technology has enabled automation and interoperability, overall, Labor Productivity improvements in the industry are not just a function of using more

Exhibit 8.2: Labor Productivity, Technology (1987-2006)



Source: Bureau of Labor Statistics, Deloitte Analysis

⁶ “Best Global Brands,” Business Week, September 28, 2009

⁷ Labor Productivity is defined by the Bureau of Labor Statistics as industry GDP/labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

technology to do every day jobs. Process redesign and innovative approaches are driving major improvements in Labor Productivity.

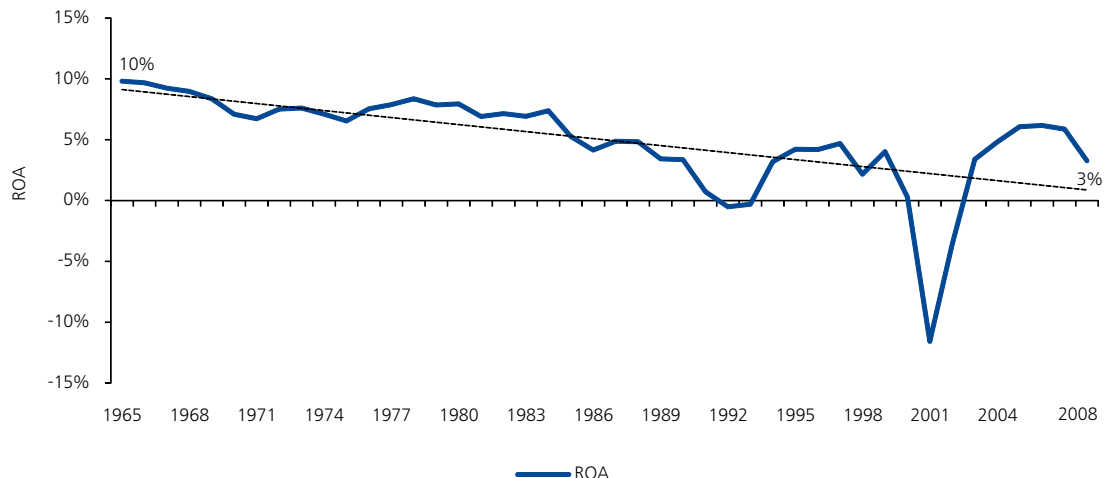
Intensifying competition seems to be a driving force for institutional innovation to improve efficiency and effectiveness. Productivity in the semiconductor industry increased as a result of shorter product lifecycles coupled with accelerated performance improvement in the average chip sold. Increasing the frequency of chip releases was a management response to both increasing Competitive Intensity and technological improvements in the complementary industries (e.g., Computer and Consumer Electronics Manufacturers).⁸

Technology companies are using collaboration with customers and other partners to advance Labor Productivity while increasing the pace of customer-valued innovation. By establishing platforms—creation spaces—where employees are able to collaborate and co-develop with participants outside the firm, companies can mitigate the cost of internal labor by leveraging insights and ideas from others and also accelerate throughput with real-time information exchange and closed-loop feedback. SAP

Developers Network and open source software platforms, such as Eclipse, are examples of creation spaces that have increased the speed and the quality of participants' output almost exponentially.

Dell's "IdeaStorm" approach to collaboration uses an online forum to engage customers and partners in ways that reduce the cost to serve while simultaneously improving satisfaction. IdeaStorm allows people to suggest ideas for Dell products and services, vote to promote or demote ideas, and see ideas in action. Through this venue (as of October 5, 2009), over 12,665 ideas have been posted and 379 of those have been implemented. While specific Labor Productivity statistics have not been published, we can assume that this approach to idea generation and evaluation reduces what would have historically been internal costs to develop and serve. While Labor Productivity improvements have been, and will continue to be, necessary for technology firms to compete, the data shows that the advantage tends to be short-lived and the gains competed away. Improvements in Labor Productivity alone are not sufficient in the face of the Big Shift.

Exhibit 8.3: Asset Profitability, Technology (1965-2008)



⁸ "U.S. Productivity Growth 1995-2000: Understanding the contribution of Information Technology relative to other factors," McKinsey Global Institute, October 2001.

Source: Compustat, Deloitte Analysis

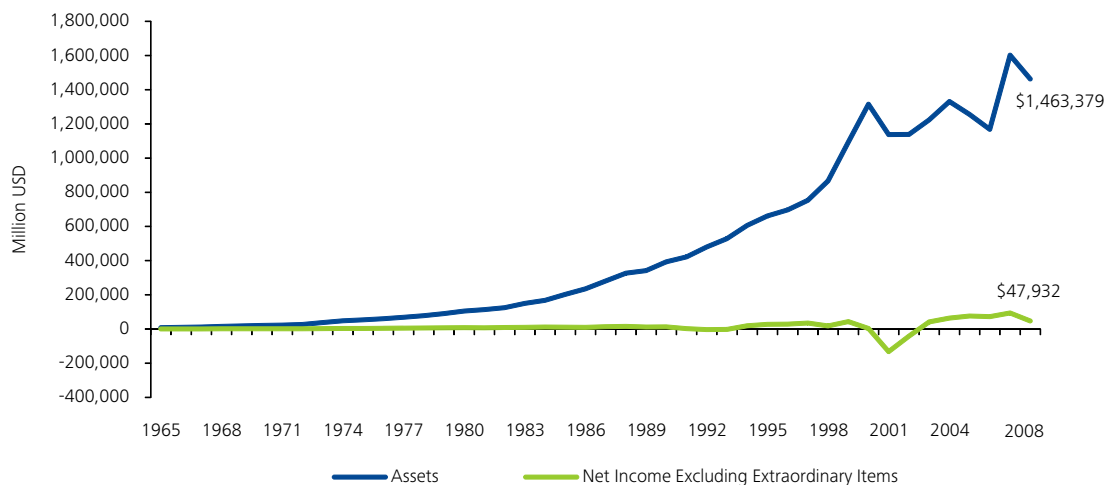
Firms

The Firms metrics measure the impact of intensifying competition and more powerful consumers and talent on firm performance. We highlight two metrics for Technology: *Asset Profitability* and *Firm Topple Rate*.

Asset Profitability⁹

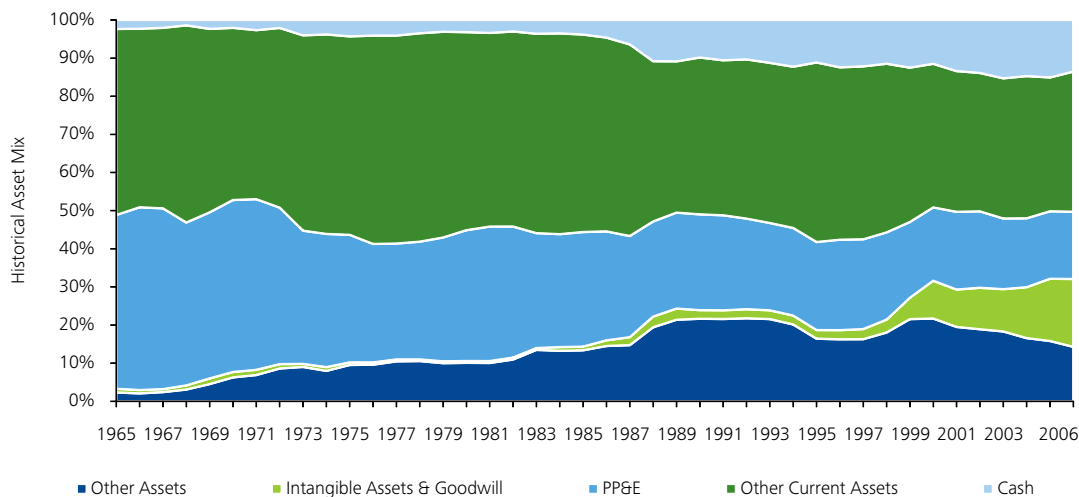
Innovation and labor productivity gains have not resulted in increasing asset profitability. Aggregate ROA in the Technology industry has fallen from 9.8 percent to 3.3 percent from 1965 to 2008 as companies have not been able to generate returns at the same pace as underlying

Exhibit 8.4: Total Net Income & Total Net Asset Comparison, Technology (1965-2008)



Source: Compustat, Deloitte Analysis

Exhibit 8.5: Historical Asset Mix, Technology (1965-2006)



Source: Compustat, Deloitte Analysis

9 Asset Profitability is defined as total return on assets (Net Income / Total Assets). For additional information on this metric, please reference the Methodology section (see page 193).

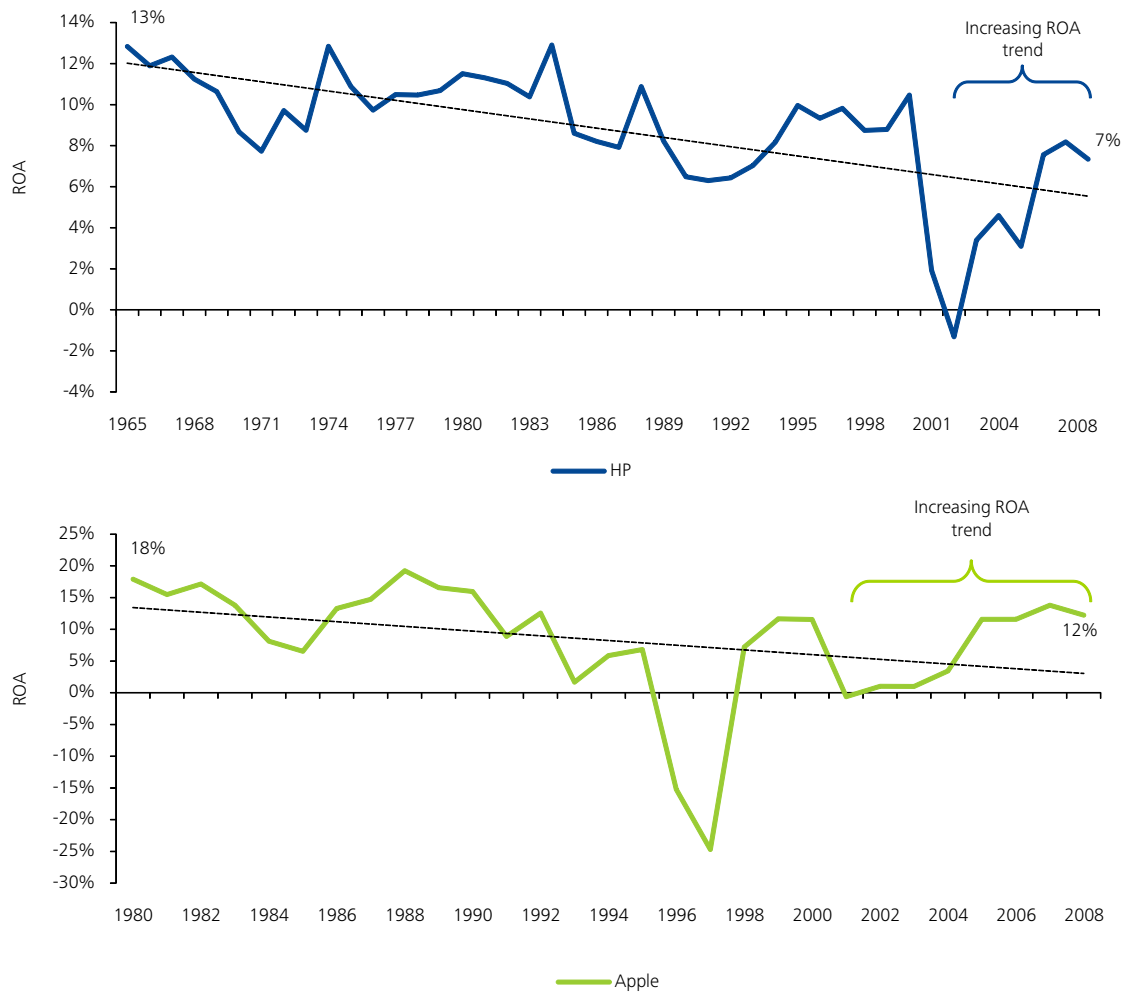
asset growth.

While net income increased from \$815 million in 1965 to \$47.9 billion in 2008, total assets grew from \$8.3 billion to \$1.4 trillion over the same time period.

