



THE BOSTON CONSULTING GROUP

# Collateral Damage

*Part 7: Green Shoots, False Positives, and What Companies Can Learn from the Great Depression*

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# Collateral Damage

## Part 7: Green Shoots, False Positives, and What Companies Can Learn from the Great Depression<sup>1</sup>

*“Gentlemen, you have come 60 days too late. The depression is over.”*

*With those optimistic words, President Herbert Hoover welcomed his guests—a delegation of banking officials and religious leaders concerned about rising joblessness—in June 1930. The U.S. economy was indeed showing signs of stabilization, and the Harvard Economic Society had even predicted an upswing for the second half of 1930. But as we all know now, the worst of the Great Depression was yet to come.*

*Readers of our Collateral Damage series of papers will know that we have taken a consistently cautious view of the prospects for the global economy. We still expect an upturn in early 2010. For us, it is not about the precise timing of the upturn, but more the nature of the recovery: we expect this upturn to be sluggish—as with all upturns after a recession that is synchronized around the globe and preceded by systemic financial stress. And in a sluggish economy, trading conditions will be tougher, competitive advantage more important, and broken business models exposed.<sup>1</sup>*

*In recent conversations at companies the world over, we have detected a change in the mindset of many executives. Many seem to be adopting a more optimistic economic outlook. They tell us that they see “green shoots.” But although government intervention means that we are unlikely to see the bank failures that contributed to the paralysis of the 1930s, we should nonetheless learn from Hoover’s hubris—and take it as a warning to be cautious about any premature celebrations of the upturn.*

*In this paper, we have taken a closer look at the green shoots phenomenon. Are the signs of stabilization and recovery reliable? Do they allow us to predict the timing and strength of the next upswing? As we explain in Part 1 of this paper, green shoots are notoriously difficult to call—except in hindsight.*

*We have also consistently argued that good companies simultaneously prepare for tough times and create a platform for growth beyond the downturn. We examined all the major recessions from the Great Depression onward—and it was the Great Depression that provided some of the clearest messages for today’s management teams. So while we do not expect a repeat of the Great Depression, there is much we can learn from the companies that prepared well and used the crisis to fundamentally improve their competitive position. In Part 2 of this paper, we tell some of those inspiring stories and distill some of the lessons. (See the sidebar “In Summary” for an overview of our findings on green shoots and lessons from the Great Depression.)*

*Of course, history is written by the victors, as Winston Churchill famously observed. And his observation is just as true about economic history. Any research identifying what distinguishes companies that outperformed during the Great Depression inevitably suffers from survivor bias. So in drawing lessons from what the winners appear to have done well, we should recognize that there may be other companies that pursued the same path—and failed. But we were also drawn to another Churchill observation that seems to characterize the winners from the 1930s: “A pessimist sees the difficulty in every opportunity; an optimist sees the opportunity in every difficulty.”*

### 1. Green Shoots Everywhere—Is the Worst Behind Us?

In 2007—just two years ago—the consensus was that the world was in a golden period of sustained economic growth. The outlook was very favorable, fueled by emerging countries integrating into the world economy and hundreds of millions of new consumers appearing on the back of the prosperity created by globalization and trade. Low inflation, low interest rates, and stable exchange rates all contributed to the positive outlook, leading commentators to draw comparisons with the “Goldilocks” economy of the late 1990s.

1. See *Collateral Damage, Part 5: Confronting the New Realities of a World in Crisis*, BCG White Paper, March 2009.

## In Summary

### The economy and the question of green shoots

- ◇ The downturn will be long and deep
- ◇ Some economic indicators are declining at a slower rate or even turning positive—but others remain quite depressed
- ◇ Many individual indicators can signal false positives and are therefore unreliable
- ◇ Even positive economic trends can prove volatile or reverse themselves
- ◇ It is dangerous to look at individual economic indicators in isolation—they sometimes tell only part of the story
- ◇ When growth returns next year, it will remain sluggish for some time

### Lessons from the Great Depression

- ◇ There were companies that outperformed
- ◇ The lessons from the winners remain relevant today
- ◇ Controlling costs is a prerequisite for surviving and thriving
- ◇ Be decisive in cutting costs, but preserve the core—focus on efficiency and capacity and don't put all your energy into dabbling with low-impact discretionary spending
- ◇ Variabilize costs and reduce breakeven levels
- ◇ Protect cash
- ◇ Protect revenues and recognize that new opportunities can emerge as consumers and corporate customers reprioritize their purchasing
- ◇ Reposition your product portfolio in line with these changing customer behaviors
- ◇ Remember that slashing the marketing budget is often not the answer; some winners actually increase their marketing expenditures
- ◇ Anticipate and capitalize on government spending
- ◇ Invest in the future: stay committed to R&D and take advantage of the stronger value environment for M&A
- ◇ Retain your talent; tough times offer opportunities to improve the quality of your workforce
- ◇ Strong and decisive leadership really does make a difference in tough times
- ◇ Pick your battles: take action where you can get the highest payback without diluting your resources

The current downturn has evolved with startling speed—as evidenced by the International Monetary Fund's constantly changing forecasts. In October 2008, the IMF forecast 3 percent growth in world GDP for 2009. The forecast has since been officially revised downward three times. The IMF now predicts that the world economy will contract by 1.3 percent, shrinking for the first time since the Second World War.

Today, after seeing the deepest drop in economic activity since the Great Depression, it is just as easy to assume that the slump will continue forever. But such unbridled pessimism would be as wrong as were the assumptions about the prolonged period of growth.

### A. Signs of Hope

There are indeed some reasons for hope, and headlines such as “Worst of Recession Over, Says CBI”<sup>2</sup> and “Signs of Green Shoots Raise Hopes”<sup>3</sup> are beginning to appear in the media. A cautious optimism has also emerged among central banks. According to Mervyn King, governor of the Bank of England, “Growth has just as much chance of being positive over the next 12 months as it has of being negative.”<sup>4</sup> Ben Bernanke,

2. *Financial Times*, April 20, 2009.

3. *Financial Times*, April 3, 2009.

4. “Sickly Britain Crawls Towards Low Growth,” *Independent*, May 14, 2009.

chairman of the Federal Reserve, echoes this sentiment: “We continue to expect economic activity to bottom out, then to turn up later this year.”<sup>5</sup> And in an early May survey of 45 U.S. economists by the National Association for Business Economics, 90 percent of the respondents expected the U.S. recession, which began in the fourth quarter of 2007, to end by late 2009.

Sometimes, however, one must look beyond the headlines. In an interview breezily reported under such headlines as “Soros Sees Easing of Downward Economic Spiral” and “Soros: Worst of Economic Crisis Behind Us,” U.S. investor George Soros said, “The economic freefall has been stopped, the collapse of the financial system averted. National economic stimulus programs are starting to take effect. The downward dynamic is easing...*I expect the recovery to make up for around half of the downturn we have had and then to move into stagnation*” [italics ours]—clearly a less optimistic message than the headlines might indicate.<sup>6</sup>

Nonetheless, there are indeed some signs supporting those who claim that the world economy has stabilized. We list just a few of them:

- ◇ In April 2009, the closely watched U.S. Purchasing Managers Index (PMI), reported by the Institute for Supply Management, registered its fourth consecutive month of growth
- ◇ In May 2009, the U.S. Consumer Confidence Index experienced its biggest jump in six years
- ◇ In Germany, manufacturers reported improved order inflow in March 2009
- ◇ Japanese industrial production grew 5.2 percent April, the biggest monthly increase in 50 years, and exports rose 7.8 percent in April
- ◇ In the United Kingdom, mortgage approvals have risen since February; house prices have crept up (albeit on very weak demand); and retail sales have shown signs of stabilizing
- ◇ Credit markets show signs of normalization: LIBOR (the London Interbank Offer Rate) has declined to 0.66 percent after hitting a high of 4.82 percent in October, and the TED spread (the three-month dollar LIBOR minus the interest rate on three-month Treasury bills), an indicator of perceived credit risk (because of the risk-free status of T-bills), reached an 11-month low of 0.48 percent in May 2009
- ◇ Credit availability for companies of all sizes in the United States has improved, according to the recent Senior Loan Officer Opinion Survey undertaken by the Federal Reserve—and the cost for buying credit insurance has declined significantly since November 2008
- ◇ U.S. house prices are falling at a decelerating rate and are already considered by some to be undervalued given the relative cost of new construction—the ratio of house prices to income is nearly 20 percent below its long-term average, and the ratio of house prices to rent is nearly 10 percent below its long-term average
- ◇ In spite of continued volatility, global stock markets have gained between 30 and 50 percent since hitting their lows in March 2009

Basic mathematics dictates that we will eventually see a slowing in the rate of deterioration of the economy over time: unless economic activity progressively approaches zero, the speed of deterioration has to moderate. More important, these signs of stabilization reflect the fact that central banks and governments all over the world have intervened in a material way. First, the central banks have introduced unprecedented low interest rates and undertaken quantitative easing in the form of direct purchases of government bonds in order to increase the money supply. Second, governments around the world have committed more than \$2 trillion in stimulus packages. In the United States alone, the stimulus package amounts

5. “Bernanke Sees Hopeful Signs but No Quick Recovery,” *New York Times*, May 5, 2009.

6. *Frankfurter Allgemeine Zeitung*, May 11, 2009 (as reported at <http://www.reuters.com/article/marketsNews/idUSLB65783520090511>).

to about \$800 billion—surpassing both the Marshall Plan and Roosevelt’s New Deal—and the 2009 federal budget deficit at \$1.8 trillion is the largest in U.S. history. All these interventions will have an impact on the real economy—although many of the measures will not become effective until 2010.

It is reasonable to assume that these interventions will prevent a deeper recession and head off a repetition of a crisis similar in magnitude to the Great Depression. But forestalling a depression or achieving stabilization is not the same as ensuring recovery.

### **B. A Closer Look at the Green Shoots**

When we look at past recessions, it becomes apparent that identifying the timing of the upswing is easier with the benefit of hindsight than when one is looking for prospective signs in the middle of the recession. As baseball legend Yogi Berra once said, “It’s tough to make predictions, especially about the future.” Yet the supply of economic forecasts has been stemmed neither by Berra’s wise words nor by economists’ poor forecasts prior to the global crash. Having repeatedly revised their outlook downward over the past 12 months, forecasters are now projecting that global GDP growth will turn positive sometime around the end of this year. Olivier Blanchard, the chief economist at the IMF, said in an April 22 press conference that global growth “should turn positive at the end of 2009” with the emerging economies leading the way, followed by the OECD economies.

