Flying Blind into the Next Recession?

(Part 3)

Identifying Risks and Opportunities in the Inevitable Downturn

Parts 1 and 2 of this series identified several factors for commercial banks to consider when evaluating both the origination and the strategic portfolio sides of the business. These time-tested factors take on even more weight during recessions. In this installment, we look back on some of the lessons learned from past economic and credit cycles.

"He who learns but does not think is lost. He who thinks but does not learn is in great danger." *– Confucius*

BY RICK BUCZYNSKI AND KENNETH I. BROWN

So where have we been? And what have we learned? A look back over the last cycle can reveal what went awry from a NAICS-based perspective during the Great Recession—and help us avoid the next catastrophe while mitigating emerging risks.

Let's start with the boom-and-bust period of 2007-09 analyzed at a two-digit level, although we will also drill down to a more granular level later. According to the National Bureau of Economic Research, the recession began in December 2007 and ended in June 2009. Table 1 presents inflation-adjusted industry revenue during that period. The industries most impacted are highlighted in red and the areas least affected are in green. Those in a midrange are shown in various shades of amber.

As shown in the table, construction and manufacturing were among the hardest-hit industries. In the construction sector, the decline in commercial real estate (CRE) occurred several quarters after the housing market's collapse. In both housing and CRE there was a great deal of variance from region to region, state to state, and, in many cases, MSA to MSA (metropolitan statistical area). Considerable damage was suffered by construction contractors, among them:

- Carpenters.
- Painters.
- Plumbers.
- Electricians.
- Drywall and insulation installers.
- Roofers.
- Flooring and tile installers.
- Concrete and masonry contractors.

Additionally, the following construction-related industries were also unduly exposed to the recession:

- Architects.
- Building inspectors.
- Security alarm services.
- Real estate appraisal.
- Furniture stores and wholesalers.
- Home furnishing wholesaling.
- Lumber wholesaling.
- Roofing, siding, and insulation wholesaling.
- Home improvement stores.
- Paint stores.

In manufacturing, the chief laggards were those subsectors that produce building materials or durable goods correlated with construction, such as furniture and major appliances.

CONSTRUCTION AND MANUFACTURING were among the hardest-hit industries. In the construction sector, the decline in commercial real estate occurred several quarters after the housing market's collapse.

Also devastated during the Great Recession was the finance and insurance sector. Commercial banking fared better than investment banks and securities brokers and dealers, as shown in Figure 1. From 2007 to 2009, commercial bank revenue fell 14.1%, while revenue for investment banks and securities brokers and dealers dropped 29.2%. Savings banks and thrifts, along with loan brokers, crashed as well, with revenue declines of 50.7% and 62.1%, respectively (those figures do not include the bottom-line impacts of defaults and charge-offs during periods of stress).

Smaller banking institutions proved to be the most vulnerable, along with those institutions with high exposure in mortgage lending, as shown in Figures 2 and 3.

Figure 3 is particularly poignant. With the ongoing consolation in the commercial banking industry, as shown in Figure 4, the next downturn is likely to further stress smaller banks and accelerate the consolation.

Moreover, as Richard Parsons noted in his book *Broke,*[1] bank failures during the crisis were heavily concentrated in a few states: Georgia, Florida, Illinois, California, and Minnesota. Parsons also inferred a key causal factor behind bank failures: historically easy bank-chartering policies.

Part 1 of this series mentioned that the insurance industry, like other areas of the financial sector, did succumb to the pressures of a deteriorating economy. Life insurance and annuity companies saw sales drop more than 20% during the recession, while property and casualty insurance carriers suffered a nearly 5% decline. We speculate that the revenue decline for property and casualty insurers was muted because individuals chose to increase deductibles rather than cancel policies. In contrast, health and medical insurance revenue was relatively stable.