As total assets have grown, the asset mix has changed dramatically. Further investigation into the asset base reveals strategic choices behind the numbers. Technology firms have been diligent in reducing traditional property, plant & equipment from approximately 46 percent of total assets to under 18 percent, most likely as a result

of outsourcing and off-shoring activities, as well as a transition for some firms to less asset-intensive offerings in software or services. Cash has grown from 2 percent of total assets to 14 percent, despite aggressive stock buybacks by leading technology companies. Most substantively, intangible assets and goodwill have grown from 1 percent of total assets to 18 percent, with the majority of the increase taking place from 1998 until the present along with significant M&A activity within the industry to acquire customers, revenues, technology and talent.

Exhibit 8.6: Company Specific ROA, Hewlett Packard Co. (1965-2008) & Apple Inc. (1980-2008)



Source: Compustat, Deloitte Analysis

The decline in ROA has been driven by technology companies' inability to sustain the pace of growth while consistently delivering high profit margins. First, because of the intense competition in the industry, the value gained through productivity improvements, pruning of physical assets and innovation is ultimately passed on to customers who now pay substantially less for technology products and services than they ever have. This makes it increasingly difficult for technology companies to generate sustained returns for their investments.

Second, companies struggle to identify organic growth opportunities that will generate near-term returns in excess of the associated P&L expense impact of requisite R&D and business model investments. As such, despite having plenty of cash, companies manage short-term earnings by minimizing innovation expense outflow, and cash continues to grow.

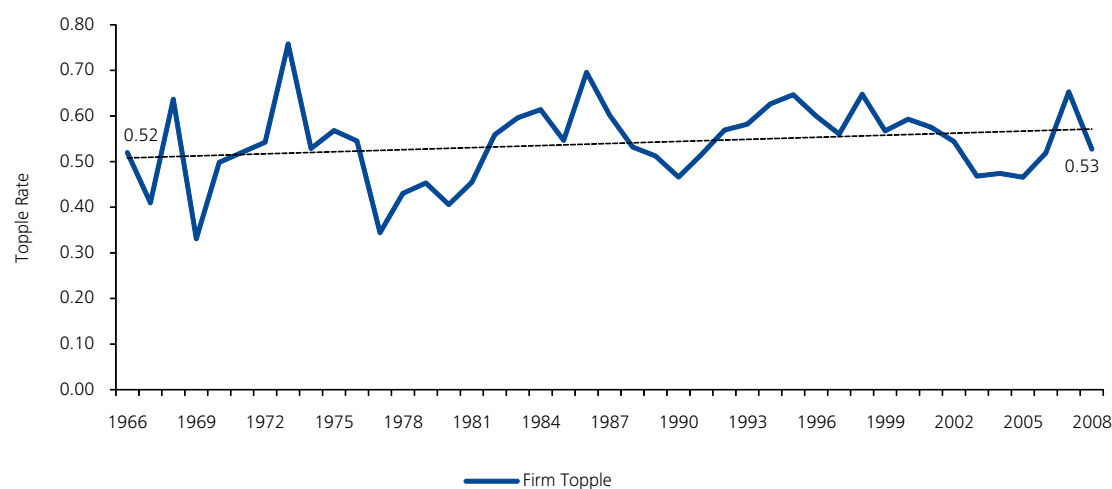
Despite the long-term ROA decline, some companies have begun to reverse the trend. HP and Apple are two prominent examples. Over the past five years, these companies have achieved ROA growth from 4.6 percent

to 7.3 percent and from 3.4 percent to 12.2 percent respectively. HP has been effective in streamlining its asset base and reducing expenses while maintaining growth. Apple has focused on innovation and creating new products and services. For example, Apple has been effective in creating an ecosystem around its iPhone where customers' needs are identified and addressed quickly by both Apple and other participants through the "App Store" distribution platform for applications. While this demonstrates that short-term reversals of the declining ROA trend are possible, it remains to be seen whether these companies can build repeatable systems to deliver sustainable ROA performance.

Firm Topple Rate¹⁰

The Technology industry topple rate has consistently been amongst the highest of any industry. The increasing Firm Topple Rate reflects how even the leaders are having difficulty sustaining performance as advantages are increasingly transient. The Technology industry is unique in how quickly an innovative company can gain market share and achieve rapid growth. The converse is that leaders are not immune and can be quickly overtaken by new entrants and emerging business models.

Exhibit 8.7: Firm Topple, Technology (1966-2008)



Source: Compustat, Deloitte Analysis

¹⁰ Firm Topple Rate is defined as the annual rank shuffling amongst firms. For additional information on this metric, please reference the Methodology section (see page 193).

People

The People metrics measure the impact of technology, open public policy, and knowledge flows on consumers and talent, including executives. This driver consists of four metrics: *Consumer Power*, *Brand Disloyalty*, *Returns to Talent*, and *Executive Turnover*.

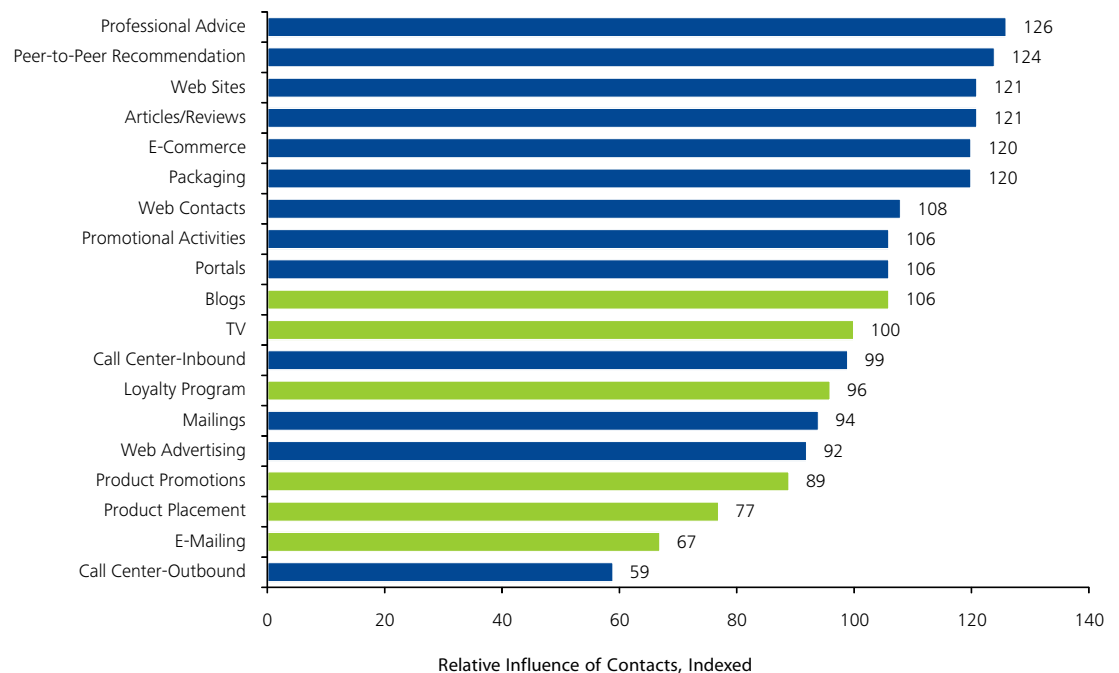
Consumer Power¹¹ and Brand Disloyalty¹²

Customers, whether individual consumers or large businesses themselves, are demanding more today than ever before. Many of the foundational qualities related to a company's brand—trust, reliability, quality, and ability to fulfill unmet needs—remain just as important today as they were decades ago. Brand still means something, though the time it takes to build or destroy brand image has changed, especially in the Technology industry. Building a reputation used to take decades, but can now be achieved in a matter of months, thanks to the rapid flow of information across the Internet, influencer forums,

blogs and review sites. A reliable brand name alone is no longer sufficient to attract and retain customers. Specific to the Technology industry, a combination of open platforms, standardization, and Internet-enabled information availability, has dramatically enhanced customer buying power and altered the landscape of brand power and loyalty. Customers can find out what they want, when they want, with significantly greater freedom of choice.

In many cases, technology advances have been both a blessing and a curse. With the development of open platforms and standardization, customers are no longer locked into vendor-defined vertical stacks of products and services. Instead, customers can more easily integrate best-of-breed parts from a range of vendors, providing the customer more choice, flexibility and power in the buying process. Customers focus less on a particular brand and more on finding a product that meets their needs with the best quality for the best price¹³—placing ever-increasing pressures on brand loyalty.

Exhibit 8.8: Relative Influence of Contacts, Technology (2006)

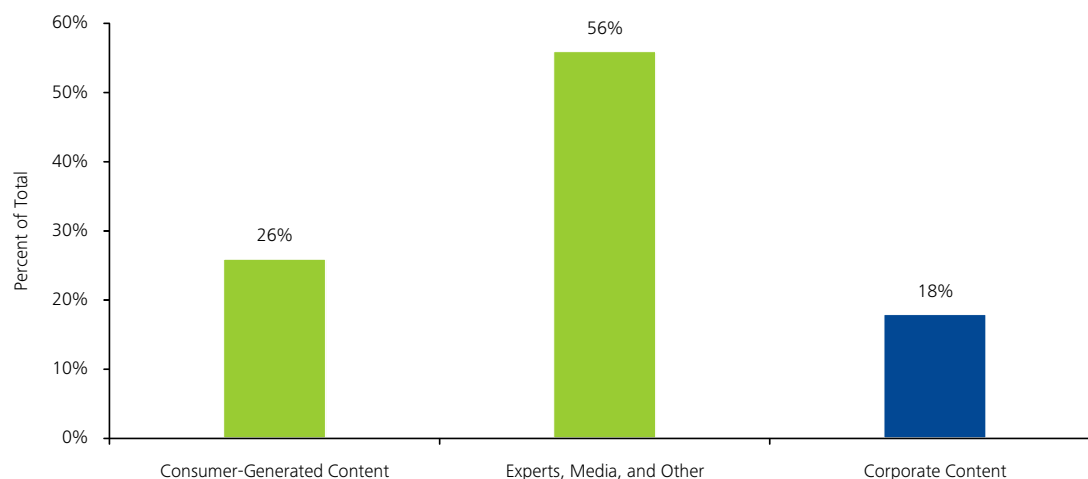


¹¹ Consumer Power scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

¹² Brand Disloyalty scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

¹³ "User Survey Analysis: U.S. PC Vendors Must Build Brand Loyalty and Retain Customers," Gartner, 2008.

Source: Marketing Leadership Council

Exhibit 8.9: Sources of Customer Information

Source: Standard & Poor's Industry Survey

Global availability of information 24 hours a day has forever changed the interaction model between customers and brands. No longer is it a one-way push of information; the Internet has spawned an array of information flows via peer networks, blogs, and review sites, just to name a few. Customers benefit from the reviews of others who can comment on a product's quality, features, and customer support, sometimes before the product has even been launched to the marketplace. Brands are shaped partly by an emerging and constantly evolving ecosystem of "unstructured" influencers. For example, as seen in Exhibit 8.8, customers rank peer-to-peer recommendations second to a professional advice and much higher than company-originated activities, such as outbound calls by call centers (telemarketing), e-mailing, product placement and product promotions.

The implications for technology companies are significant. In a Businessweek and Interbrand study that assessed the change in brand values from 2008 to 2009, some companies such as Google and Amazon increased their brand value by over 20 percent, while others like Sony and Dell fell by over 10 percent. Amazon's brand value increase is particularly interesting when one considers how little this company relies traditional marketing and advertising. Instead, intense focus on the customer experience has

shaped positive reviews with user groups and online communities, contributing to Amazon's relatively fast-paced rise to become one of the most highly valued brands in retail.

Exhibits 8.8 and 8.9 further illustrate the degree to which consumers are turning towards each other for information, rather than to the corporate content of traditional marketing and advertising.

While these are challenging times for technology companies, there is also great opportunity. Firms are no longer locked out of any particular product category or customer segment due to lack of brand permission. The same conditions that empower customers to explore new brands or products also enable companies to go after new market niches. Technology companies that are able to preserve the core of their brand while extending into new playing fields have a tremendous brand leverage oriented opportunity.