We decided to look at a range of popular indicators in order to see which might be reliable signals of an upswing. There are three broad types of indicators:

- ◇ Leading indicators (such as consumer confidence), which turn upward before GDP does, signaling an imminent recovery
- ◇ Coincident indicators, which generally turn upward concurrently with GDP
- ◇ Lagging indicators (such as unemployment rates), which turn upward after GDP does

We analyzed a total of 61 indicators for five of the world’s largest economies—the United States, Germany, France, the United Kingdom, and Japan. We selected indicators covering the five main categories of economic activity—consumption, business output and investment, labor markets, asset markets (housing and financial), and monetary policy. Within each category, we chose indicators that have led the recovery in GDP in previous recessions, compiling our list from a range of sources, including the OECD and The Conference Board—which also publish composite leading indicator indices. We then analyzed the indicators, dividing them into four categories based on the trend in their monthly growth rates:

- ◇ Group 1 indicators were clearly positive, had grown consistently for more than three months, and had recovered to 2007 levels
- ◇ Group 2 indicators were beginning to display a positive trend through three consecutive months of growth
- ◇ Group 3 indicators were showing some deceleration in the rate of decline but no consistent upturn was apparent
- ◇ Group 4 indicators were continuing to show a consistently negative trend

Less than 10 percent of these indicators are in group 1 (at the time of writing in early June 2009), and while a quarter are showing positive trends, it is still too early to confirm an upturn. (See Exhibit 1.) Almost 60 percent are in group 3 and the remaining 8 percent are in group 4. And even among the indicators showing signs of an upturn (groups 1 and 2), nearly half are driven by monetary policy—such as interest rate spreads and the money supply. Less than a quarter of non-policy-led indicators have shown any positive sparks.

Many important signals of consumer demand, such as new orders in manufacturing and new orders in construction, are still in groups 3 and 4. These have shown some slowing in the rate of decline in the last

## Exhibit 1. There Are Few Signs of Recovery

	Group 1 Clearly positive <sup>1</sup>	Group 2 Positive trend but too early to confirm <sup>2</sup>	Group 3 Rate of decline decelerating but no positive trend <sup>3</sup>	Group 4 Consistently negative trend with no sign of upturn <sup>4</sup>
<b>United States</b>	<ul style="list-style-type: none"> <li>◇ Spread between long and short interest rates</li> <li>◇ Money supply (M2, inflation adjusted)</li> </ul>	<ul style="list-style-type: none"> <li>◇ Consumer confidence index</li> <li>◇ Manufacturing PMI</li> <li>◇ Index of new orders (manufacturing survey)</li> <li>◇ S&amp;P 500 stock market index</li> </ul>	<ul style="list-style-type: none"> <li>◇ New home sales</li> <li>◇ New building permits (residential)</li> <li>◇ Dwellings started</li> <li>◇ Nominal retail sales</li> <li>◇ Nominal auto sales</li> <li>◇ Inventories-to-sales ratio</li> <li>◇ Index of vendor performance (speed of delivery)</li> <li>◇ Net new orders for durable goods</li> </ul>	<ul style="list-style-type: none"> <li>◇ Average weekly hours in manufacturing</li> </ul>
<b>Germany</b>	<ul style="list-style-type: none"> <li>◇ Spread between long and short interest rates</li> </ul>	<ul style="list-style-type: none"> <li>◇ Consumer confidence index</li> <li>◇ DAX stock market index</li> </ul>	<ul style="list-style-type: none"> <li>◇ Money supply (M2, inflation adjusted)</li> <li>◇ Nominal retail sales</li> <li>◇ New car registrations</li> <li>◇ New orders for residential construction</li> <li>◇ Business climate index</li> <li>◇ Orders inflow index (manufacturing survey)</li> <li>◇ Finished goods stocks index (manufacturing survey)</li> <li>◇ New orders (manufacturing)</li> <li>◇ Export order books index (manufacturing survey)</li> </ul>	
<b>Japan</b>		<ul style="list-style-type: none"> <li>◇ Spread between long and short interest rates</li> <li>◇ Money supply (M2, inflation adjusted)</li> <li>◇ Consumer confidence index</li> <li>◇ TOPIX stock market index</li> </ul>	<ul style="list-style-type: none"> <li>◇ Nominal retail sales</li> <li>◇ New car registrations</li> <li>◇ Dwellings started</li> <li>◇ Inventories-to-shipments ratio</li> <li>◇ Hours worked overtime in manufacturing</li> <li>◇ Ratio of imports to exports</li> </ul>	<ul style="list-style-type: none"> <li>◇ Index of sales tendency (small business survey)</li> </ul>
<b>France</b>	<ul style="list-style-type: none"> <li>◇ Spread between long and short interest rates</li> </ul>	<ul style="list-style-type: none"> <li>◇ Index of finished goods inventories (manufacturing survey)</li> <li>◇ SBF 250 stock market index</li> </ul>	<ul style="list-style-type: none"> <li>◇ Money supply (M2, inflation adjusted)</li> <li>◇ Consumer confidence index</li> <li>◇ Dwellings started</li> <li>◇ Nominal retail sales</li> <li>◇ New car registrations</li> <li>◇ Future expectation of own production (manufacturing)</li> <li>◇ Future expectation of overall industrial production</li> <li>◇ Index of order book level (manufacturing survey)</li> </ul>	
<b>United Kingdom</b>	<ul style="list-style-type: none"> <li>◇ Spread between long and short interest rates</li> </ul>	<ul style="list-style-type: none"> <li>◇ Money supply (M2, inflation adjusted)</li> <li>◇ Consumer confidence index</li> <li>◇ Mortgage approvals for house purchases</li> </ul>	<ul style="list-style-type: none"> <li>◇ Nominal retail sales</li> <li>◇ Future expectation of own production (manufacturing)</li> <li>◇ Business climate indicator</li> <li>◇ Index of order book level (manufacturing survey)</li> <li>◇ FTSE-A (nonfinancial index)</li> </ul>	<ul style="list-style-type: none"> <li>◇ New car registrations</li> <li>◇ Finished goods inventories (level in past four months)</li> <li>◇ Unemployment benefits (claimant count)</li> </ul>
<b>Number of indicators</b>	<b>5</b>	<b>15</b>	<b>36</b>	<b>5</b>

Sources: Thomson Datastream; BCG analysis.

Note: Stock indices are placed in group 2 if they show positive growth for six weeks; all data are latest available (March/April 2009).

<sup>1</sup>Indicator has recovered to last year's level.

<sup>2</sup>Indicator has had positive month-on-month growth for the last three months.

<sup>3</sup>No consistent trend in the last three months.

<sup>4</sup>Indicator has had negative month-on-month growth for the last three months.

quarter, but there is not yet a positive trend. Retail sales, for example, have yet to show any consistent upward movement, even though consumer confidence has increased. The Purchasing Managers Index in many countries has started to increase, indicating a rebound in manufacturing, but exports are largely still down. Two major leading indicators of labor markets—the average weekly hours in manufacturing in the United States and the unemployment benefit claimant count in the United Kingdom—continue to worsen, with no signs of bottoming out. Furthermore, falling house prices will continue to affect demand as consumers' net worth falls: in March 2009 alone, the drop in U.S. house prices resulted in a \$360 billion loss to household net worth. Though undervalued, U.S. house prices will likely continue to fall because the number of unsold homes is near a record high, employment and wages continue to fall, and the recent spike in Treasury yields appears to be pushing up interest rates.

It is not all gloom and doom, however. When we analyzed the same set of indicators for December 2008, we found that the picture was much worse. (See Exhibit 2.) Only 11 percent of the indicators had shown any upturn, and a whopping 61 percent of the indicators were still in group 4 (continuing to decline). The biggest change since then has been the shift from group 4 into group 3—that is, a shift from a continued “free fall” into what appears to be a slower decline.

Things are clearly better today than they were three months ago. As Jean-Claude Trichet, president of the European Central Bank, said, the economy appears to be “around the inflection point.”<sup>7</sup> The free fall of the last few quarters appears to have moderated and we are now experiencing a slower rate of decline. Nonetheless, there are few signs that we are back on a positive trajectory.

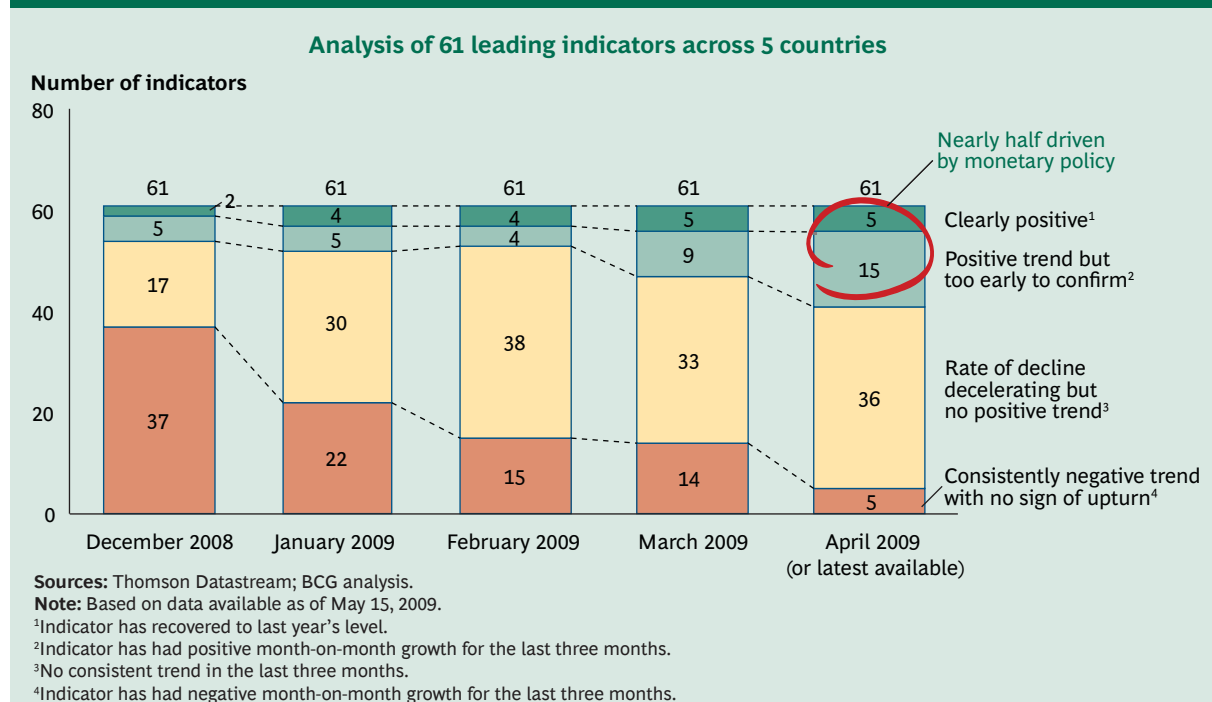
### C. Don't Bank on It

In addition to the fact that only a few indicators are clearly positive, we need to keep in mind several other factors.