Meanwhile, wholesale and retail trade, along with transportation, proved especially susceptible to the recession, since their performance is highly synchronized with the overall economy. Health care and the mining sector appeared to

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TABLE 1: BOOM TO BUST: INDUSTRIES HIT HARDEST DURING THE GREAT RECESSION

NAICS Codes	Industry Two-Digit	INFLATION-ADJUSTED REVENUE ($ BN)		Boom/Bust Growth Annual % Change
		End Boom Year 2007	End Bust Year 2009	
11	Agriculture, Forestry, Fishing & Hunting	395	360	-4.5%
21	Mining	482	489	0.8%
22	Utilities	857	805	-3.1%
23	Construction	1,975	1,535	-11.8%
31-33	Manufacturing	6,051	4,904	-10.0%
42,44-45	Wholesale & Retail Trade	12,133	10,488	-7.05%
48-49	Transportation & Warehousing	1,105	967	-6.5%
51	Information	1,362	1,358	-0.2%
52	Finance & Insurance	6,787	5,300	-11.6%
53	Real Estate & Rental and Leasing	765	668	-6.6%
54	Professional, Scientific & Technical Services	1,588	1,560	-0.9%
56	Administrative and Support & Waste Management and Remediation Services	680	619	-4.5%
61	Educational Services	1,284	1,180	-4.2%
62	Health Care & Social Assistance	1,973	2,098	3.1%
71	Arts, Entertainment & Recreation	327	315	-2.0%
72	Accommodation & Food Services	736	711	-1.7%
81	Other Services	619	578	-3.3%

Source: IBISWorld

be somewhat immune. Nonetheless, the two-digit mining sector is dominated by energy—which magically held up well, although this is unlikely to recur during the next recession. If energy production and related support services are netted out, revenue in the mining sector sank by more than a quarter.

During the initial recovery phase, mid-2009 to the end of 2011, most industries rebounded modestly, as shown in Table 2.

The most notable counter example is construction, predominantly CRE. Figure 5 sheds some light on this subsector, which continued to contract even after the recession was officially over in mid-2009. The lesson here is that the bigger the boom, the bigger and longer the bust.

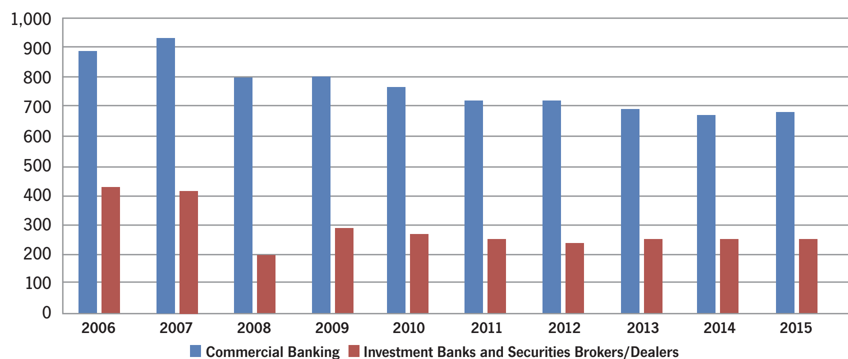
In comparison to Table 2, Table 3 presents the two-digit industry performance over the longer four-year boom/bust/recovery time frame. Like the recovery of the general economy, the industry-by-industry rebound was uneven.

Many industries displayed little or no significant amelioration over the 2007-11 period, the exceptions being agriculture, mining, health care, education, and the information industry. Construction again stands out as an obvious underperformer.

Wide disparities in regional economic conditions also require consideration; see Figure 6. Even within states, MSAs can have vastly different economic profiles.

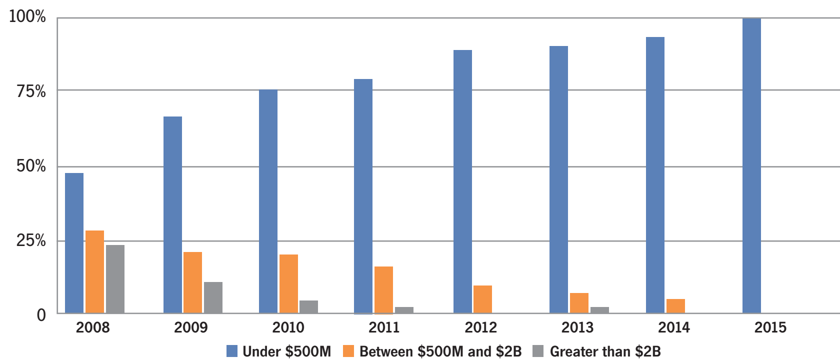
Evaluations of revenue are helpful in comparing relative performance across industry groups, but other factors also warrant consideration—in particular, structural dynamics such as barriers to entry, the degree of competition, ability to substitute or trade down, government assistance, trade exposure, technological innovation, and an industry's life cycle. Many of these factors were addressed in Parts 1 and 2 of this series. Supply-chain considerations, such as the bargaining power of customers and suppliers, should be introduced into the analysis as well.