Returns to Talent¹⁴

Fueled by an environment of high innovation and growth, the Technology industry places a premium on talent. The gap in compensation between the "creative" and "non-creative" workers¹⁵ is larger in the Technology

¹⁴ Returns to Talent is defined as the compensation gap between the Creative Class and Non-Creative Class as measured by data from the Bureau of Labor Statistics and categorized by Richard Florida's Risen of the Creative Class. For additional information on this metric, please reference the Methodology section (see page 193).

industry than for all others and reflects the growing importance that is placed on its workers (see Exhibit 8.10). The Technology industry also has the highest overall compensation across the U.S. industries considered. It is no coincidence that this industry has also seen a dramatic increase in competitive intensity over this same time period. In an attempt to get ahead of or just keep up with the competition, technology firms are increasing both cash and equity compensation.

Executive Turnover¹⁶

An issue the Technology industry must deal with is that despite high compensation, Executive Turnover is typically twice as high as that of the U.S. economy. The Executive Turnover metric measures executive attrition rates (e.g., internal transitions, joining, leaving, promotions, retirements and terminations). The Technology industry has experienced an attrition rate over three times higher than that of the U.S. economy (see Exhibit 8.11).

This trend is not surprising, as executives are under pressure to maintain competitiveness and market share, all while exceeding investor expectations. It is questionable as to whether this phenomena - high labor cost and high turnover - is sustainable for the industry and the key

players within. While key talent is always a necessity, a more systemic approach to optimizing information flows within and outside company boundaries can help offset the impact of individual churn. Robust information flows distributed throughout the organization become a more critical and sustaining asset.

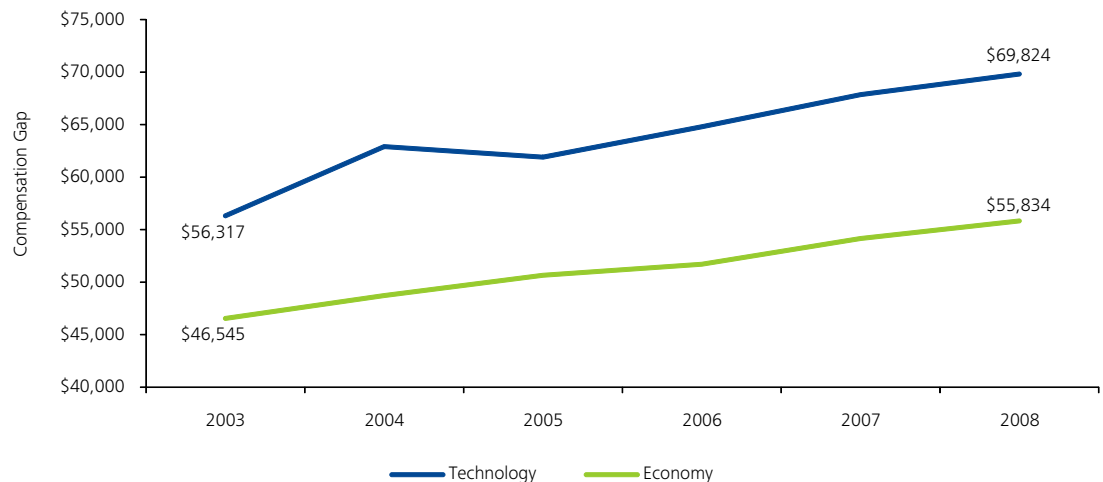
Flows

Knowledge flows—as opposed to knowledge stocks—are quickly becoming one of the most crucial sources of value creation. The more the business environment changes, the faster the value of what one knows at any point in time diminishes. Success for technology companies hinges on the ability to participate in a growing array of knowledge flows in order to stay on top of industry developments and innovate in response to changing customer demands. The *Inter-firm Knowledge Flows* metric is one indicator of the Technology industry's readiness and ability to adapt to the forces of the Big Shift.

Inter-firm Knowledge Flows¹⁷

The Technology industry ranks third among U.S. industries in average participation by employees in Inter-firm Knowledge Flows. They use more social media and Google

Exhibit 8.10: Returns to Talent, Technology (2003-2008)

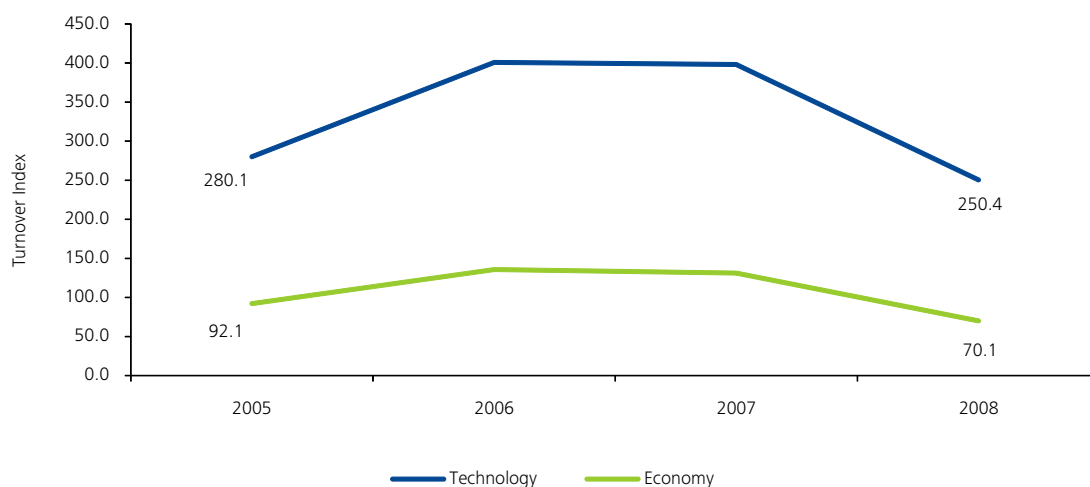


Source: US Census Bureau, Richard Florida's "The Rise of the Creative Class", Deloitte Analysis

15 Industry employees can be categorized into two groups. "Creative class" workers are those engaged in the core industry activities (e.g., computer scientists, mathematicians, engineers, physical and social scientists) and management (e.g., business and financial, operations, high-end sales). The "non-creative class" workers are those in the support functions such as production, building and ground cleaning and maintenance, low-end sales, etc.

16 Executive Turnover measures executive attrition rates as reported by Liberum Research. For additional information on these metrics, please reference the Methodology section (see page 193).

17 Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte's survey on Inter-firm Knowledge Flows and Worker Passion, which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 8.11: Executive Turnover, Technology (2005-2008)

Source: Liberum Management Change Database, Deloitte analysis

alerts and participate more often in web-casts, phone conversation and lunch meetings with people outside their organization than the rest of the U.S. economy. This is not surprising given their need to continuously update skills and learn about new technologies.

Dell employees, for example, routinely spend 15 to 20 minutes a day using social media to gain outside perspective and engage others in their work. Max Weston, an education strategist at Dell, regularly shares his thoughts on education and technology with over 3,000 followers on Twitter. Matt Domsch, a technology strategist in the office of the CTO, is a Linux expert who uses Twitter and a personal blog to engage other Linux enthusiasts.¹⁸ In an effort to learn from leaders outside of the industry, Google and Procter & Gamble (P&G) have initiated an employee swap program. Google employees learn leading marketing techniques from P&G, while P&G employees gain expertise

in on-line advertising and knowledge of the Internet users as a customer segment from Google.¹⁹

The Technology industry has long been a source of innovation and inspiration, delivering exponential improvements in computing power, bandwidth, storage, and software that drive today's real-time search, global connectivity, and automation of the world's most complex processes. Over the past four decades, return on assets has declined despite gains in Labor Productivity. At the same time, the industry has paid more to creative talent overall than any other industry. While technology-driven productivity improvements have failed to generate commensurate returns, technology companies have the opportunity to tap into a savvy and connected workforce, both in their own companies and across their partner and customer ecosystem to facilitate innovation and create real value and differentiation for the consumer.

18 "The world's most valuable brands: Who's most engaged?" Wetpaint, ALTIMETER <http://www.engagementdb.com/downloads/ENGAGEMENTdb_Report_2009.pdf>, July 2009.

19 "A New Odd Couple: Google, P&G Swap Workers to Spur Innovation," The Wall Street Journal, November 19, 2008.

Methodology

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to the lack of data availability and inadequate data quality.

Metric Definitions and Sources²⁰

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics (“BLS”)
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	Compustat
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	
		Firm Topple Rate	Annual rank shuffling amongst U.S. firms	
	People	Consumer Power	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	
		Returns to Talent	Compensation gap between the Creative Class and Non-Creative Class	BLS; categorized by Richard Florida’s Rise of the Creative Class
		Executive Turnover	Measures executive attrition rates as reported by Liberum Research	Liberum Research Management Change
	Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate

Industry Definition: Technology

The Technology industry includes companies within a grouping of Standard Industrial Classification codes (“SIC”) as outlined below:

Sub-sector	SIC Code	SIC Description
Technology	3570	Computer & Office Equipment
	3571	Electronic Computers
	3572	Computer Storage Devices
	3575	Computer Terminals
	3577	Computer Peripheral Equipment
	3579	Office Machines
	3670	Electronic Components & Accessories
	3672	Printed Circuit Boards
	3674	Semiconductors & Related Devices
	3677	Electronic Coils, Transformers, & Other Inductors
	3678	Electronic Connectors
	3679	Electronic Components, NEC
	3695	Magnetic & Optical Recording Data
	3823	Industrial Instruments From Measurement, Display & Control
	5045	Wholesale - Computers & Peripheral Equipment & Software
	7370	Services - Computer Programming, Data Processing, Etc.
	7371	Services - Computer Programming Services
	7372	Services - Prepackaged Software
	7373	Services - Computer Integrated Systems Design
	7377	Services - Computer Rental & Leasing

²⁰ For more information on metric selection and definitions, see “Shift Index: Industry Metrics and Perspectives”, pgs.

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Telecommunications

Gerald Belson and Phil Asmundson

Understanding the impact of intermodal competition and the rise of consumer power in the Telecommunications industry

Executive Summary

Despite Labor Productivity that grew faster during the last four decades than any other U.S. industry except Technology, financial returns in the Telecommunications industry,¹ as measured by average return on assets (ROA), fell by more than 30 percent, from 5.2 percent in 1965 to 3.7 percent in 2008. Prior to 1996, all telecommunications carriers operated under a regulated rate-of-return on assets. The institution of the 1996 Telecommunications Act brought about a truly market-based competitive environment in this industry. After 1996, there was a sharp rise in competitive intensity, driven by technology and, to a lesser extent, public policy.

Few industries have been as profoundly affected by new technology and shifting public policy as the Telecommunications industry. In a relatively short period, technology advances have radically re-shaped the industry, from a virtual geographic monopoly to a dynamic and highly competitive market. Today, the Telecommunications industry sits squarely in the center of the convergence trend. Meeting customer expectations around the seemingly limitless demand for both wired and wireless bandwidth will likely form the basis for competition and the agenda for public policy debate over the next decade. While landmark regulatory decisions such as the original

breakup of AT&T (which, remarkably, was just a quarter century ago) and the Telecommunications Act of 1996 have played a major role, the most significant drivers of competition have arguably arisen from the growth of technology itself. To understand how this industry has changed over the last 40 years, it is important to understand how technological changes have influenced and empowered the customer.

With the convergence of the underlying technologies for voice communications, data and video services, the war for customers is now being fought between companies that bring very different access assets into the battle (for instance, traditional wireline telecommunications companies, cable TV operators, and wireless communications companies). Customers in most markets now have a choice of two landline voice and data providers (wireline carriers and cable TV operators) and typically at least four cellular wireless providers. Within these markets, wireless is increasingly viewed as a substitute for wireline communications, while cable and wireline telecommunications companies offer bundled offerings which directly attack each other's core markets. Going forward, competition will intensify as cable operators develop sophisticated voice and data products for the business market and wireline carriers launch video products in the consumer market.

¹ Telecommunications industry is comprised of following sub-sectors: Wireline and Wireless Service Providers, and Telecommunications Equipment Manufacturers.

This technology-driven, intermodal competition (competition between wireless, cable TV operators and traditional wireline communications) has actually done more to create competitive markets than the regulatory actions in the 1990s and early 2000s did. Although these actions did open up the markets and attract new entrants, few of the new entrants (e.g., CLECs, DLECs, MVNOs) succeeded, in part because they lacked the ability to leverage their own networks or to reach viable scale. New entrants in the wireless market have had more success, particularly those companies offering innovative business models, but in general, the market for cable, Wireline and Wireless is dominated by major players in each sub-sector.