**Individual indicators are not reliable.** The past performance of leading indicators has been inconsistent. Those that have led in some recessions have lagged in others. We looked at the performance of

7. “Downturn Bottomed Out, Trichet Signals,” *Financial Times*, May 11, 2009.

## Exhibit 2. Some Indicators Show Improvement, But There Is No Consistent Upturn

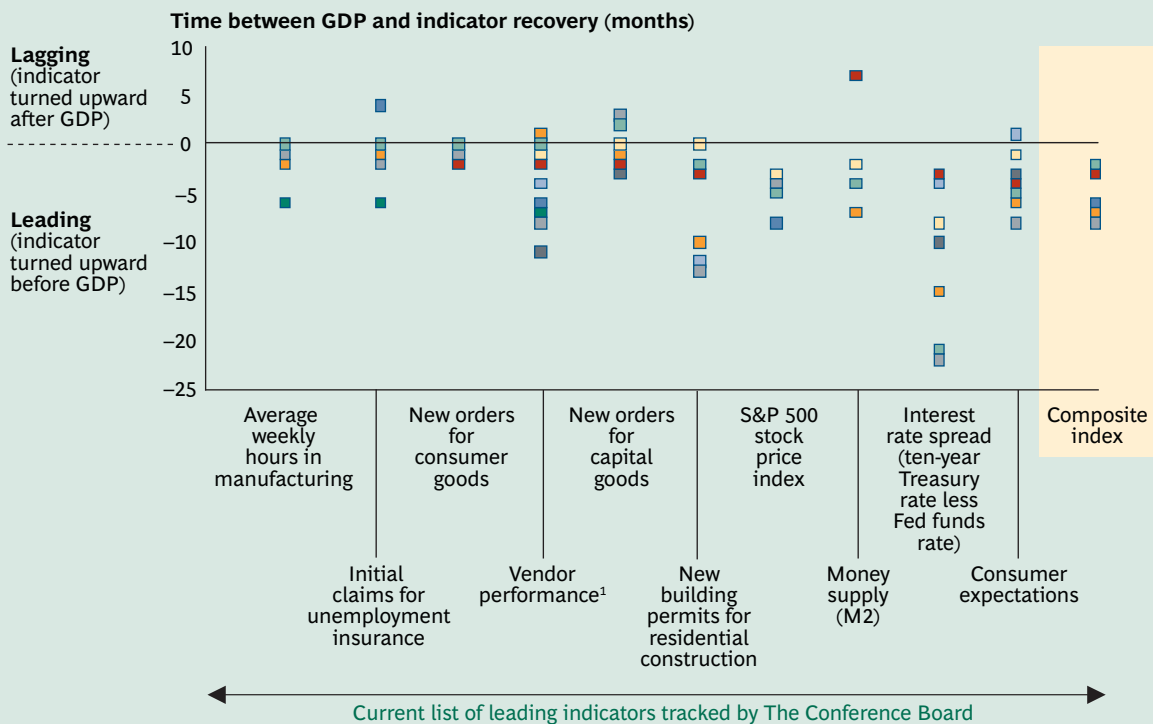


key leading indicators across the last nine major U.S. recessions. (See Exhibit 3.) New orders for capital goods in the United States lagged in the 1991 recession, turning upward only two months after the trough in GDP. Money supply lagged in the 1980 recession, turning upward more than two quarters after the trough in GDP. Even indicators that have consistently turned upward before GDP in past recessions have had large swings in lead times: new building permits turned upward 13 months before the GDP recovery in 1982, but turned upward only 2 months before the recovery in 1991.

This inconsistency occurs largely because the relevance of the individual indicators varies according to the nature of the recession. What appear to have been good indicators in a particular type of recession may not be as useful or relevant for other types of recessions. Over the last few decades, the OECD and The Conference Board have frequently changed the indicators in their composite indices in an attempt to find measures that are better predictors of recovery. For example, only three (of ten) indicators in The Conference Board's current U.S. composite index of leading economic indicators were in that index in 1960. Unfortunately, identifying the relevant indicators is often possible only in retrospect. A composite picture is more reliable, but even the accepted composite indices tend to turn upward only three to four months, on average, before GDP recovery—and have at times been coincident. More important, they can at best predict the end of the down period; they do not in any way predict the shape of the recovery ahead.

### Exhibit 3. Individual Indicators Are Unreliable

Performance of U.S. leading indicators in predicting recovery, 1949–1991



- Past recessions (month of GDP trough)
- October 1948    ■ February 1961    ■ July 1980
  - May 1954      ■ November 1970    ■ November 1982
  - April 1958     ■ March 1975        ■ March 1991

Source: The Conference Board's *Business Cycle Indicators Handbook*.  
 Note: Indicators are from The Conference Board's Leading Economic Index; some data points are missing due to unavailability of indicator data for that period.  
<sup>1</sup>Diffusion index of slower/faster deliveries from suppliers to manufacturers.

**A positive trend may reverse itself.** It is important to beware of false positives. Despite the importance accorded to leading business-cycle indicators, their reliability can be called into question. Because of volatility in the data, an intermittent upturn can be followed by a steep decline and send a false signal of recovery. One of the most celebrated examples of this is the “dead-cat bounce” during the Great Depression. After the stock market crashed in October 1929, the market rallied between November 1929 and April 1930. During the rally, the S&P 500 index regained 60 percent of its lost value and fueled hopes of a quick recovery. Instead, the brief rally was followed by a prolonged decline from 1930 to 1932, which reduced the S&P 500 index to one-seventh of its pre-crisis value. Over the last few months, we have witnessed a similar rally in global stock markets. Whether this is indeed a signal of recovery or simply another bear market rally is impossible to determine with any degree of certainty. It would be best to tread with caution. Several other indicators have provided similar false signals in the past. Even in the current recession, the consumer confidence index for the United States grew for three consecutive months in the second quarter of last year before crashing in the aftermath of the Lehman Brothers collapse.

**Are we looking at the complete picture?** Individual indicators have to be assessed carefully. A good example is a Bloomberg article from March with the rather exuberant headline “Manufacturing Crash Empties Inventories, Sets Stage for Rebound.”<sup>8</sup> U.S. manufacturing inventories have indeed declined rapidly since September 2008, but in the last three months the rate of decline appears to have eased. Many are seeing this as a sign of improvement and a prelude to recovery. Unfortunately, sales have declined at an even faster rate. As a result, the declining trend in inventories is not mirrored in the ratio of inventories to sales, which continues to be significantly higher today at 1.45 than the long-term average of 1.26—in fact, this ratio has increased since September 2008.

**Can we trust the data?** Watch out for data revisions. A lot of the current optimism about green shoots is based on data released in the last few months. Many of these figures are preliminary estimates based on an extrapolation of available data. The numbers are generally revised once the data for the full sample have been received, and these revisions can substantially alter the trend indicated by the preliminary estimates. This has been particularly true for the data on monthly job losses published by the U.S. Bureau of Labor Statistics. Over the last six months, job losses have been underestimated by a cumulative 18 percent—equivalent to about 500,000 jobs.<sup>9</sup> For certain months in the second and third quarters of 2008, revisions increased the initial estimates by as much as 50 percent. In theory, downward and upward revisions of estimates should be equally likely. Over the last 12 months, however, downward revisions have been more common for positive indicators—such as retail sales and industrial production—and upward revisions have been more common for negative indicators such as job losses.

In spite of the signs of stabilization, it is too early in our view to call the end of the recession. This sentiment is shared by some central bankers, including David Blanchflower, a member of the Bank of England’s Monetary Policy Committee, who stated that his “...worry is that there can be many false dawns and we shouldn’t assume that everything is over.”<sup>10</sup> It is also shared by some leading economists, including Martin Feldstein from Harvard University, who wrote that “the key thing to bear in mind is that the stimulus effect is a one-time rise in the level of activity, not an ongoing change in the rate of growth...[It] will appear in official statistics as a temporary rise in the growth rate...but the rate of GDP growth is likely to return to negative territory.”<sup>11</sup> Although stimulus programs can produce green shoots, it remains to be seen if the plants can grow without further fertilization by governments.

#### **D. Major Risks Remain**

There is no doubt that today’s recession will end—like all recessions that have come before it. The important question is what kind of recovery we can expect. As we laid out in the sixth paper of the *Collateral Damage* series, the majority of companies in a March 2009 survey expected a “U-shaped” recession: a deep drop followed by a slow recovery.<sup>12</sup> A sizable minority expect a “V”: a fast recovery back to levels seen in 2007. And some companies fear an “L”: a long period of slow growth at a much lower level of economic

8. Bloomberg.com, March 23, 2009.

9. U.S. Bureau of Labor Statistics.

10. “MPC Lone Ranger David Blanchflower Rides Out with Warning of False Dawn,” *Times*, May 28, 2009.

11. See [http://www.sfbg.com/blogs/bruce/2009/05/feldstein\\_has\\_the\\_us\\_recovery.html](http://www.sfbg.com/blogs/bruce/2009/05/feldstein_has_the_us_recovery.html).