As intermodal competition has increased, customer demands and expectations have evolved as well. A good illustration of this is voice quality itself. Protected economically by rate-of-return regulation, Wireline companies historically focused on building a network of enviably high quality. With the emergence of wireless services, however, it became clear that customers would trade voice quality for mobility. Quality and coverage are still important but not to the same standard to which the wireline network was built.

For telecommunications equipment manufacturers, the challenges have been even more intense. Originally part of the Bell System in the U.S., equipment manufacturers grew rapidly during the Internet boom of the late 1990s, fueled by rapid network growth, new entrants and the

emergence of global telecommunications markets. Unlike service providers, for whom competition comes primarily from domestic carriers, manufacturers faced global competition as well, particularly on the device (handset) side. While some incumbent manufacturers have struggled or been acquired, new entrants have had success bringing innovative products to the market (e.g., smartphones), often merging communications technology with other consumer products.

Two technology changes are re-shaping the industry by quite literally changing the underlying platforms of telecommunications: the increasing performance of signal processing technology and the low cost and flexibility of storage. Together these two changes are pushing intelligence that traditionally resided in the network into end-user devices. Higher signal processing capabilities enable modern networks to carry large quantities of data. This high data rate removes the need for the traditional data management layers that provided service quality for real time traffic (e.g., speech). With very high data rates, quality can be restored to real time communications through the use of re-transmission protocols. The IP protocol is the common link allowing traffic to flow and networks to communicate. This shift—where IP bandwidth and intelligent edge devices have become much cheaper than traditional TDM bandwidth and switches—is creating an environment where telecommunications companies provide the pipe upon which the services of other companies ride.

Markets

The Markets metrics reflect the impact of technological platforms, open public policy, and knowledge flows on the market-level dynamics facing corporations. For the Telecommunications industry, we look at two metrics in this category: *Competitive Intensity* and *Labor Productivity*.

Competitive Intensity²

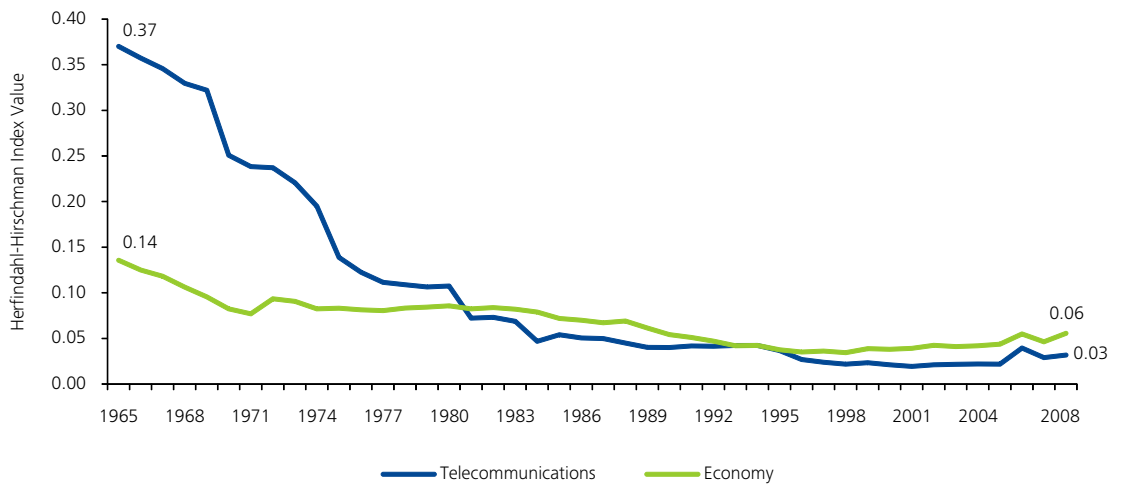
Competition in the Telecommunications industry has increased significantly over the last 40 years, as illustrated by the significantly lower Herfindahl-Hirschman Index (HHI). However, there are a number of industry dynamics that are not easily captured by the HHI, such as geographic exclusivity and scope of service issues (e.g., companies

crossing industry boundaries). Accordingly, the index must be interpreted within the context of the specific sub-sectors and unique regulatory conditions of the market.

The HHI demonstrates an interesting characteristic of the industry's evolution. While competition thrives at a national level, the level of choice available to an individual customer may be constrained by geographic and service limitations and capability issues; competition may be more intense in certain sub-sectors than in others.

Both the Wireline and Wireless sub-sectors emerged from regional structures, which, while numerous, were less competitive than the markets today. Through acquisition, the list of players has shortened, but has been joined by competitors previously considered outside the industry,

Exhibit 9.1: Competitive Intensity, Telecommunications (1965-2008)



Source: Compustat, Deloitte Analysis

HHI Value	Industry Concentration	Competitive Intensity
< .01	Highly Un-concentrated	Very High
0.01 - 0.10	Un-concentrated	High
0.10 - 0.18	Moderate Concentration	Moderate
0.18 - 1	High Concentration	Low

² Competitive intensity is measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in sector concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition. For additional information on this metric, please reference the Methodology section (see page 193).

resulting in an HHI number that indicates the industry is more competitive than ever—a perspective many carriers today would certainly share. While new entrants continue to appear (e.g., VoIP), their impact has been more to act as a catalyst for new business models than to take significant market share. If there is a serious challenge to the current market order, history suggests that it will come from an established competitor from another part of the digital value chain (e.g., portals, search engines, on-line commerce companies) or an international carrier.

What is clear is that the predominant form of competition within the industry is now intermodal—competition between Wireless, cable TV operators and traditional Wireline communications. Technology has enabled each service provider to offer similar service sets, and all three can now offer some level of voice, data communications and video services. In most markets, however, there are only two primary wired competitors: the cable TV. operator and the traditional telecommunications service provider.

To date, the traditional Wireline carriers have suffered the most from competition. Having lost the economic advantage of being the “only game in town,” they still own many of the regulatory obligations, leaving them at a disadvantage to new entrants not subject to the same regulatory constraints. However, some of these new entrants are themselves vulnerable to the evolving digital communications landscape. Cable operators are threatened

as the nature of broadcast content changes and the multi-channel world becomes the on-demand world. Similarly, Wireless service providers face having to share their revenues with application, content and equipment providers, many of which have global scale and scope. The broader the digital communications ecosystem becomes, the larger the potential number of players vying for a share of the market.

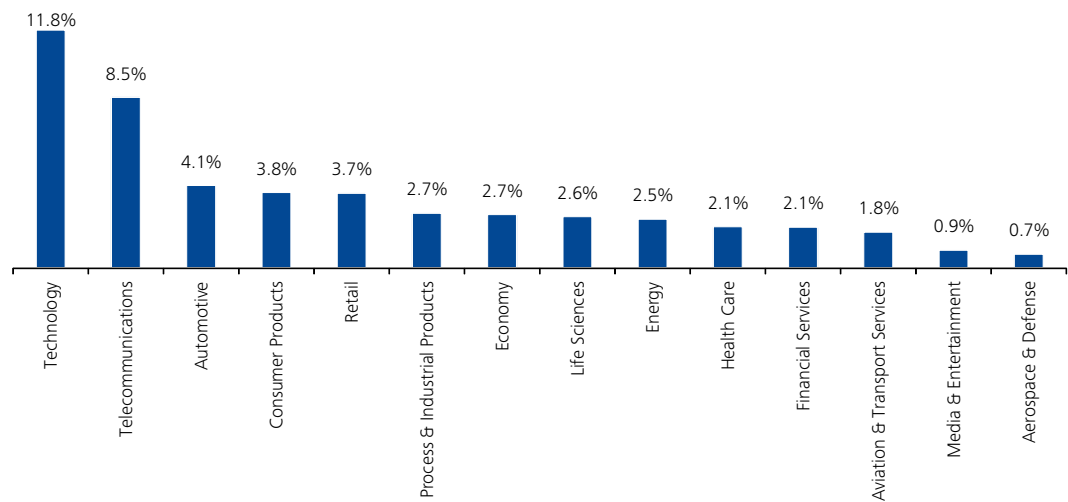
When viewed through the lens of intermodal competition, the wave of consolidation over the past decade has been less about buying competitors and more about acquiring territory (served by carriers with the same/similar technology). Similarly, service providers are acquiring other modes of communication in order to provide a complete bundle of services across all access mediums.

Labor Productivity³

During the period after rate-of-return regulation, Labor Productivity within the Telecommunications industry grew at 8.5 percent CAGR, from a value of 108 in 1998 to 208 in 2006. This was the highest growth in labor productivity (other than in the Technology industry) over the period from 1998 to 2006, significantly outpacing all other industries.

This growth in Labor Productivity is not surprising given that carriers were moving out of the rate-of-return regulation and into the “modern” era from a competitive

³ Labor Productivity is defined by the Bureau of labor statistics as industry GDP/labor hours. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 9.2: Labor Productivity by Sector CAGR (%), Telecommunications (1998-2006)

Source: Bureau of Labor Statistics, Deloitte Analysis

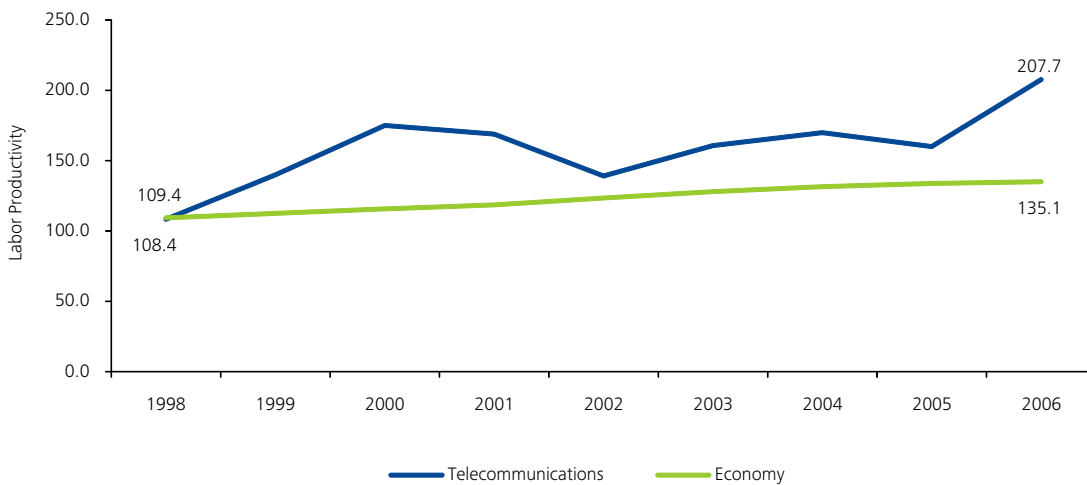
standpoint. Prior to the Telecommunications Act of 1996, the rate-of-return regulation created little incentive for improving Labor Productivity. Telecommunications companies focused on building the best, longest lasting, and most reliable networks, but not necessarily the most efficient. Cost structures for wages and other operational costs tended to be high relative to other industries. For as long as rate-of-return regulation was in effect, the industry experienced very little improvement in productivity.

Since the elimination of rate-of-return regulation, however, Labor Productivity has improved, driven in large part by technology and innovation. Particularly in Wireless, carriers continue to invest in automation tools in order to maintain a cost base that is competitive with rest of the

market. The gains from these investments are reflected in the high growth rate of Labor Productivity in the Telecommunications industry relative to the overall U.S. economy.

Despite the significant improvement in Labor Productivity in the years before the recent recession, those gains are being eroded as increasing competition drives greater product complexity. Telecommunications carriers have had to invest in customer care and sales—in terms of head count and skill level—in order to remain competitive.

Equipment manufacturers have also realized productivity gains, mainly by aggressively pursuing off-shoring deals in markets with lower labor costs. Many of the

Exhibit 9.3: Labor Productivity, Telecommunications (1998-2006)

Source: Bureau of Labor Statistics, Deloitte Analysis

manufacturing and fabrication operations of these equipment companies are now located in countries such as China, Malaysia, Vietnam and Taiwan. In certain cases, manufacturing functions have been outsourced altogether, allowing equipment manufacturers to transfer the high fixed costs of manufacturing to the outside vendor.

Finally, productivity in the industry is affected by the fact that the Telecommunications industry is largely standards-based. Organizations such as the Internet Engineering

Task Force (IETF), the International Telecommunications Union (ITU), and the Institute of Electrical and Electronic Engineers (IEEE) govern the specifications of most of the telecommunications network deployed around the world. Aside from a few isolated exceptions (e.g., China's Time-Division Synchronous Code Division Multiple Access, TD-SCDMA) the spread in the industry's Labor Productivity is somewhat bound by standardization of telecommunications specifications.

Firms

The Firms category measures the impact of intensifying competition, volatility, and powerful consumers and talent on telecommunications firms' performance. For the Telecommunications industry, we discuss two metrics: *Asset Profitability*, and *ROA Performance Gap*.

Asset Profitability⁴

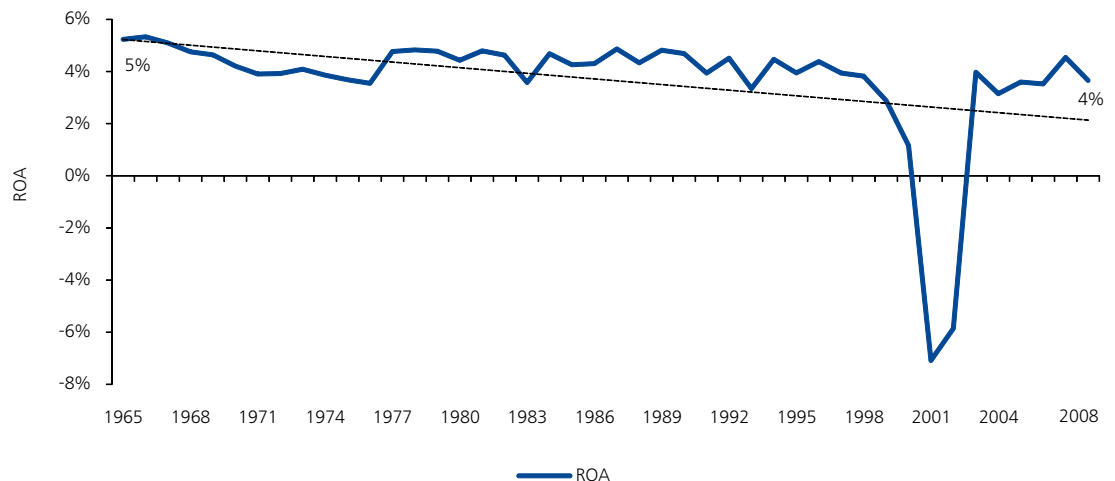
From 1965 to 2008, the average return on assets (ROA) in the Telecommunications industry fell from 5.2 percent to 3.7 percent, a drop of more than 30 percent. The notable downward spike of 2000-2002 corresponds to the dot-com bust, during which large write-downs in the industry were fairly common. In considering ROA at an industry level, we must remember that two of the largest bankruptcies in U.S. history occurred during this time period (and are reflected in metrics for the Telecommunications industry). The first was Worldcom, at the time the nation's second-largest long distance phone company. At the time of the bankruptcy filing in July 2002, Worldcom's assets were valued at \$107 billion with a debt load of \$41 billion. The second bankruptcy was Global Crossing, a Tier 1 carrier with a large footprint of backbone fiber across the globe. Although no more than a quarter

the size of Worldcom, the Global Crossing filing also significantly affects the industry metric.

In spite of fluctuations in ROA, overall the Telecommunications industry has continued to converge and consolidate around key players, with little change in the market leaders. Among both the carriers and the equipment manufacturers, the market leaders have consistently adapted to competition in their respective domains. The largest Wireline carriers continue to make strategic acquisitions and divestitures within their footprint, while investing heavily in wireless. Similarly, equipment manufacturers have migrated to optical and IP-based solutions in-line with the rich suite of applications that continue to enter the market. These firms have also pursued mergers with strategic partners in order to maintain leverage against a consolidating base of carriers and to enhance their product offerings.

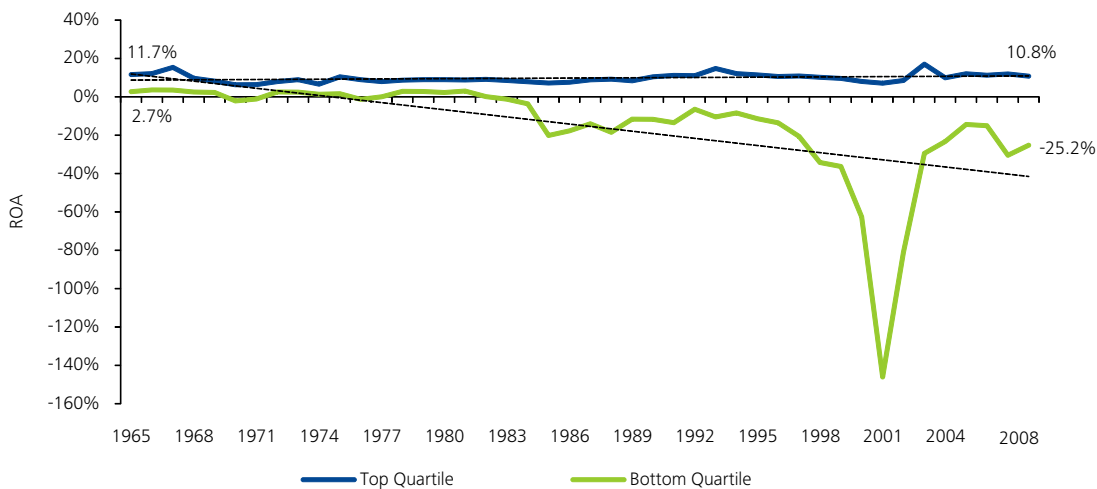
In today's post rate-of-return era, asset profitability is an increasingly reliable measure of firm performance. At an industry level, the volume of M&A activity that continues in this industry and the associated post-merger synergies must be accounted for in order to more accurately understand asset profitability.

Exhibit 9.4: Asset Profitability, Telecommunications (1965-2008)



⁴ Asset Profitability is defined as total return on assets (net income / total assets). For additional information on this metric, please reference the Methodology section (see page 193).

Source: Compustat, Deloitte Analysis

Exhibit 9.5: Asset Profitability Top and Bottom Quartiles, Telecommunications (1965-2008)

Source: Compustat, Deloitte Analysis

ROA Performance Gap⁵

The gap in ROA performance between the top quartile of telecommunications companies against the bottom quartile is increasing steadily. The sharp plummet of bottom performers between 2000 and 2002 represents one of the worst periods of ROA performance for the Telecommunications industry as discussed earlier (see Exhibit 9.5).

In the Telecommunications industry, the spread in ROA performance is largely intermodal. The increasing gap reflects the composition and specific situations of top

and bottom quartile performers. There is stark contrast between wireline companies, wireless companies, cable companies and satellite providers. Specifically, the distinguishing factor in ROA performance is the ability of companies in each of these sub-sectors to adapt to changing customer demand. By that measure, wireless companies have been most closely tied to the customer with their continued rapid innovation in support of high bandwidth mobile data applications along with corresponding advancement in handset hardware and software performance.

⁵ ROA Performance Gap is defined as the gap in return on assets between firms in the top and bottom quartiles. For additional information on this metric, please reference the Methodology section (see page 193).

People

The People metrics measure the impact of technology, open public policy, and knowledge flows on consumers and talent, including executives. For the telecommunication industry we discuss four metrics in this category: *Consumer Power*, *Brand Disloyalty*, *Returns to Talent*, and *Executive Turnover*.

Consumer Power⁷

In a world disrupted by the Big Shift, consumers continue to demand and capture market power from companies. The Consumer Power metric measures the value captured by consumers. Our Consumer Power analysis includes two categories for telecommunications: wireless carrier and cable/satellite T.V. (highlighted in bold in Exhibit 9.6).

This metric can be viewed in two ways: first, as an absolute measure of consumers' power with regard to the telecommunications companies' power (i.e., if the Consumer Power number is higher than 50, the consumers believe they have more power in the relationship); second, as a relative measure, to identify in which categories consumers believe they have more power.

In the telecommunications services market, Consumer Power is limited by the high costs associated with switching service providers. In the voice market, regulatory changes such as local number portability have eased the consumer's ability to switch providers, but term contracts and personalized e-mail addresses (with the carrier's extension, e.g., johndoe@verizon.net) restrict the customer's ability to change providers for wireless, video and data services.

An unlikely source of Consumer Power has emerged as a result of carriers' typical approach to customer segmentation: high-spend customers are targeted for post-paid, bundled subscribership, while low-spend customers are left with unbundled, pre-paid account subscribership. Unbundled services and the lack of contract commitments translate to higher-power (easier switching) among low-value customers.

Exhibit 9.6: Consumer Power by Category, Telecommunications (2008)

Consumer Category	Consumer Power
Search Engine	70.9
Snack Chip	70.7
Broadcast TV News	70.2
Banking	70.1
Restaurant	69.7
Soft Drink	69.5
Home Entertainment	69.1
Pain Reliever	69.0
Hotel	68.8
Magazine	68.8
Insurance (Home/Auto)	68.4
Computer	68.0
Automobile Manufacturer	67.3
Athletic Shoe	66.8
Department Store	66.3
Mass Retailer	65.9
Household Cleaner	65.9
Investment	65.8
Wireless Carrier	65.6
Grocery Store	65.5
Airline	65.4
Cable/Satellite TV	63.1
Gaming System	62.5
Gas Station	61.6
Shipping	61.3
Newspaper	54.0

Source: Deloitte Survey and Analysis

In the wireless services market, technology has the potential to drive consumer power. Specifically, with GSM, Consumer Power is substantially higher because of the ability of customers to switch their SIM cards to different carriers within the pre-paid market. This is especially true in Asia, where the existence of multiple GSM carriers enables frequent switching, and as a result, more Consumer Power. In the U.S., GSM is less of a driver due to the existence

⁷ Consumer Power scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

of only two notable GSM carriers—AT&T and T-Mobile. The remaining large carriers—Verizon, Sprint and US Cellular—are all CDMA-based and do not drive Consumer Power in wireless services.

Public policy also plays an important role in driving Consumer Power, especially in the area of net neutrality. As the Federal Communications Commission's (FCC's) continues to push toward net neutrality, carriers are being pressured to refrain from blocking applications and services that ride over their networks, even if such services compete with their own offerings. For example, Skype's VoIP service is available on AT&T's iPhone device, allowing the consumer to make calls to other Skype users over the data network, effectively circumventing the carriers' voice service altogether. The impact of net neutrality on Consumer Power is amplified by pricing regulation that restricts the carriers' passing through of charges related to applications and services to the end customer.

As the Big Shift continues, telecommunications firms are finding new ways to maintain some power in an effort to extend the lifecycle of the consumer and to minimize the high cost of acquiring (or re-acquiring) customers.

Brand Disloyalty⁸

The Brand Disloyalty metric is an indicator of consumer gain stemming from the Big Shift as a result of increased Consumer Power and a generational shift in attitudes toward brands. Two categories for telecommunications are included in the Brand Disloyalty analysis: cable/satellite TV and wireless carrier (highlighted in bold in Exhibit 9.7).

The data shows that the Brand Disloyalty index for wireless carriers is 56.5, which is slightly lower than the average Brand Disloyalty index of 57.5 across all categories, indicating that brand is slightly more important in telecommunications. The data also reveals that Brand Disloyalty is lower for a wireless carrier in comparison with cable/satellite TV, suggesting that customers are more loyal to their wireless carrier than to their cable and/or satellite TV provider.

In general, brand loyalty to telecommunications carriers is driven by the carrier's performance in terms of quality and service as perceived by the end customer. Specifically, loyalty to a wireless carrier is driven by the quality of the carrier's service in the subscriber's home area and in the vicinity of that subscriber's daily commute. Because of this, smaller carriers contribute to the overall Brand Disloyalty index for wireless carriers due to perceptions of poor coverage in certain markets. Price is typically not a driver of Brand Disloyalty amongst the different wireless carriers because price tends to be very comparable amongst the

Exhibit 9.7: Brand Disloyalty by Category, Telecommunications (2008)

Consumer Category	Disloyalty
Hotel	70.1
Airline	69.9
Home Entertainment	69.0
Mass Retailer	68.0
Department Store	65.9
Grocery Store	63.6
Automobile Manufacturer	62.7
Computer	61.7
Cable/Satellite TV	61.4
Shipping	60.0
Gas Station	59.5
Restaurant	58.5
Insurance (Home/Auto)	57.8
Athletic Shoe	57.2
Wireless Carrier	56.5
Gaming System	55.3
Banking	54.6
Household Cleaner	54.5
Search Engine	53.4
Investment	53.3
Snack Chip	51.5
Pain Reliever	51.4
Broadcast TV News	49.4
Magazine	45.2
Newspaper	42.3
Soft Drink	40.9

Source: Deloitte Survey and Analysis

⁸ Brand Disloyalty scores were calculated based on responses to Deloitte's survey on Consumer Power and Brand Disloyalty. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

different carriers, in spite of the introduction of unlimited plans for voice and data.