12. See *Collateral Damage, Part 6: Underestimating the Crisis*, BCG White Paper, April 2009.

activity. Skeptical analysts even fear what they call a “sinus-L,” meaning a long period of upswings and downswings driven by government programs on a sustained lower level of economic activity. Indeed, this is what happened in the Great Depression—the New Deal contributed to modest economic improvements, but full recovery only occurred in World War II. As U.S. Treasury Secretary Henry Morgenthau stated in 1939, “We have tried spending money. We are spending more than we have ever spent before and it does not work...I say after eight years of this Administration we have just as much unemployment as when we started, and an enormous debt to boot!”<sup>13</sup>

We see several indicators that point to a sluggish recovery once the prolonged recession is over (and remember, for some countries we are already well over a year into the downturn).

- ◇ **The empirical evidence is discouraging.** The latest *World Economic Outlook* report published by the IMF sets this current recession in its historical context. The report studied 122 recessions that have occurred globally in the last 50 years. It found that two types of recession are particularly long and severe—those preceded by financial crises and those that are globally synchronized. The current recession meets *both* criteria. The report found that recessions combining both characteristics are rare and usually even longer and more severe, lasting seven quarters, on average, from peak to trough—during which time real GDP falls by 4.8 percent. The ensuing recovery is also typically slow and weak, with GDP recovering by only half (2.8 percent) in the first year. In other words, history suggests that most economies will essentially have stood still for nearly four years.
- ◇ **The deleveraging of the U.S. consumer has barely begun.** In the past, U.S. consumption has been the growth engine for the world economy. Today, the U.S. consumer directly accounts for about 17 percent of world GDP. If one were to include all the Chinese toy factories, German machinery, and Japanese trucks that indirectly rely on U.S. consumption, this figure would be even higher. Can the U.S. consumer come to the rescue again?

Over the course of two decades, personal saving rates in the United States dropped from 9 percent to roughly zero, until spiking up suddenly over the last five months to around 4 percent. Unfortunately, much of the strength in consumption was driven by easy credit and inflated house prices. The abrupt collapse of both the housing market and the stock market in 2008 has significantly reduced the net worth of the highly leveraged U.S. consumer. Moreover, under any measure—such as debt servicing ability or personal debt as a percentage of either GDP or net worth—the U.S. consumer is burdened by levels of debt not seen since the Great Depression. Estimates of the amount of consumer deleveraging needed to achieve sustainable levels range from \$1 trillion to \$6 trillion. To put these numbers into perspective, U.S. GDP is approximately \$15 trillion, and U.S. consumer debt has reached 96 percent of GDP. Before the debt-fueled inflation in house prices that began in 1997, consumer indebtedness was approximately 68 percent of GDP—coincidentally the long-term average for the period from 1980 to 2006. It would take \$4 trillion of deleveraging to get back to that level of indebtedness. Unfortunately, any effort by U.S. households to reduce their debt load will reduce global growth significantly. But we do not see an alternative: a return to the credit boom would only exacerbate the debt overhang problem in the future.

- ◇ **Credit is not flowing yet.** Credit is important as a catalyst for growth. For all but three of the last 25 years, between \$3 and \$6 of credit have been required for every \$1 of GDP growth. If credit is in short supply, growth will be constrained. The central banks have pursued a fairly aggressive policy in order to stabilize the banking system and to restore the credit flow in the economy. Even so, while the core U.S. money aggregates such as M1 and M2 are growing at high rates, banks’ outstanding loans and leases in the United States are still declining.<sup>14</sup> This decline might be due to a generally greater reluctance by banks to lend—but it could also be demand-driven, with more borrowers seeking to deleverage.

13. John Morton Blum, *From the Morgenthau Diaries: Years of Urgency, 1938-1941* (Houghton Mifflin, 1959), p. 24.

14. M1 is a narrow definition of money and includes currency plus demand deposits; M2 is a broader measure that includes M1 plus personal savings deposits, time deposits under \$100,000, and money-market funds; and M3 includes M2 along with institutional time deposits, institutional money-market funds, and larger liquid assets.

In the eurozone, household loans have been fairly stable over the last six months while the broader money aggregates (M2 and M3) have shown some growth. Under normal circumstances, we would expect growth in the broader money aggregates and loans to keep pace with—if not outstrip—the growth in M1, because money is multiplied through credit and spending. In the current crisis, however, it is precisely these multipliers that have collapsed.

- ◇ **The banks have not been restored to health.** A total of \$18 trillion worldwide has been earmarked in the form of guarantees, direct capital injections, and asset purchases in order to restore the financial system. Even so, the main problem of the banking system is its insolvency, and this problem has not been addressed. Neither U.S. Treasury Secretary Timothy Geithner's plan nor the bad-bank model proposed in countries like Germany addresses this core issue, focusing as they do on overcoming a temporary illiquidity. Under the assumptions of the IMF, the estimated total losses of the financial systems in the United States and Europe are in the range of \$4.1 trillion—of which \$1.1 trillion has already been written down.<sup>15</sup> Given the necessary write-downs and the minimum equity required to operate—as well as to sustain the expected losses from the downturn in the real economy—the IMF estimates that banks need to raise new capital in the range of \$875 billion to \$1.7 trillion.<sup>16</sup> As long as this issue is not seriously addressed, the United States and Europe (where banks have until now written down less than their U.S. counterparts) remain on the path that Japan was on in the 1990s, when the insolvency issue of the Japanese banks dragged on for several years. The Japanese banks were called “zombies”—and we risk a similar situation now.
- ◇ **The not so stressful “stress test.”** As far as we can see, the U.S. government's stress test was more a negotiation than a true assessment of banks' health and balance-sheet quality. For starters, the economic scenarios were negotiated between the banks and the auditors and were therefore far too optimistic, with subsequent developments in unemployment and other key variables already worse than the assumptions used for 2010. In addition, valuations were based on the banks' own risk models, and overall leverage requirements (the ratio of assets to tangible common equity) were set at 25:1—values far above both historic norms and the 15:1 target recommended by the IMF and many academics. This leaves us far from sure that the underlying problems have really been addressed.
- ◇ **Governments do not have unlimited resources.** The borrowing capacity of governments is not unlimited—and any doubt about the financial power of governments could also undermine the credibility of guarantees for the banking system. Some smaller countries have already been downgraded—and even for major economies like the United Kingdom and the United States, a possible downgrading in credit ratings is being discussed for the first time. This creates the risk that efforts to stabilize public finances by reduced spending and increased taxes will push the economy back into recession, similar to what happened in 1937 when President Roosevelt tried to balance the federal budget. Governments are even more constrained in the current recession than they were then because many entered the downturn with already-high debt loads and budget deficits. If the lesson from Secretary Morgenthau is still valid today, sizable deficit spending not only may fail to restart economic growth but also risks further destabilizing the economy.

The nature of the problem we are facing carries a worrisome resemblance to certain aspects of the 1930s. As Mark Twain said, “History does not repeat itself, but it often rhymes”—echoing the past more closely than we might wish. We have to assume that we will be dealing with the fallout of the crisis, mainly the debt overhang, for many years to come. And in a lower-growth environment, the world will be different in many ways, as we discussed in Part 5 of the *Collateral Damage* series.

Given the nature of this recession and the impact of government actions so far, we believe that we are most likely to experience a U-shaped recession. But for many companies, especially in export-oriented

15. The IMF estimates that two-thirds of write-downs will be borne by banks, with the remainder applying to other financial institutions.

16. IMF, *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risks*, April 2009. The estimate for new capital is based on target leverage, measured by the ratio of tangible common equity to tangible assets. The \$875 billion estimate is based on a target leverage ratio of 4 percent, which was typical just prior to the financial crisis, while the \$1.7 trillion estimate is based on a ratio of 6 percent, the average in the 1990s. Both estimates take into account an additional \$3 trillion in write-downs that the IMF estimates will be necessary.

capital-goods sectors, this “U” will feel very much like an “L.” Companies should prepare *now* to thrive in an uncertain and fundamentally different environment. Yes, there is the risk of coming late to the upswing, but as one of our clients put it, “The risk of being wrong in a deep and long recession can be significantly higher than the risk of coming late to a starting upturn.”

## 2. Winning Performances During the Great Depression

Recessions separate winners from losers within industries. Overall profit levels fall and variation in profit performance is higher—markets consolidate as outperformers strengthen their position, and default rates spike as underperformers drop out. On average, larger companies tend to outperform the others, but some small players are able to successfully leapfrog into a top-three spot—finding it easier to move up the ranks in an environment in which some of their competitors are in distress. Most important, companies that outperform in a recession tend to enjoy a sustained advantage: they retain their performance leadership in subsequent years in terms of both revenues (17 percent greater than underperformers five years after the trough) and stock prices (an index of stock prices, baselined to the trough in 1932, shows that the average performance of outperformers was 34 percent greater than the average performance of other companies).

The real question, therefore, is what drives a winning performance in a downturn and the following upswing? In order to answer this question, we have dug deep into the history of the Great Depression, which was without any doubt the most challenging operating environment for any business leader.

Most companies performed badly during the Great Depression. But some fared far better than their peers. We went in search of the stories behind the companies that performed relatively well to see whether there were any lessons for today’s managers. We analyzed companies’ stock price performance and identified about 30 outperformers based on cumulative total returns from 1929 to 1936. (See Exhibit 4.)

This sample provided lots of good stories and relevant insight. Some of those success stories boiled down to being in the “right” industry. And for every company that outperformed, there were others that followed the same course with somewhat less success. But even allowing for survivor bias, five stories struck us as instructive for today’s executives.

### A. U.S. Automakers: An Industry Transformed

The 1930s constituted a period of major transformation in the U.S. auto industry. Similar to today, the automobile industry was among the most adversely affected in the Great Depression. From 1929 to 1932, sales of new automobiles fell by 75 percent—and auto companies had a combined loss of \$191 million in 1932, compared with profits of \$413 million in 1929. The hitherto highly profitable luxury end of the market virtually disappeared—the lower-priced segment grew from 40 percent of sales in 1929 to 80 percent of sales in 1933 and remained at 60 percent through the upturn and beyond. As a result, half of all automakers closed down.