As the Big Shift continues to drive greater power to the customer, Wireless carriers have responded by providing superior service in key areas most frequented by the subscriber. This, in turn, drives brand loyalty and helps extend the lifecycle of the subscriber's relationship with the Wireless carrier, but not without careful investment of capital to ensure coverage and quality service in those key areas.

Returns to Talent⁹

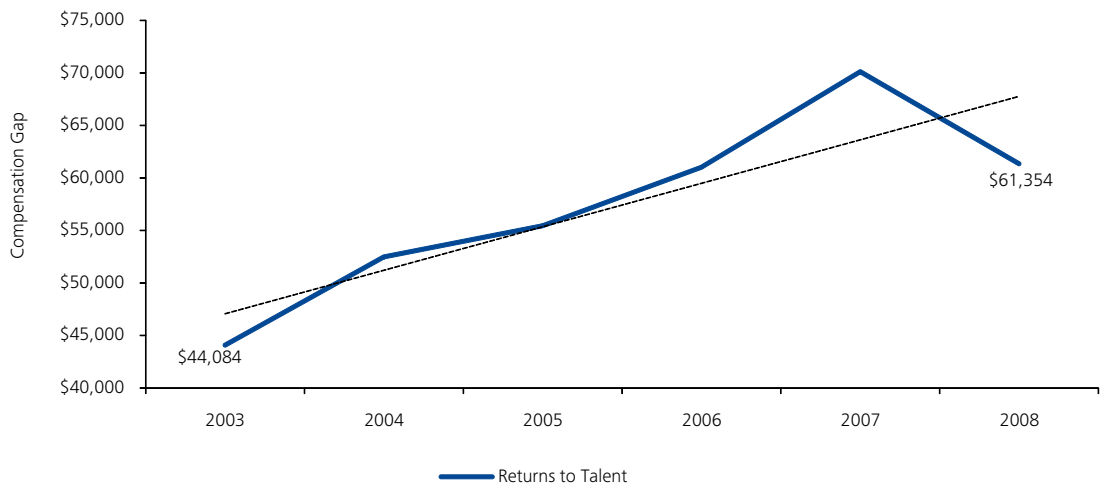
In the Telecommunications industry, the talent pool can be divided into three main groups: the super creative core (engineers, computer scientists, mathematicians, etc), the creative or management pool (business and financial operations, sales, etc.), and the working and service groups

(support staff, etc.). For the compensation gap metric, the first two groups are both considered "creative" talent.

Given the deep technical foundation within the industry, there is a continued need to hire and retain strong technical talent, especially at the junior and mid-levels. This has resulted in a rising compensation gap between the super creative core and creative/management pools and the rest of the organization. Companies in this industry view both these pools as a source of strategic advantage and a key differentiator, especially in response to the increasing intermodal competition.

The forces of the Big Shift will continue to drive companies in the Telecommunications industry to invest in the richest parts of their talent pool in an effort to derive strategic advantage over the competition.

Exhibit 9.8: Returns to Talent, Telecommunications (2003-2008)



Source: US Census Bureau, Richard Florida's "The Rise of the Creative Class", Deloitte Analysis

⁹ Returns to Talent is defined as the compensation gap between the creative class and non-creative class as measured by data from the Bureau of Labor Statistics and categorized by Richard Florida's Rise of the Creative Class. For additional information on this metric, please reference the Methodology section (see page 193).

Executive Turnover¹⁰

The Executive Turnover metric is a proxy for tracking the highly unpredictable, dynamic pressures on the market participants with the most responsibility and visibility: executives.

Telecommunications executives tend to rotate through multiple roles (VP, SVP, EVP, etc.) within the company. Culturally, telecommunications firms encourage rotation at the executive level to ensure that leadership within the organization is well-versed in the different teams, roles and responsibilities within the organization and helps foster better collaboration between the different teams (although the net effect of such rotation is not studied here). On the other hand, among the more junior staff (manager-level and below), internal rotations are far less common, and organizations tend to exist in functional “silos.”

Executives typically have a long tenure in telecommunications firms, are promoted internally and stay through retirement. Hiring from outside the industry is uncommon. Given the deep technical nature and particular history of the industry, bringing executives from outside tends to be too challenging in terms of assimilation and ramp-up, unless the executive is from another telecommunications firm.

In the Telecommunications industry, Executive Turnover is primarily driven by internal transition, promotions and retirement of the baby boomer generation. Some turnover is necessary in order for firms to introduce new and different thinking and remain competitive in the dynamic world of the Big Shift.

Flows

Knowledge flows—as opposed to knowledge stocks—are becoming one of the most crucial sources of value creation. Twentieth-century institutions built and protected knowledge stocks—proprietary resources that no one else could access. The more the business environment changes, however, the faster the value of what one knows at any point in time diminishes. In this world, success hinges on the ability to participate in a growing array of knowledge flows in order to rapidly refresh knowledge stocks. The Flow metrics provide an indicator of the industry’s capacity to meet and address the challenges posed by the Big Shift. For the Telecommunications industry, the most relevant of the metrics is *Inter-firm Knowledge Flows*.

Inter-firm Knowledge Flows¹¹

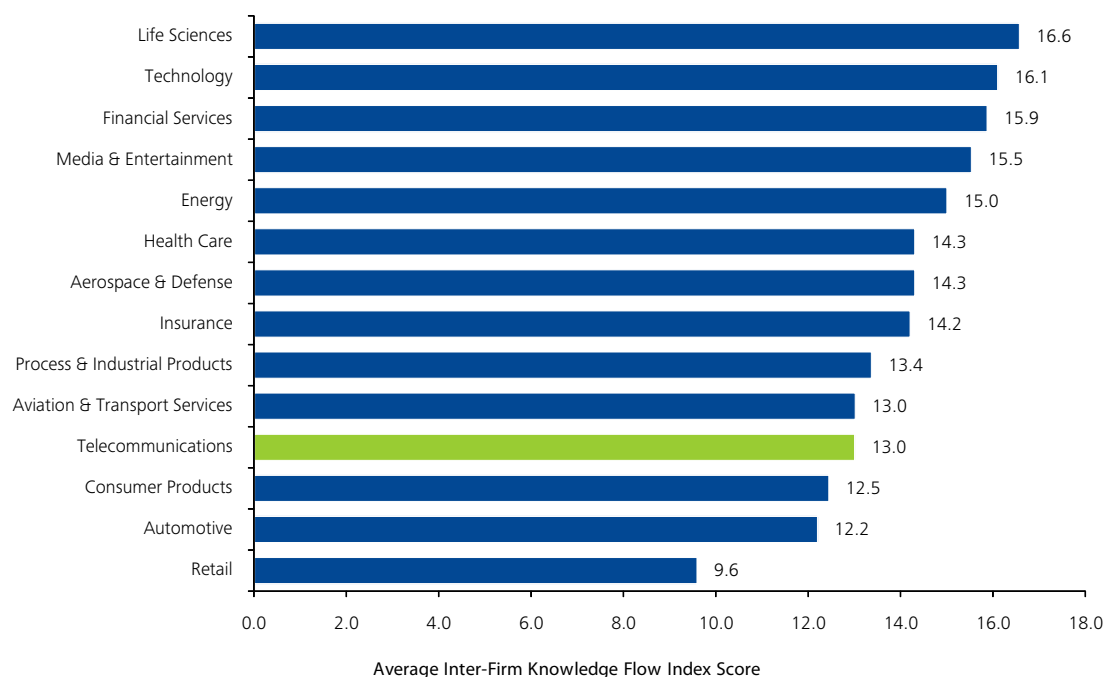
On average, workers in the Telecommunications industry participate less in knowledge flow activities compared to workers in most other industries.

The lower participation in knowledge-sharing activities may be partially driven by the geographical boundaries that separate telecommunications carriers and the technological boundaries that separate equipment manufacturers. As a result, in spite of a standards-based model, there is limited knowledge sharing between the different firms. Carriers’ network technology selection is instead driven by the economics of their customer base, and equipment manufacturers attempt to drive standards to their advantage but do not share intellectual property with one another.

¹⁰ Executive Turnover measures executive attrition rates as reported by Liberum Research. For additional information on this metric, please reference the Methodology section (see page 193).

¹¹ Inter-firm Knowledge Flows scores were calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion, which measures the extent of employee participation in knowledge flows across firms. This survey was administered through Synovate. For additional information on this metric, please reference the Methodology section (see page 193).

Exhibit 9.9: Inter-firm Knowledge Flow Index Score, Telecommunications (2008)



Source: Deloitte Survey and Analysis

The deterrents to participating in Inter-firm Knowledge Flows are exacerbated by the competitive structure within the industry; firms that are suppliers within one technology space may be competitors in others. This is more common as equipment manufacturers venture upstream into the services market, creating conflict that complicates the relationship between the sub-sectors.

Regulatory changes and technological convergence have so far shaped the story of the Telecommunications industry. For the foreseeable future, concurrent, multi-dimensional shifts within the Telecommunications industry will echo the overarching Big Shift trends of increased competition and greater Consumer Power.

Growth in Wireless is strong, while pure-play Wireline access services continue to decline. Wireline services must be positioned to support the significant bandwidth

growth in the core if they are to benefit from the increasing demand for wireless. Similarly, as both carriers and equipment manufacturers focus their investments on the growth areas driven by wireless, expect an influx of companies from adjacent industries (e.g., Apple, Google) looking to extract disproportionate returns from the value chain. To some extent, the business models of these new entrants will conflict with the subscribership model of telecommunications carriers, ultimately resulting in a shift in power to the consumer. Consumer-driven public policy will also continue to influence competition.

Ultimately, new business models will emerge within the converged Telecommunications industry. The organizations best able to use the digital infrastructure and knowledge flows to better understand and create value for the consumer will leverage these shifts to their advantage and capture the additional value for themselves.

The Shift Index consists of 25 indicators within three indices that quantify the three waves of the Big Shift – the Foundation Index, Flow Index and Impact Index. Of the 25 indicators, 13 can be examined at an industry level while the remaining metrics cannot due to the lack of data availability and inadequate data quality.

Metric Definitions and Sources¹²

Below are descriptions of the metrics we examined at an industry level along with the data sources utilized in their analyses:

		Metric	Description	Source
Impact	Markets	Labor Productivity	Industry GDP/ Labor Hours	Bureau of Labor Statistics (“BLS”)
		Competitive Intensity	Measured by the Herfindahl-Hirschman Index (HHI) which tracks changes in industry concentration by measuring the market share held by the top 50 firms. Lower scores signify lower concentration and therefore higher competition	Compustat
	Firms	Asset Profitability	Total return on assets (Net Income / Total Assets)	
		ROA Performance Gap	Gap in return on assets (ROA) between firms in the top and bottom quartiles	
	People	Consumer Power	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	Deloitte survey administered through Synovate
		Brand Disloyalty	Calculated based on responses to Deloitte’s survey on Consumer Power and Brand Disloyalty	
		Returns to Talent	Compensation gap between the Creative Class and Non-Creative Class	BLS; categorized by Richard Florida’s Rise of the Creative Class
		Executive Turnover	Measures executive attrition rates as reported by Liberum Research	Liberum Research Management Change
Flows	Inter-firm Knowledge Flows	Calculated based on responses to Deloitte’s survey on Inter-firm Knowledge Flows and Worker Passion which measures the extent of employee participation in knowledge flows across firms	Deloitte survey administered through Synovate	

¹² For additional information on this metric, please reference the Methodology section (see page 193).