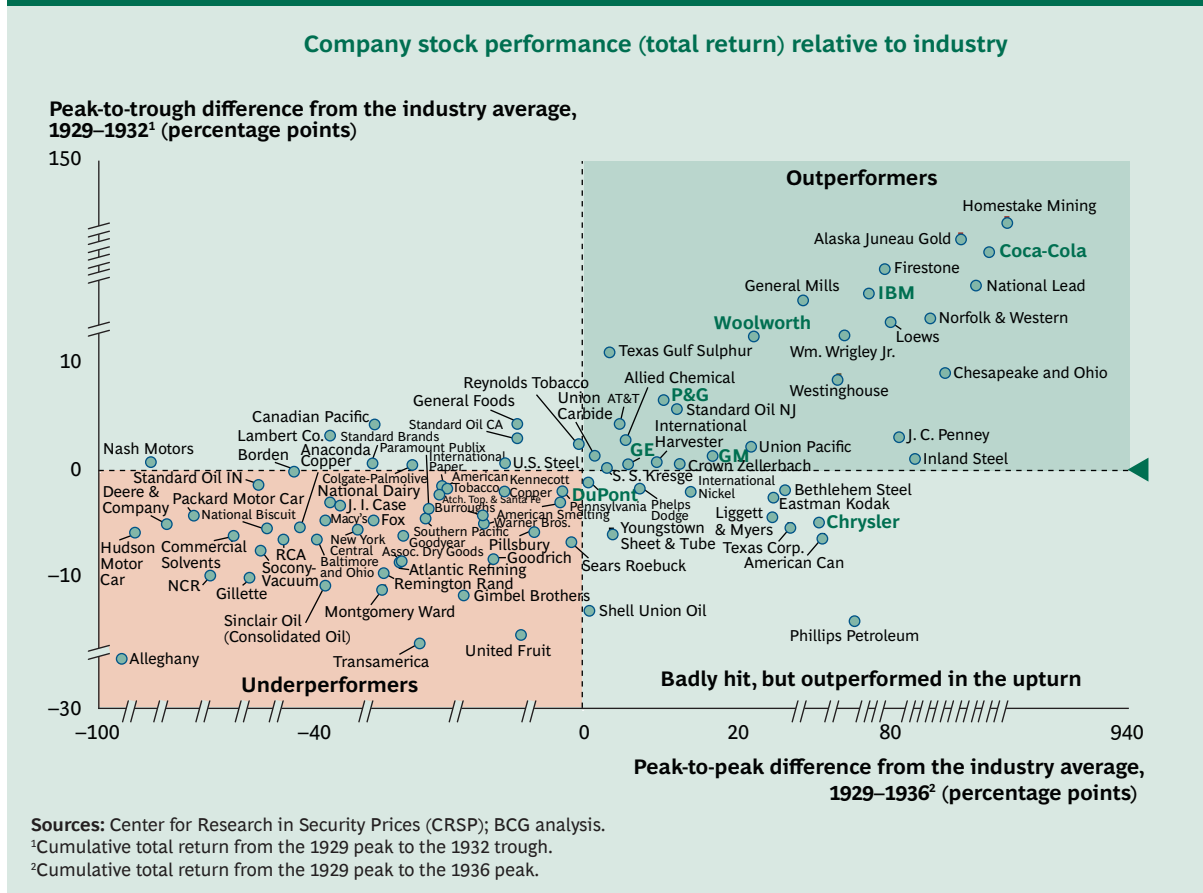
Yet two companies stood out: General Motors and Chrysler. GM delivered a profit in every year of the Great Depression and Chrysler showed a loss in only one year. Their market shares grew by 15 and 19 percentage points, respectively. Prior to the Great Depression, the automobile market was split three ways—with GM and Ford each enjoying a one-third market share, and the rest split among several smaller companies. The actions taken by GM and Chrysler during this period strengthened GM’s position as the market leader and propelled Chrysler into second place. In contrast, inaction and some poor choices significantly hurt Ford Motor Company’s position and permanently damaged the smaller competitors. So what did GM and Chrysler do right and everyone else do wrong?

#### General Motors: An Early and Decisive Response to Cut Costs and Refocus the Product Range.

According to Alfred P. Sloan, president and later chairman of GM from 1923 to 1956, “It would be unfair to claim any particular prescience on our part; no more than anyone else did we see the depression coming...[W]e simply learned how to react quickly. This was perhaps the greatest payoff of our system of financial and operating controls.”<sup>17</sup>

17. Robert Sobel, *The Age of Giant Corporations: A Microeconomic History of American Business, 1914–1984* (Greenwood, 1984).

## Exhibit 4. Company Returns During the Great Depression Reveal Some Strong Performers



*Making Decisive Cost Cuts.* GM was quick to mothball plants and lay off workers in 1930, rapidly scaling back production in its middle-market and expensive brands and driving a one-third reduction of the breakeven point on its lower-end Chevrolet brand. Limited backward integration kept fixed costs low and transferred risk to suppliers, allowing a quick scaling down of production. GM maintained a policy that no more than 33 percent of parts would be manufactured internally. It also used the same engine and parts across different brands to further reduce inventories and create flexible capacity, and merged its sales forces across middle-market brands to facilitate better sales-force effectiveness and capacity utilization.

*Shifting Its Product Focus.* At the heart of GM's success during the Great Depression was its decision to realign its product offering to fit the needs of a consumer base with less money to spend—"a car for every purse." It expanded aggressively into the low-priced car market by shifting production to Chevrolet, its high-volume discount brand. GM also increased advertising spending for Chevrolet. Although Chevrolet was more expensive than the equivalent Ford models, GM used consumer finance as a way to create a package attractive to customers, extending credit to Chevrolet customers when banks were not lending. To reduce inventories, GM cut prices by as much as 70 percent on its expensive cars—a move that would have been unthinkable under any other circumstances.

*Responding to the External Environment.* GM remained alert to the external environment. It began to build more efficient plants in 1935 when automobile sales began to increase. However, when the economy slowed again in 1937, GM was quick to postpone its investment program, finishing its new plants in 1939 when the Great Depression was truly over.

**Chrysler: From Start-up to "Big Three" Through Efficiency and Innovation.** A start-up in 1925, Chrysler merged with a larger company (Dodge) in 1928. The merger gave it the scale to survive the Depression.

Chrysler subsequently introduced Plymouth, a discount brand, in 1928. As sales of more expensive brands declined, Plymouth sales increased, attracting customers who were trading down.

*Staying Flexible and Efficient.* Like GM, Chrysler eschewed backward integration, enabling it to remain flexible when the Depression began and to cut costs quickly. Chrysler also executed all the basic measures that companies still follow today: as sales declined in 1930, it closed plants, laid off workers, and reduced administrative expenses by nearly one-third that year. But what truly differentiated Chrysler was its focus on cost reduction through efficiency—something that would be a competitive advantage under any circumstances. Perhaps some of the incentive for this focus came from its scale disadvantage compared with GM and Ford, but Chrysler realized a 50 percent increase in production efficiency (the Plymouth assembly lines produced cars at a rate of 90 cars per hour versus 60 cars per hour at both GM and Ford), which gave the Plymouth the highest unit profit of any auto brand in the 1930s. Despite constituting only half the sales volume of Chevrolet, Plymouth generated a 70 percent greater profit per unit.

*Supporting the Top Line, Too.* Chrysler recognized that sales in a severe recession were much more likely to come from a budget vehicle. So Chrysler increased the sales presence of Plymouth throughout the Depression by opening new dealerships.

*Thinking Ahead and Anticipating the Impact of Government Spending.* Chrysler correctly predicted that the road expansion program undertaken as part of the New Deal would lead to greater demand for faster, more powerful cars. The carmaker had the courage to continue to invest in R&D during the tough times, becoming the first manufacturer to use a wind tunnel to design more aerodynamic cars. This led to the “airflow” design and semi-unit body construction used to build faster cars. Chrysler’s innovation quickly became the industry standard.

**Ford: Inflexible and Slow to React.** As the automobile company that had pioneered high volume and low prices, Ford should have been well positioned for the Great Depression. However, indecisiveness and inflexibility resulted in declining sales and ultimately a 12-percentage-point loss in market share. Ford moved from being a contender for market leader to a weak third place. As the most vertically integrated company in the industry, Ford bore the full financial impact of the decline in sales because of its high fixed production costs. Ford’s lax accounting and poor business management made cutting costs difficult. In fact, since it was unable to control costs, Ford tried to increase its prices in the midst of the Depression.

*Exposed to Protectionism.* Unlike GM, which purchased foreign auto manufacturers outright, Ford shipped parts overseas to be assembled in the country of sale—making Ford vulnerable to the rise in protectionism. Ford suffered from tariffs of nearly 100 percent on certain parts. Already behind the innovation curve at the start of the Depression (caught short by Chevrolet’s introduction of a V6 engine in 1928), Ford released a new V8 model in 1932 in an attempt to catch up. However, in rushing to catch up, Ford introduced a more expensive and less reliable product that was poorly positioned for the value-conscious Depression market. Ford survived, of course, but the Great Depression left a lasting impact.

**The Rest of the Market: Permanently Undermined by the Downturn.** All the smaller companies competed in the expensive or mid-priced segments of the market, exposing them to sharp drops in sales. They were slow to cut costs and to introduce low-priced models. Other than Chrysler, the small players either went out of business or lost so much market share that they could no longer compete effectively. Packard, a luxury brand, introduced its first mid-priced model in 1935. The year 1937 saw the unlikeliest combination when Nash Motors merged with Kelvinator—a refrigeration and kitchen appliance company—and created the hot water car heater and a vacuum gear change system. But with little market share left, the company was unable to disseminate its inventions widely. By the mid-1950s, none of the smaller brand names remained as auto companies.

### **B. General Electric: Began Strong, Finished Stronger**

Going into the Great Depression, GE was already a thriving company. The 1920s had been a decade of strong success. GE had achieved clear leadership over its main competitor, Westinghouse, executed successful entry into foreign markets, and entered several emerging segments—most notably, consumer durables. However, as the largest player, GE quickly suffered the full brunt of the downturn.

Manufacturing was the single worst-hit sector of the U.S. economy, both in magnitude and in speed. By 1932, U.S. manufacturing output was only 33 percent of what it had been in 1929, and output did not recover to 1929 levels until 1940. Exposed to both the capital and consumer goods markets, GE's revenues dropped by 75 percent from 1929 to 1933. Remarkably, though, GE remained profitable throughout the Great Depression, while also laying the groundwork for its long-term success.

**Making Decisive Yet Thoughtful Cost Cuts.** As sales quickly dropped off in 1930, GE was equally quick to respond by cutting costs and reducing excess capacity, but it did so in a well-thought-out and disciplined fashion. A good example was GE's management of labor costs. In tandem with the drop in sales, the company cut labor costs by 14 percent in the first year of the downturn and eventually by 66 percent in the trough year of 1932. In comparison, Westinghouse cut labor costs at a slower rate, with a reduction of only 7 percent in 1930 (although its cuts did reach 59 percent by 1932). But GE took a more intelligent approach than merely cutting costs. In order to retain as much of its talent as it could and maintain its competitive advantage in the long term, it shortened the workweek, cut wages, and shifted skilled employees to lower-skilled jobs rather than lay them off, as Westinghouse did. By 1932, GE had laid off fewer employees than Westinghouse, while making larger cuts in average employee earnings. GE was able to turn a \$13 million profit in 1933, compared with Westinghouse's \$9 million loss that year. The decision to keep talent within the company helped GE improve its rate of innovation in the later 1930s and positioned it to benefit from new opportunities as economic growth got under way again.

**Identifying and Exploiting Changing Markets.** While the manufacturing industry experienced dramatic losses in the early 1930s, the consumer goods segment performed much better. Two factors contributed to this: the enthusiasm of U.S. consumers for novel new products (a phenomenon that was subsequently mirrored in Sony's success during Japan's "lost decade" of the 1990s) and rapidly growing access to electricity. Between 1930 and 1940, the Rural Electrification Administration increased access to electricity from 10 percent to 90 percent of rural households, driving demand for GE's products, particularly light bulbs. Recognizing these trends early on and treating them as opportunities, GE reorganized its product portfolio to minimize exposure to the decline in capital goods and benefit from the continued growth of some of its consumer-goods products. In 1930, despite negative economic news, GE decided to go ahead with the release of the electric washing machine, which became a best-selling product during the 1930s. GE also introduced vacuum cleaners, food mixers, and air conditioners during the Depression. To fund these product sales, GE launched the General Electric Credit Corporation in 1932 to provide credit to consumers unable to obtain financing from the highly constrained banks.

**Encouraging, Anticipating, and Exploiting the Potential of Government Programs.** Early on, GE saw the potential of government contracts. Starting in 1931, Gerard Swope, GE's president, became an active public campaigner for Keynesian government-spending policies. Though the company was unsuccessful at convincing the Hoover administration, once Franklin D. Roosevelt was elected and the New Deal was under way in 1933, GE capitalized on government spending across a range of new federal programs. The Tennessee Valley Authority, designed to provide economic development to the largely poor and rural American South, began the construction of dams across the Southeast. Construction of new electricity infrastructure, in turn, provided a large market for GE's electricity generation and transmission products.

**Investing in the Future.** Perhaps most pivotal to GE's long-term success was its sustained investment in innovation throughout the Great Depression. Although GE's management felt obliged to cut R&D spending in half between 1930 and 1933, it cut less than the company's competitors did. And once GE realized the benefits of its efficiency program, it began to reinvest aggressively in R&D, increasing the budget in every year following 1933 for the remainder of the 1930s. In comparison, Westinghouse continued to cut R&D through the 1930s: having already reduced its research staff, it instituted a further 25 percent cut in 1934, lowering its R&D capacity to just 33 percent of 1929 levels. This greater commitment to innovation positioned GE to benefit from New Deal government spending and laid the groundwork for later successes in a variety of fields. The basic research that GE undertook during the Great Depression led directly to the introduction of the first mercury-vapor bulb in 1934, the first fluorescent lamp in 1938, and the FM radio in 1939. It further led to the introduction of silicone, plastic, and synthetic-diamond products in later years. The research conducted during the 1930s also positioned GE to be a major contractor in the U.S. government's nuclear program in the 1940s.

Decisive yet thoughtful cost cutting, portfolio repositioning (recognizing new opportunities early on and divesting selectively), investing in R&D, and retaining good talent allowed GE to weather the Great Depression and emerge stronger. Despite a 75 percent fall in revenues, GE remained profitable through the downturn—and widened the lead it enjoyed over its rivals in the years that followed.

### **C. IBM: Bold Moves by a Smaller Company**

Much like GE, IBM was in an industry hard-hit by the Great Depression. As businesses scaled back or went bankrupt, U.S. business-machine production dropped 60 percent between 1929 and 1932. Nonetheless, IBM's revenues increased in 1930 and 1931, and its profits were steady. Only in 1932 and 1933 did revenues decline, and then by a comparatively modest 13 percent. Thomas Watson, IBM's president, estimating that only 5 percent of business accounting was mechanized in 1929, realized the significant potential for growth in this new industry. Assuming correctly that the business machine market would continue to grow despite the economic downturn (because companies would seek efficiency improvements during tough times), Watson made two fundamental decisions. First, IBM would maintain its production capacity and not lay off workers. Second, it would increase its investments in innovation. IBM's revenues doubled between 1928 and 1939, while industry revenues overall fell 2 percent. IBM vaulted from fourth position in the market before the Great Depression, with 11 percent of market share, to a close second (behind Remington Rand), with 22 percent of market share in 1939.

**Developing Products to Meet Changing Market Needs.** As demand began to fall in late 1929 and competitors cut back, IBM decided to accelerate its launch of a state-of-the-art alphabetical accounting machine to be ready in early 1930. Demand for this new model grew quickly but was constrained by the high price point. IBM then introduced a smaller, less expensive Depression-era model in 1931, which allowed it to retain existing customers (who had become very cost-conscious) and acquire new ones—businesses that previously had been unable to afford the company's larger machines. IBM also launched an innovative sales model: rather than sell its machines, it rented them out. With companies' reduced appetite for large capital expenditures and financing, IBM's rental program offered flexibility and affordability. Getting its accounting machines into operation also allowed IBM to maintain demand for the high-margin paper cards that they used, which accounted for only 10 percent of revenues but 20 percent of profits. Watson continued to expand capacity, increasing it by one-third from 1929 to 1932.

**Protecting Talent, Building Loyalty.** IBM never conducted mass layoffs during the Depression. Wages were cut from 1931 to 1934 in order to reduce costs, but Watson insisted on preserving talent by maintaining the company's workforce. A range of employee benefits—such as life insurance, survivor benefits, and paid holidays—were introduced, not only to keep workers productive and happy but also to attract talent.

**Continuing to Believe in Innovation.** IBM actually expanded its research capabilities during this period. Starting in 1932, Watson committed IBM to invest at least 6 percent of annual revenues—over \$1 million—in R&D. This funding was used to build the first centralized research lab, which became the model for corporate research. The focus was on developing product-ready technology; IBM developed faster machines and the first accounting machine to perform multiplication.

**Pursuing M&A When the Values Are Favorable.** Watson used mergers and acquisitions to increase its innovation capacity, acquiring three companies between 1930 and 1933—notably Electromatic Typewriters, which provided IBM with the technology to develop the electric typewriter. At the same time, when the opportunity arose, Watson divested the company's weighing-scales division.

With the start of the New Deal, IBM was well positioned to capitalize on a large new market. The substantial expansion of government under the Roosevelt administration presented a range of new accounting problems that IBM could service. With both the most innovative products on the market and surplus inventory that could be quickly deployed, IBM won the first lucrative contracts for business machines. This ensured that the federal government would continue to use the company's paper cards and buy other IBM machines to maintain consistency across programs—and it allowed IBM to win the biggest contract of the New Deal era, with the Social Security Administration in 1935. With 120 million postings per year covering 27 million claimants, the Social Security contract was very lucrative, in terms of both machine rentals and the sale of paper cards. Owing to such government contracts, IBM's sales revenue grew by an average of 16 percent per year from 1935 until 1940.

#### D. Procter & Gamble: Relentless Expansion

Unlike capital goods and business machines, the categories in which P&G operated remained relatively resistant to the Depression in terms of sales. P&G was able to continue to increase both sales and profits, widening the gap with its closest competitor. P&G identified two key opportunities. First, competing brands were advertising less, so P&G was able to increase advertising spending to gain share. Second, P&G identified several gaps in the market and, with a strategy of acquisition and innovation, moved to fill them with new products. And at a time when competitors were putting less marketing and other support behind their products, the cost of P&G's strategy was relatively less than it would have been under normal business conditions.

**Increased Marketing Support.** Most companies aggressively cut their advertising budgets as well as their R&D during the Great Depression. Consequently, those that maintained or increased their advertising spending were able to gain a greater share of voice at a much lower cost. P&G was one of the most aggressive in doing so. Seeing an opportunity to reach housewives—its core customers—by advertising on daytime radio, the company launched the first daytime serial radio programs, starting in 1933 with one program and expanding later on. P&G used these programs to promote its core product—soap—and the programs quickly became known as soap operas. By the end of the 1930s, P&G had established itself as one of the biggest advertisers on the radio. Between 1935 and 1937, P&G doubled its spending on radio advertising, and then doubled it again from 1937 to 1939—the entire period being one in which spending on marketing in the United States remained nearly flat.

**Increased R&D Spending.** By 1929, soap manufacturing had been the heart of P&G's business for nearly 100 years. While the structure of the business had changed substantially, the core product remained remarkably constant. Yet there were developments in the chemicals industry through the 1920s that offered applications to consumer products, particularly soap products. Treating these as an opportunity rather than a threat, P&G expanded its R&D program during the Great Depression despite external economic pressures. This work led to the development of the first synthetic soap products and paid off significantly in both the short and the long run. In 1933, P&G introduced the first synthetic detergent, Dreft; in 1934 came the first synthetic shampoo, Drene; and in 1938, P&G introduced Teel, the first liquid oral dentifrice. All of these brands were successful in their own right but were also precursors to many products launched in the 1940s and 1950s, such as Tide and Crest, two of the most successful brands in the company's history.

**Intensified Market Research.** P&G guided its R&D program, as well as its ongoing brand management, by keeping an eye on technological developments and an ear tuned to its customers. Starting in the 1930s, P&G initiated a market research program in which college-educated women went door-to-door, surveying housewives about their household habits and the products that they used. The program was so successful at providing insights into consumers that P&G tripled its budget between 1930 and 1942.