Industry Definition: Telecommunications

Many industries in the U.S. are comprised of a wide variety of firms that are currently being affected by the Big Shift in different ways and at different magnitudes. The Telecommunications industry is no exception. With the help of industry experts, we divided this industry into three sub-sectors: Equipment Providers; Wireless; and Wireline. Due to data limitations, we were only able to examine five metrics (based on S&P's Compustat data) at the sub-sector level. These sub-sectors include companies within a grouping of Standard Industrial Classification codes ("SIC") as outlined below:

Sub-sector	SIC Code	SIC Description
Equipment Providers	3661	Telephone Apparatus
	3663	Radio & TV Broadcast and Communications Equipment
	4822	Telegraph Apparatus
Wireless	4812	Radio Telephone Carriers
Wireline	4813	Telephone Communications

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Shift Index Methodology

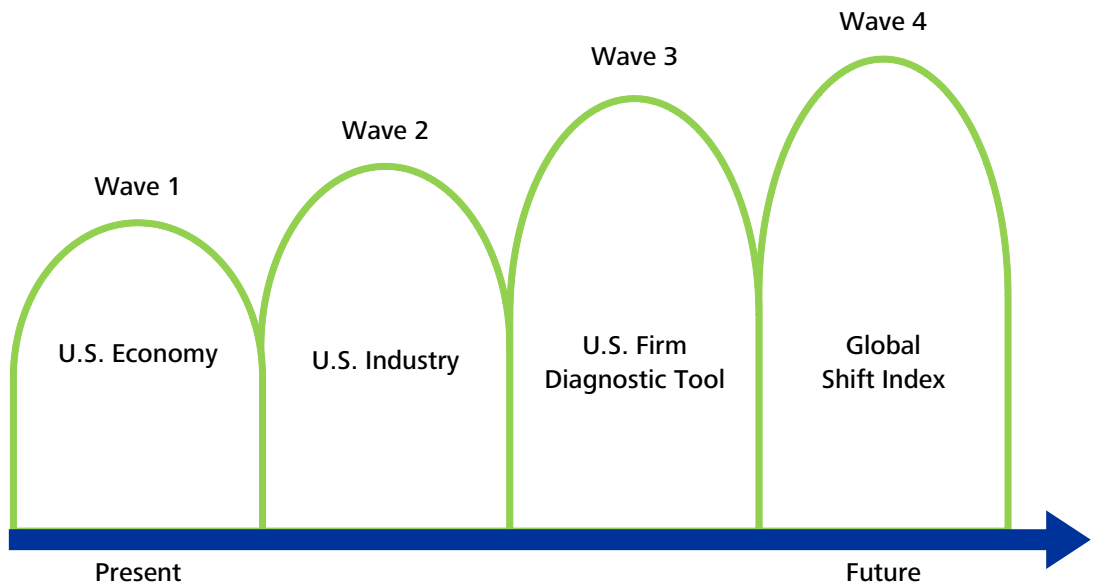
Shift Index Overview

The Deloitte LLP Center for the Edge (the Center) developed the Shift Index to measure long-term changes to the business landscape. The Shift Index measures the magnitude and rate of change of today's turbulent world by focusing on long-term trends, such as advances in digital infrastructure and the increasing significance of knowledge flows.

The earlier 2009 Shift Index focused on the U.S. economy. The current Shift Index Industry Perspectives report explores in greater detail how the Big Shift is affecting various U.S. industries.

Subsequent releases of the Shift Index, in 2010 and beyond, will broaden the index to a global scope and provide a diagnostic tool to assess performance of individual companies relative to a set of firm-level metrics. Exhibit 12 details these development phases.

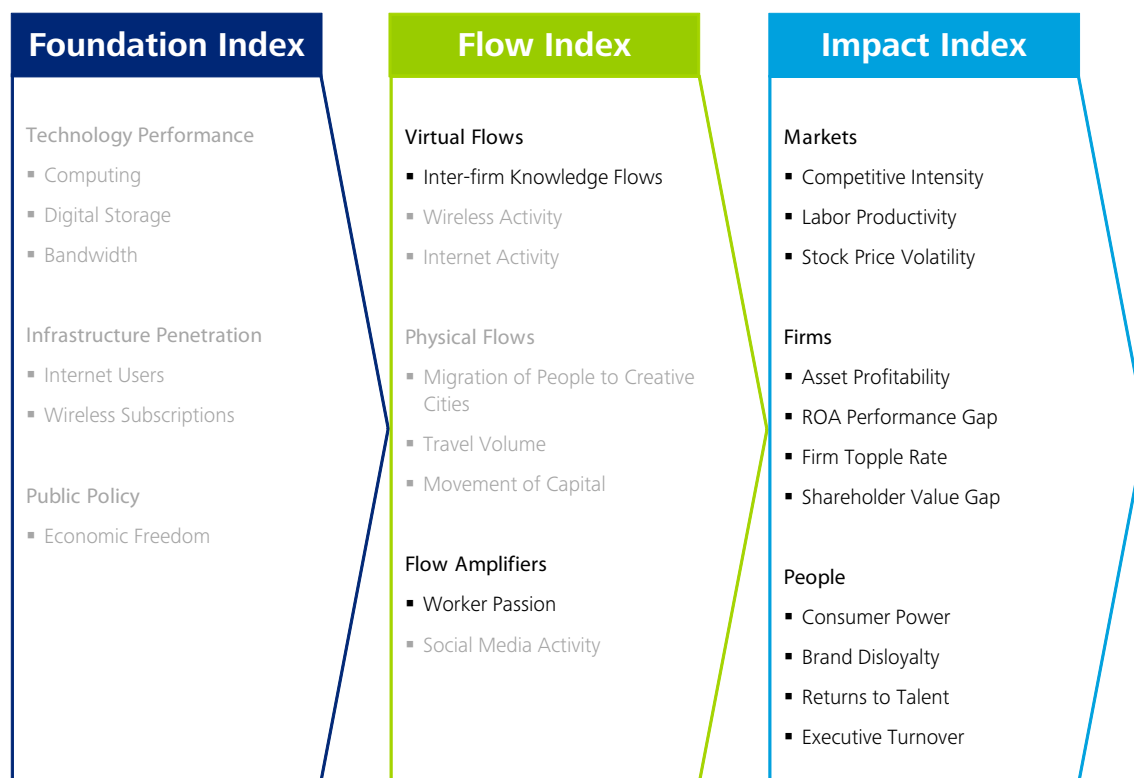
Exhibit 12: Shift Index Waves



Source: Deloitte

While the 2009 Shift Index analyzed 25 metrics across three indices, the Industry Perspectives report focuses on 13 metrics included in the Flow and Impact indices. These metrics were selected based on their importance to assessing industry performance relative to the Big Shift.

Exhibit 13: Shift Index Metrics



Source: Deloitte

Flow Index

Metric	Methodology
Virtual Flows	
Inter-firm Knowledge Flows	<p>Definition: The Inter-firm Knowledge Flows metric is a proxy for knowledge flows across firms. Success in a world disrupted by the Big Shift will require individuals and firms to participate in knowledge flows that extend beyond the four walls of the firm.</p> <p>Calculations: We explored the types and volume of Inter-firm Knowledge Flows in the United States through a national survey of 3,201 respondents. The survey was administered online in March 2009. The results are based on a representative (90% confidence level) sample of approximately 200 ($\pm 5.8\%$) respondents in 15 industries, including 50 respondents ($\pm 11.7\%$) tagged as senior management, 75 ($\pm 9.5\%$) as middle management, and 75 ($\pm 9.5\%$) as front-line workers. In the survey, we tested the participation and volume of participation in eight types of knowledge flows:</p> <p>1) In which of the following activities do you participate:</p> <ul style="list-style-type: none"> • Use social media to connect with other professionals (e.g., blogs, Twitter, and LinkedIn) • Subscribe to Google alerts • Attend conferences • Attend Web-casts • Share professional information and advice over the telephone • Arrange lunch meetings with other professionals to exchange ideas and advice • Participate in community organizations • Participate in professional organizations <p>2) How often do you participate in each of the above professional activities?</p> <ul style="list-style-type: none"> • Daily • Several times a week • Weekly • A few times a month • Monthly • Once every few months • Once a year • Less often than once a year <p>The knowledge flow activities were normalized by the maximum possible participation for each activity (e.g., daily for social media and weekly for Web-casts).</p> <p>Thus, an Inter-firm Knowledge Flow value was calculated for each individual based on his or her participation in knowledge flows. The average of these flows is the index value for the Inter-firm Knowledge Flow value metric.</p> <p>Data Sources: Data were obtained from the proprietary Deloitte survey and analysis.</p>

Metric	Methodology
Flow Amplifiers	
Worker Passion	<p>Definition: The Worker Passion metric measures how passionate U.S. workers are about their jobs. Passionate workers are fully engaged in their work and their interactions and strive for excellence in everything they do. Therefore, worker passion acts as an amplifier to the knowledge flows, thereby accelerating the growth of the Flow Index.</p> <p>Calculations: Our exploration of worker passion was designed around a national survey with 3,201 respondents. The survey was administered online in March 2009. The results are based on a representative (90% confidence level) sample of approximately 200 ($\pm 5.8\%$) respondents in 15 industries, including 50 respondents ($\pm 11.7\%$) tagged as senior management, 75 ($\pm 9.5\%$) as middle management, and 75 ($\pm 9.5\%$) as front-line workers.</p> <p>In the survey, we tested different attitudes and behavior around worker passion—excitement about work, fulfillment from work, and willingness to work extra hours—using the following six statements/questions:</p> <p>Please tell us how much you agree or disagree with each statement below relating to your specific job (7-point scale from strongly agree to strongly disagree):</p> <ol style="list-style-type: none"> 1) I talk to my friends about what I like about my job. 2) I am generally excited to go to work each day. 3) I usually find myself working extra hours, even though I don't have to. 4) My job gives me the potential to do my best. 5) To what extent do you love your job? (7-point scale from a lot to not at all) 6) Which of the following statements best describes your current situation? <ul style="list-style-type: none"> • I'm currently in my dream job at my dream company. • I'm currently in my dream job, but I'd rather be at a different company. • I'm not currently in my dream job, but I'm happy with my company. • I'm not currently in my dream job, and I'm not happy at my company. <p>A response was classified as a "top two" response if it was a 7 or 6 on the 7-point scales or a 1 or 2 on the last question.</p> <p>The respondents were then classified as "disengaged," "passive," "engaged," and "passionate" based on the number of "top two" responses:</p> <ul style="list-style-type: none"> • Passionate: 5-6 of the statements • Engaged: 3-4 of the statements • Passive: 1-2 of the statements • Disengaged: None of the statements <p>The index value for Worker Passion is the percentage of "passionate" respondents to the number of total respondents.</p> <p>Data Sources: Data were obtained from the proprietary Deloitte survey and analysis.</p>

Impact Index

Metric	Methodology
Markets	
Competitive Intensity	<p>Definition: The Competitive Intensity metric is a measure of market concentration and serves as a rough proxy for how aggressively firms interact.</p> <p>Calculations: The metric is based on the HHI, a methodology used in competitive and antitrust law to assess the impact of large mergers and acquisitions on the concentration of market power. Underlying the metric is the notion that markets where power is more widely dispersed are more competitive. This logic is consistent with the Big Shift, which predicts that industries will initially fragment as the traditional benefits of scale decline with barriers to entry. As strategic restructuring occurs, and companies begin to focus more tightly on a core business type, certain firms will once again begin to exploit powerful economies of scale and scope, but in a much more focused manner.</p> <p>Data Source: The metric was calculated by Deloitte, using data provided by Standard & Poor's Compustat on over 20,000 publicly traded U.S. firms (and foreign companies trading in American Depository Receipts). It is available annually and by industry sector through 1965.</p>
Labor Productivity	<p>Definition: The Labor Productivity metric is a measure of economic efficiency that shows how effectively economic inputs are converted into output. The metric is a proxy for the value creation resulting from the Big Shift and enriched knowledge flows.</p> <p>Calculations: Productivity data were downloaded directly from the Bureau of Labor Statistics database.</p> <p>The Bureau of Labor Statistics does not compute productivity data by the exact sectors analyzed in the Shift Index. Therefore, labor productivity by industry was derived using data published by the Bureau. Bureau data were aggregated by five, four, and sometimes three digit NAICS codes using Bureau methodology to map to the Shift Index sectors.</p> <p>Sector labor productivity figures were calculated as a ratio of the output of goods and services to the labor hours devoted to the production of that output. A sector output index was calculated using the Tornqvist formula (the weighted aggregate of the growth rates of the various industries between two periods, with weights based on the industry shares in the sector value of production). The input was calculated as a direct aggregation of all industry employee hours in the sector.</p> <p>Data Sources: The metric was based on the Bureau of Labor Statistics data. Major sector data are available annually beginning in 1947, and detailed industry data on a NAICS basis are available annually beginning in 1987.</p>