**Acquisition of New Product Lines.** P&G identified gaps in the market and undertook to fill them with new brands. It notably seized upon the M&A opportunity presented by the downturn. Over the course of the 1920s, P&G had expanded in the U.S. soap market by acquiring 12 brands across the United States and was planning more when the Depression struck. With its acquisition of James S. Kirk & Company in June 1930, the company stuck to its plan of continued expansion, gaining production capacity and a strong brand in the Chicago area. Also in 1930, P&G entered the U.K. and French soap markets, respectively, with the acquisition of Fairy and Monsavon. Its fourth soap-brand acquisition of the era occurred in 1937 with the purchase of Monogen in Japan. Between its acquired and its own developed brands, P&G introduced more successful products during the 1930s than in the two decades before and after. These brand acquisitions and introductions benefited the company long after the end of the Great Depression.

#### E. DuPont: Rapid Innovation

In the years before the Great Depression, the U.S. chemicals industry had experienced a period of innovation and success. Much of that success continued through the 1930s, with the industry remaining profitable, although profits did drop 77 percent as revenues shrank. However, DuPont significantly outperformed the industry. The company's profits increased 60 percent between 1929 and 1937, while its profit

share in the chemicals industry increased from 20 percent to 32 percent over the same period. Rather than cut back in response to the Depression, DuPont expanded. With R&D budgets at most companies being cut and the rate of new patents shrinking nationally, DuPont recognized that increasing investment in R&D could open an innovation lead over its competitors. It adopted a policy of cost “refinement, not retrenchment,” assessing research on the basis of its potential to deliver marketable products in a short time frame.<sup>18</sup> The struggling ammonia division, for example, was reoriented in the 1930s toward the development of nylon. DuPont used the downturn as an opportunity to take a hard look at its research programs, eliminating those that had little chance of success while increasing R&D spending on those with greater potential. Cutting its R&D budget in only one year of the Great Depression, DuPont increased its annual spending by a total of 93 percent between 1930 and 1939.

Investment in R&D led directly to DuPont’s introduction of neoprene in 1931 and nylon in 1939, giving it a first-mover advantage with two of its most successful products for decades to come. DuPont was also one of the first companies to introduce an acrylic glass product (Lucite), launching it in 1936. To ensure success, the company leveraged its product innovations by introducing consumer advertising for the first time (it had previously advertised only to manufacturers). Taking advantage of affordable advertising rates, it was the first chemicals company to reach out directly to consumers and to develop a consumer brand. With sales falling 50 percent between 1929 and 1933, continuing to increase R&D was a risky decision, but it paid off quickly. In 1937, 40 percent of DuPont’s sales were of products that had not existed a decade before.

In addition to increasing R&D spending, DuPont utilized M&A during the Great Depression to acquire innovation from outside the company. In 1930, with many suppliers failing, the company was threatened with a shortage of raw materials and bulk intermediates. DuPont acquired a competitor, Roessler & Hasslacher Chemical, not only securing the crucial inputs it needed for its own products but also gaining entry into the electrochemical market through a range of specialized chemicals that were eventually used in electroplating, refrigeration, bleaching, disinfectants, and insecticides.

### 3. What Should Today’s Companies Learn from the Great Depression Winners?

These success stories are drawn from a range of companies and industries that experienced very different challenges during the downturn. But irrespective of their starting positions and how badly their industry fared, companies that succeeded did so because they undertook a set of bold and decisive moves—and, although they may have had some good luck, it is hard to argue that they did not earn their good fortune. In this section, we capture the key lessons that emerge from our analysis—lessons that we believe are just as relevant for companies today as they were nearly 80 years ago. (See Exhibit 5.)

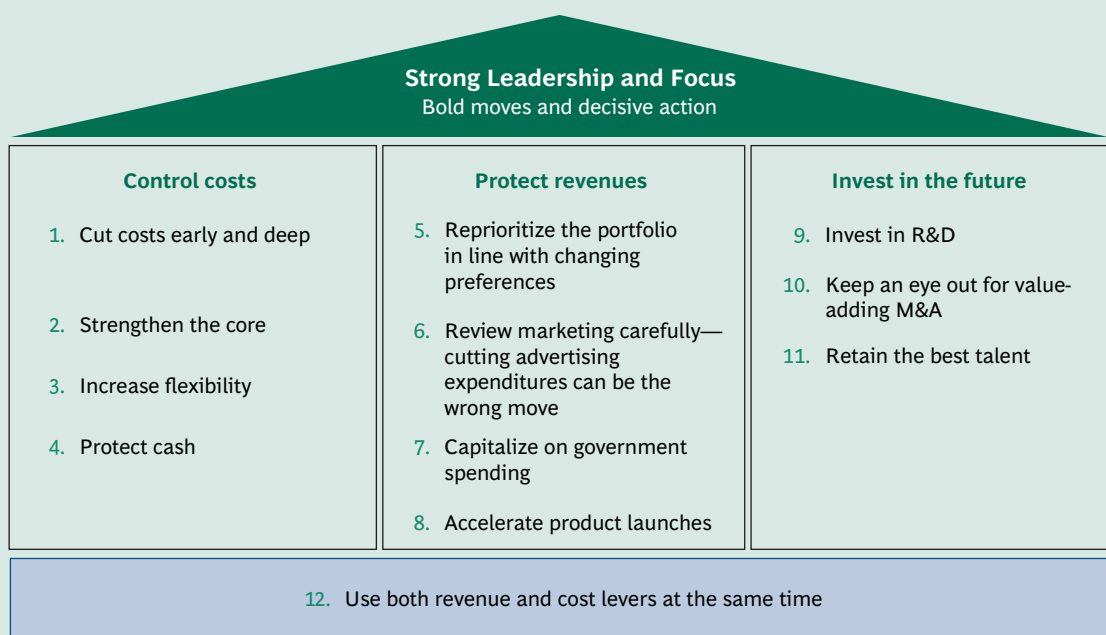
#### A. Control Costs

During a recession, companies experience severe demand shocks. In the 1930s, corporate revenues declined by 54 percent over a three-year period. Aggressive cost cutting and tight cost management are obviously crucial in such an environment. However, the first lesson from the Great Depression is that it is not enough to cut costs. Well-managed companies also use the opportunity to strengthen operations, variabilize cost structures, and reduce breakeven levels.

**Cut costs early and decisively, and strengthen the core.** During the Great Depression, companies that quickly cut costs were able to get their companies into fighting shape. They fared better in both the short and the long term. They focused on the fundamentals of efficiency and capacity, rather than dabbling with discretionary costs. At the same time, winners used the downturn as an opportunity to protect the business fundamentals, positioning themselves to benefit from the eventual upturn. The most successful companies focused on retaining superior products and talent and exiting unattractive markets. Between 1929 and 1931, F.W. Woolworth, the discount retailer, cut costs by 9.4 percent even though sales had declined by only 6.7 percent. It cut wages, increased inventory turnover, and reviewed purchase contracts every two months.

18. David A. Hounshell and John K. Smith, Jr., *Science and Corporate Strategy: DuPont R&D, 1902–1980* (Cambridge University Press, 1988).

## Exhibit 5. The Secrets of Success Apply Today: What We Can Learn from the Great Depression



Source: BCG analysis.

**Increase flexibility.** Not all businesses were able to cut costs quickly during the Great Depression. Those with variable cost structures and those that creatively utilized idle capacity weathered the storm best. The relative fortunes of GM, Chrysler, and Ford show the value of using external vendors strategically to manage costs, as well as the value of cutting breakeven levels through improvements in production efficiency—particularly in the face of scale disadvantages (as was the case with Chrysler). Sears, Roebuck and Company is an example of an organization that used product innovation to make the most of its under-pressure cost base. During the Depression, the mail-order retail market was the worst-performing retail channel because of its exposure to rural markets, which were hit hard by substantial declines in agricultural production and high debt levels. Sears leveraged capability and capacity to start Allstate Insurance in 1931, a mail-order car insurance company, selling insurance at a lower cost than its competitors.

**Protect cash.** Maintaining a healthy balance sheet, a good cash position, and access to credit are obvious preconditions for pursuing the winning strategies of past recession champions. All of our winning companies were able to succeed only because they managed to secure their financial fundamentals. Many of the companies that failed did so because they lacked sufficient financial power and flexibility.

### B. Protect Revenues

In a severe downturn, almost all companies face material demand shocks, but consumer spending does not fall equally across categories. Rather, consumers cut back on a lot of discretionary spending but maintain spending on the essentials and a few affordable luxuries (such as cigarettes, chocolate, and lipstick). Within categories, consumers tend to trade down, opting for less expensive, better-value brands. Yet even in tough times, new segments emerge. Governments, for example, start to play a larger role in overall consumption.

**Reprioritize the portfolio in line with changing consumer behaviors.** The 1930s saw consumers trading down heavily. Companies that were able to shift to lower-priced, better-value product offerings won disproportionately. We have described this phenomenon in the U.S. auto industry. Retail was no different. Woolworth's, already in the discount market, further lowered prices and opened new stores to capture market share. In 1932, it introduced a line of value products priced at 20 cents; within two months, this line accounted for 30 percent of sales in trial stores, leading to its expansion to all Woolworth's stores. We

currently see this phenomenon being replicated today in retail sales around the world, with value brands and stores performing disproportionately well.<sup>19</sup>

**Advertise to retain loyalty.** Most companies slash their marketing budgets during recessions. In fact, because it is so easy to reduce, advertising spending has been cut deeper than the actual fall in corporate output during every downturn. Between 1929 and 1933, overall advertising spending in the United States dropped by 64 percent, while corporate output fell by 54 percent. (U.S. advertising spending declined by 3.9 percent in 2008, faster than the rate of GDP decline.) During the Great Depression, a number of companies maintained (and even increased) their advertising spending, gaining share of voice at a lower cost, retaining customers, and building loyalty for the upturn. The evidence shows that those that cut the deepest are often unable to make up for lost ground when the upturn comes. Kellogg, the breakfast cereal manufacturer, propelled itself into the position of market leader through sustained advertising, displacing Post, its rival, which had cut back. This is not to say that there should be no cuts in spending but rather that such cuts should be carefully thought through and not executed simply because they are easy.

**Anticipate and capitalize on government spending.** New Deal programs such as the Tennessee Valley Authority and the Rural Electrification Administration accounted for a significant share of GDP between 1934 and 1940—just as today's large stimulus plans promise to do. The Public Works Administration, for instance, accounted for 5.6 percent of GDP and the Works Progress Administration accounted for 3 percent. Many of the Great Depression winners benefited from early efforts to understand the commercial implications of these programs.

Over the next three to five years, governments around the world will spend upward of \$2 trillion in stimulus plans. This money will be spent on infrastructure, housing, medical facilities, renewable energy, reindustrialization, and many other initiatives, creating direct and indirect opportunities for companies. Companies that position themselves well in these arenas will benefit disproportionately. Indeed, some companies have already demonstrated the relevance of this strategy. For example, the *Financial Times* reported in May that Peter Löscher, the president and CEO of Siemens, believes that “Germany will emerge from the crisis to spearhead a fresh wave of industrialization” and that “infrastructure programs launched worldwide and the push for a green modernization would spur growth in the industrial sector.”<sup>20</sup>

**Accelerate product launches.** The Great Depression (and subsequent recessions) shows that companies tend to put the brakes on product development during downturns, believing that the upturn will be a safer time to launch new products. But many of our winning companies—such as IBM, GE, and Procter & Gamble—successfully launched new and better products during the Great Depression, gaining share at a lower cost and then benefiting disproportionately in the upturn as competitors struggled to catch up.

### C. Invest in the Future

Recessions, though difficult, do eventually end. Successful companies go beyond the necessary short-term measures (conserving cash, cutting costs, and protecting revenues) to invest in the future.

**Stay committed to R&D and innovation.** As we demonstrated in our descriptions of some of the Great Depression's strong performers, these companies not only addressed their cost bases but also were committed to maintaining investment in commercial R&D. The fruits of the efforts undertaken by companies such as DuPont, GE, and Chrysler in the 1930s differentiated them from their competitors for several decades to come. Even more important, perhaps, history shows that innovation is typically the catalyst for periods of renewed growth.

**Look for M&A opportunities.** Several of our Great Depression examples prove that with competitors weak or failing, stronger players can take advantage of opportunities to make acquisitions that are more affordable and more likely to create value. Moreover, our research on subsequent recessions shows that M&A in downturns has a much higher rate of success than boom-time deals.<sup>21</sup>

19. See *Winning Consumers Through the Downturn: 2009 BCG Global Report on Consumer Sentiment*, BCG report, April 2009.

20. “Siemens Chief Sees Surge for Germany,” *Financial Times*, May 17, 2009.

21. See *The Clock Is Ticking: Preparing to Seize M&A Opportunities While They Last*, BCG White Paper, May 2009.

**Effective companies de-average their actions.** Many managers today are focused solely on cost management. Others are trying to sell their way out of the recession by looking for new markets or new customers. Our Great Depression winners demonstrate that the best companies use all the tools in the toolbox.

**Strong leadership really does help.** Many of the companies we described were led by iconic figures in American business history. This is no accident. Tough times call for brave and decisive leadership. Some of our winners took great gambles in building inventories, developing new products, or maintaining ad spending. Many acted early to take firm action on the cost fundamentals—the tough decisions about people and plants, not just about cutting executive travel or training events. And many of the winners took their talent agendas very seriously.

**Pick your battles.** All the companies that emerged as winners following the biggest economic crisis of the last 100 years had one thing in common: they used their strength to compete on the most critical success factor in their industry. They carefully trod a middle path between spreading their efforts too thin and addressing only part of the problem. They attacked the financial and operational weaknesses of their competitors to fundamentally change their competitive position, whether by competing on innovation, retaining their best talent, or capturing consumers by investing in new-product development and marketing. Rarely are all these actions equally important for every company. Once companies have done their homework, determining what is required to ensure survival, they need to pick their battles and invest heavily in a limited number of initiatives. Spreading scarce resources across too many initiatives risks wasting a unique opportunity.

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Almost a century later, these lessons remain relevant. Companies today are facing similar if not quite such dramatic challenges: rapidly declining demand, a strong tendency toward trading down by consumers, fundamental shifts in industry structures, increased protectionism, and a stronger government role. The profits of the S&P 1500 declined by 41 percent in the fourth quarter of 2008. Default rates are shooting up and Moody's Investor Service is forecasting that four times as many companies will default in 2009 as in 2008. As the Great Depression teaches us, companies that act quickly and decisively to control costs and protect revenues in a demanding environment will succeed today and lay the foundation for long-term success.

## 4. Bibliography

### Books and Articles

- Allen, Robert C., *Speaking of Soap Operas* (University of North Carolina Press, 1985).
- Applegate, Edd, *Personalities and Products: A Historical Perspective on Advertising in America* (Greenwood, 1998).
- Bank of England, *Financial Stability Report*, issue 24, October 2008.
- Bernstein, Michael A., *The Great Depression: Delayed Recovery and Economic Change in America, 1929–1939* (Cambridge University Press, 1987).
- Birla, Madan, *FedEx Delivers: How the World's Leading Shipping Company Keeps Innovating and Outperforming the Competition* (John Wiley & Sons, 2005).
- Bresnahan, Timothy F., and Daniel M.G. Raff, "Intra-Industry Heterogeneity and the Great Depression: The American Motor Vehicles Industry, 1929–1935," *Journal of Economic History*, vol. 51, issue 2 (1991).
- Chandler, Alfred D., Jr., *Scale and Scope: The Dynamics of Industrial Capitalism* (Harvard University Press, 1994).
- Chandler, Alfred D., Jr., *Shaping the Industrial Century: The Remarkable Story of the Evolution of the Modern Chemical and Pharmaceutical Industries* (Harvard University Press, 2005).
- Chandler, Alfred D., Jr., *Strategy and Structure: Chapters in the History of American Industrial Enterprise* (MIT Press, 1990).
- The Conference Board, *Business Cycle Indicators Handbook*, June 2001.
- Cortada, James W., *Before the Computer: IBM, NCR, Burroughs, and Remington Rand and the Industry They Created, 1865–1956* (Princeton University Press, 1993).
- Dassbach, Carl H.A., *Global Enterprises and the World Economy: Ford, General Motors, and IBM, the Emergence of the Transnational Enterprise* (Garland, 1989).
- Derdak, Thomas (ed.), *International Directory of Company Histories* (St. James Press, 1988).
- Dutton, William S., *Du Pont: One Hundred and Forty Years* (Charles Scribner's Sons, 1942).
- Dyer, Davis, Frederick Dalzell, and Rowena Olegario, *Rising Tide: Lessons from 165 Years of Brand Building at Procter & Gamble* (Harvard Business School Press, 2004).
- Editors of *Advertising Age*, *Procter & Gamble: The House that Ivory Built* (NTC Business Books, 1988).
- Eichengreen, Barry, and Kevin H. O'Rourke, "A Tale of Two Depressions," VoxEU.org blog, April 6, 2009, <http://www.voxeu.org/index.php?q=node/3421>.
- Engerman, Stanley L., and Robert E. Gallman (eds.), *The Cambridge Economic History of the United States, Volume III: The Twentieth Century* (Cambridge University Press, 2000).
- Federal Reserve Bank of Minneapolis, "The 1929 Stock Market: Irving Fisher Was Right," Research Department Staff Report 294, December 2003.
- Hounshell, David A., and John K. Smith, Jr., *Science and Corporate Strategy: DuPont R&D, 1902–1980* (Cambridge University Press, 1988).

International Monetary Fund, *Global Financial Stability Report: Responding to the Financial Crisis and Measuring Systemic Risks*, April 2009.

International Monetary Fund, *World Economic Outlook: Crisis and Recovery*, April 2009.

Lebergott, Stanley, *Manpower in Economic Growth: The American Record Since 1800* (McGraw-Hill, 1964).

Maney, Kevin, *The Maverick and His Machine: Thomas Watson, Sr., and the Making of IBM* (John Wiley & Sons, 2003).

Mayhew, Anne, *Narrating the Rise of Big Business in the USA: How Economists Explain Standard Oil and Wal-Mart* (Taylor & Francis, 2008).

Ndiaaye, Pap A., *Nylon and Bombs: DuPont and the March of Modern America* (Johns Hopkins University Press, 2007).

Nicholas, Tom, "Trouble with a Bubble," *Harvard Business Review*, August 28, 2007.

Perman, Stacy, "Learning from the Great Depression," *BusinessWeek*, October 17, 2008.

Pitronne, Jean, *F.W. Woolworth and the American Five and Dime: A Social History* (McFarland, 2003).

Pugh, Emerson W., *Building IBM: Shaping an Industry and Its Technology* (MIT Press, 1995).

Schatz, Ronald W., *The Electrical Workers: A History of Labor at GE and Westinghouse, 1923–60* (University of Illinois Press, 1987).

Shiller, Robert, *Irrational Exuberance* (Princeton University Press, 2005).

Schisgall, Oscar, *Eyes on Tomorrow: The Evolution of Procter & Gamble* (Ferguson, 1981).

Sobel, Robert, *The Age of Giant Corporations: A Microeconomic History of American Business, 1914–1984* (Greenwood, 1984).

"Startups Among the Ruins: How 10 Companies Launched During the Great Depression," Allbusiness.com, March 23, 2009, <http://www.allbusiness.com/economy-economic-indicators/economic-conditions-depression/11817455-1.html>.

Tedlow, Richard S., *New and Improved: The Story of Mass Marketing in America* (Basic Books, 1990).

Vance, Sandra S., and Roy V. Scott, *Wal-Mart: A History of Sam Walton's Retail Phenomenon* (Twayne, 1994).

Weil, Gordon L., *Sears, Roebuck, U.S.A.: The Great American Catalog Store and How It Grew* (Stein & Day, 1977).

Weiss, H. Eugene, *Chrysler, Ford, Durant and Sloan: Founding Giants of the American Automobile Industry* (McFarland, 2003).

Wigmore, Barrie A., *The Crash and Its Aftermath: A History of Securities Markets in the United States, 1929–33* (Greenwood, 1985).

Wise, George, and Willis R. Whitney, *General Electric, and the Origins of U.S. Industrial Research* (Columbia University Press, 1985).

### Other Sources

Capital Economics, *US Economics Weekly*, *UK Economics Weekly*, *European Economics Weekly*, and other topic updates beginning in January 2009.

Center for Research in Security Prices, CRSP U.S. Stock & Indices Databases, April 2009 Monthly Update, University of Chicago, Booth School of Business.

IBM Archives, <http://www-03.ibm.com/ibm/history/>.

Proquest Historical Newspapers, the *New York Times*.

SourceOECD/Statistics.

Thomson Datastream.

U.S. Bureau of Labor of Statistics.

U.S. Federal Reserve System.

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