Metric	Methodology
Stock Price Volatility	<p>Definition:</p> <p>The Stock Price Volatility metric is a measure of trends in movement of stock prices. The metric is a proxy for measuring disruption and uncertainty.</p> <p>Calculations:</p> <p>Standard deviation is a statistical measurement of the volatility of a series. Our data provider, Center for Research in Security Prices (CRSP) at the University of Chicago Booth School of Business, provides annual standard deviations of daily returns for any given portfolio of stocks. Rather than using an equal-weighted approach, we used value-weighting.</p> <p>According to CRSP: “In a value-weighted portfolio or index, securities are weighted by their market capitalization. Each period the holdings of each security are adjusted so that the value invested in a security relative to the value invested in the portfolio is the same proportion as the market capitalization of the security relative to the total portfolio market capitalization” (http://www.crsp.com/support/glossary.html).</p> <p>Data Sources:</p> <p>Established in 1960, CRSP maintains the most complete, accurate, and user-friendly securities database available. CRSP has tracked prices, dividends, and rates of return of all stocks listed and traded on the New York Stock Exchange since 1926, and in subsequent years, it has also started to track the NASDAQ and the NYSE Arca.</p> <p>http://www.crsp.com/documentation/product/stkind/calculations/standard_deviation.html</p>
Firms	
Asset Profitability	<p>Definition:</p> <p>Asset Profitability (ROA) is a widely used measure of corporate performance and a strong proxy for the value captured by firms relative to their size.</p> <p>Calculations:</p> <p>In the Shift Index, Asset Profitability is an aggregate measure of the net income after extraordinary items generated by the economy (defined as all publicly traded firms in our database) divided by the net assets, which includes all current assets, net property, plants, and equipment, and other non-current assets. Net income in this case was calculated after taxes, interest payments, and depreciation charges.</p> <p>Data Sources:</p> <p>The metric was calculated by Deloitte, using data provided by Standard & Poor’s Compustat on over 20,000 publicly traded U.S. firms (and foreign companies trading in American Depository Receipts). It is available annually and by industry sector through 1965.</p>

Metric	Methodology
ROA Performance Gap	<p>Definition: The ROA Performance Gap tracks the bifurcation of returns flowing to the top and bottom quartiles of performers and is a proxy for firm performance.</p> <p>Calculation: This metric consists of the percentage difference in ROA between these groups and is a measure of how value flows to or from “winners” and “losers” in an increasingly competitive environment.</p> <p>Data Sources: The metric is based on an extensive database provided by Standard & Poor’s Compustat. It was calculated by Deloitte. The metric is available annually and by industry sector through 1965.</p>
Firm Topple Rate	<p>Definition: The Firm Topple Rate measures the rate at which companies switch ranks, as defined by their ROA performance. It is a proxy for dynamism and upheaval and represents how difficult or easy it is to develop a sustained competitive advantage in the world of the Big Shift.</p> <p>Calculations: To calculate this metric, we used a proprietary methodology developed within Oxford’s Said School of Business and the University of Cologne that measures the rate at which firms jump ranks normalized by the expected rank changes under randomness. A topple rate close to zero denotes that ranks are perfectly stable and that it is relatively easy to sustain a competitive advantage, whereas a value near one means that ranks change randomly, and that doing so is uncommon and incredibly difficult.</p> <p>We applied this methodology to firms with more than \$100 million in annual net sales and averaged the results from our 15 industry sectors to reach an economy-wide figure.</p> <p>Data Sources: This metric is based on data from Standard & Poor’s Compustat. It was calculated annually and by industry sector through 1965.</p>

Metric	Methodology
Shareholder Value Gap	<p>Definition: The Shareholder Value Gap metric is defined in terms of stock returns, and it aims to quantify how hard it is for companies to generate sustained returns to shareholders. It is another assessment of the bifurcation of “winners” and “losers.”</p> <p>Calculations: The calculation uses the weighted average TRS percentage for both the top and bottom quartiles of firms in our database, in terms of their individual TRS percentages, to define the gap. Total returns are annualized rates of return reflecting price appreciation plus reinvestment of monthly dividends and the compounding effect of dividends paid on reinvested dividends.</p> <p>Data Sources: The metric is based on Standard & Poor’s Compustat data and is available annually and by industry sector through 1965.</p>

People	
Consumer Power	<p>Definition: The Consumer Power metric measures the value captured by consumers. In a world disrupted by the Big Shift, consumers continue to wrestle more power from companies.</p> <p>Calculations: A survey was administered online in March 2009 to a sample of 2,000 U.S. adults (at least 18 years old) who use a consumer category in question and can name a favorite brands in that category. The sample demographics were nationally balanced to the U.S. census. A total of 4,292 responses were gathered as consumers were allowed to respond to surveys on multiple consumer categories. A total of 26 consumer categories were tested with approximately 180 (±6.2%, 90% confidence level) responses per category.</p> <p>We studied a shift in Consumer Power by gathering 4,292 responses across 26 consumer categories to a set of six statements measuring different aspects, attributes, and behaviors involving consumer power:</p> <ul style="list-style-type: none"> • There are a lot more choices now in the (consumer category) than there used to be. • I have convenient access to choices in the (consumer category). • There is a lot of information about brands in the (consumer category). • It is easy for me to avoid marketing efforts. • I have access to customized offerings in the (consumer category). • There isn't much cost associated with switching away from this brand. <p>Each participant was asked to respond to these statements on a 7-point scale, ranging from 7=completely agree to 1=completely disagree. An average score was calculated for each respondent and then converted to a 0–100 scale.</p> <p>The index value for the Consumer Power metric is the average consumer power score of all respondents.</p> <p>Data Sources: Data were obtained from the proprietary Deloitte survey and analysis.</p>

Metric	Methodology
Brand Disloyalty	<p>Definition:</p> <p>The Brand Disloyalty metric is another measure of value captured by consumers. As a result of increased consumer power and a generational shift in reliance on brands, the Brand Disloyalty measure is an indicator of consumer gain stemming from the Big Shift.</p> <p>Calculations:</p> <p>A survey was administered online in March 2009 to a sample of 2,000 U.S. adults (at least 18 years old) who use a consumer category in question and can name a favorite brands in that category. The sample demographics were nationally balanced to the U.S. census. A total of 4,292 responses were gathered as consumers were allowed to respond to surveys on multiple consumer categories. A total of 26 consumer categories were tested with approximately 180 ($\pm 6.2\%$, 90% confidence level) responses per category.</p> <p>We studied a shift in Brand Disloyalty by gathering 4,292 responses across 26 consumer categories to a set of six statements measuring different aspects, attributes, and behaviors involving brand disloyalty:</p> <ul style="list-style-type: none"> • I would consider switching to a different brand. • I compare prices for this brand with other brands. • I seek out information about other brands. • I ask friends about the brands they use. • I switch to the brand with the lowest price. • I pay attention to advertising from other brands. <p>Each participant was asked to respond to these statements on a 7-point scale, ranging from 7=completely agree to 1=completely disagree. An average score was calculated for each respondent and then converted to a 0–100 scale.</p> <p>The index value for the Brand Disloyalty metric is the average brand disloyalty score of all respondents.</p> <p>Data Sources:</p> <p>Data were obtained from the proprietary Deloitte survey and analysis.</p>

Metric	Methodology
Returns to Talent	<p>Definition: The Returns to Talent metric examines fully loaded compensation between the most and least creative professions. The metric is a proxy for the value captured by talent.</p> <p>Calculations: The most and least creative occupations were leveraged from Florida’s study. A fully loaded salary (cash, bonuses, and benefits) was calculated for each group, and the differences were measured.</p> <p>Data Sources: The most and least creative occupations were obtained from Florida’s book <i>The Rise of the Creative Class</i>. Fully loaded salary information was gathered from the Bureau of Labor Statistics data leveraging the Occupational Employment Statistics (OES) Department and Employer Cost for Employee Compensation information (ECEC). The analysis was performed by Deloitte.</p> <p>ECEC: http://www.bls.gov/ect/home.htm OES: http://www.bls.gov/OES/ Creative Class Group: http://www.creativeclass.com/</p>
Executive Turnover	<p>Definition: The Executive Turnover metric measures executive attrition rates. It is a proxy for tracking the highly unpredictable, dynamic pressures on the market participants with the most responsibility—executives.</p> <p>Calculations: The data were obtained from the Liberum Research (Wall Street Transcript) Management Change database and measures the number of executive management changes (from a board of director through vice president level) in public companies. For the purposes of this analysis, we summed the number of executives who resigned from, retired, or were fired from their jobs and then normalized that one number, each year from 2005 to 2008, against the number of total management occupational jobs reported by the Bureau of Labor Statistics (Occupation Employment Statistics) for each of those years. Liberum Research’s Management Change Database is an online SQL database. Each business day, experts examine numerous business wire services, government regulatory filings (e.g., SEC 8K filings), business periodicals, newspapers, RSS feeds, corporate and business-related blogs, and specified search alerts for executive management changes. Once an appropriate change is found, Liberum’s staff inputs the related management change information into the management change database. Below are the overall management changes tracked by Liberum:</p> <ul style="list-style-type: none"> • I - Internal move, no way to differentiate if the move is lateral, a promotion, or a demotion • J - Joining, hired from the outside • L - Leaving, SEC 8K or press release contains information that states individual has left the firm; no indication of a resignation, retirement, or firing • P - Promotion, moved up the corporate ladder • R - Resigned/retired • T - Terminated <p>Data Sources: Liberum Research (a division of Wall Street Transcript); http://www.twst.com/liberum.html OES: http://www.bls.gov/OES/</p>

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Deloitte Center for the Edge

The Center focuses on the boundary, or edge, of the global business environment where strategic opportunity is the highest

The Deloitte Center for the Edge conducts original research and develops substantive points of view for new corporate growth. The Silicon Valley-based Center helps senior executives make sense of and profit from emerging opportunities on the edge of business and technology. Center leaders believe that what is created on the edge of the competitive landscape—in terms of technology, geography, demographics, markets—inevitably strikes at the very heart of a business. The Center’s mission is to identify and explore emerging opportunities related to big shifts that aren’t yet on the senior management agenda, but ought to be. While Center leaders are focused on long-term trends and opportunities, they are equally focused on implications for near-term action, the day-to-day environment of executives.

Below the surface of current events, buried amid the latest headlines and competitive moves, executives are beginning to see the outlines of a new business landscape. Performance pressures are mounting. The old ways of doing things are generating diminishing returns. Companies are having harder time making money—and increasingly, their very survival is challenged. Executives must learn ways not only to do their jobs differently, but also to do them better. That, in part, requires understanding the broader changes to the operating environment:

- What’s really driving intensifying competitive pressures?
- What long-term opportunities are available?
- What needs to be done today to change course?

Decoding the deep structure of this economic shift will allow executives to thrive in the face of intensifying competition and growing economic pressure. The good news is that the actions needed to address near-term economic conditions are also the best long-term measures to take advantage of the opportunities these challenges create. For more information about the Center’s unique perspective on these challenges, visit www.deloitte.com/centerforedge.



John Hagel (Co-Chairman) has nearly 30 years’ experience as a management consultant, author, speaker and entrepreneur, and has helped companies improve their performance by effectively applying information technology to reshape business strategies. In addition to holding significant positions at leading consulting firms and companies throughout his career, Hagel is the author of a series of best-selling business books, including *Net Gain*, *Net Worth*, *Out of the Box*, and *The Only Sustainable Edge*.



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This report is a sequel to the recently released 2009 Shift Index that provided an overview of long-term forces shaping the U.S. economy. In this report, we take the aggregate data for the U.S. economy and break it down into nine industries, providing decision-makers with a much clearer view of how these forces are playing out in a variety of industries. This analysis confirms that competitive and performance pressures are mounting across most industries and that companies are encountering growing difficulties in addressing these pressures. Widespread erosion in performance suggests a need to reassess management practices at a fundamental level. Such a reassessment might help to more effectively address the significant opportunities created by the Big Shift.

This report puts a number of key questions on the leadership agenda: Are companies organized to effectively generate and participate in a broader range of knowledge flows, especially those that go beyond the boundaries of the firm? How can they best create and capture value from such flows? And most importantly, how do they measure their progress navigating the Big Shift in the business landscape? We hope that this report will help executives to answer these questions in the context of their specific industries—in these difficult times and beyond.

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