FIGURE 1: INVESTMENT BANKS DECIMATED BY THE FINANCIAL CRISIS; COMMERCIAL BANKS TOOK A DIRECT HIT
Banking: Inflation-Adjusted Revenue ($ Bn)



Source: IBISWorld

FIGURE 2: BANK FAILURES ARE CONCENTRATED AMONG SMALLER INSTITUTIONS
Percent of FDIC Failed Banks (by Asset Size)



Source: FDIC

Additionally, at a five-digit level, each industry has its own unique set of economic drivers—the same genre of variables the Federal Reserve uses in its Comprehensive Capital Analysis and Review exercise. The IBISWorld/RMA Industry Risk Rating System© combines these complex factors to form a risk rating score.[2] The metric ranges from a very low 1 to a very high 9, where 5 is the long-term average. A schematic of the basic methodology appears in Figure 7.

Table 4 aggregates granular five-digit IBIS/RMA risk ratings rolling up to the two-digit level. Relative industry revenues were applied to calculate weights. The green-amber-red scheme is used to indicate varying degrees of risk. Validation work has been undertaken to establish a clear correlation between risk scores and industry-level performance.[3]

There are some notable outliers within these two-digit roll-ups. Within the agriculture group, soybean farming appeared to do okay, while plant and flower growing and timber services were at the upper end of risk. But these results should be interpreted with caution. Soybean farming benefited from green policies that were part of the stimulus program undertaken during the Obama administration. Moreover, soybean prices are highly correlated to energy prices, which held firm through the first nine months of the recession. So don't be too sanguine on soybeans going forward. The same holds true for corn farming.

Moreover, as noted in Part 1, the agriculture sector tends to be extremely volatile and its performance often lags far behind general recoveries. The key takeaway here is that the devil is always in the details, and it's important to fully understand the dynamics of a niche in order to make an informed credit decision.

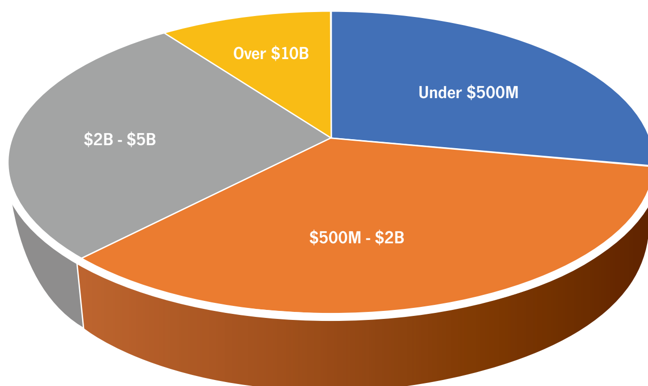
The mining sector, meanwhile, is heavily weighted in oil and gas extraction. Overall, the sector is typically a high-risk area compounded by relentless volatility, as discussed in Part 1. But there's more to consider: Along the oil and gas supply chain, oil and gas field services are anchored in a downward tow with oil and gas extraction during times when energy demand slumps. Copper, nickel, lead, and zinc mining got smashed as well in the previous cycle. As with other commodity-price-driven sectors, predicting the course of the mining sector is challenging, regardless of which stage of the economic cycle we are in.

As for utilities, wind and solar power did reasonably well during the recession, largely thanks to green policies that were connected to stimulus efforts. A word of caution here: A sector starting from a small revenue base will easily show considerable growth, which needs to be factored into a bank's analysis; recall our life-cycle comments about emerging industries. In addition, wind and solar power depend on government support, both nationally and statewide. How confident are you of alternative energy policies in the current political climate?

As mentioned previously, the construction sector was slammed across the board. Taking the hit were builders of homes, apartments, and condos, as well as land developers and a myriad of contractors. CRE's performance lagged the collapse, but soon joined in with an equally harmful downstream vibe (refer back to Figure 2).

At the more granular five-digit level,

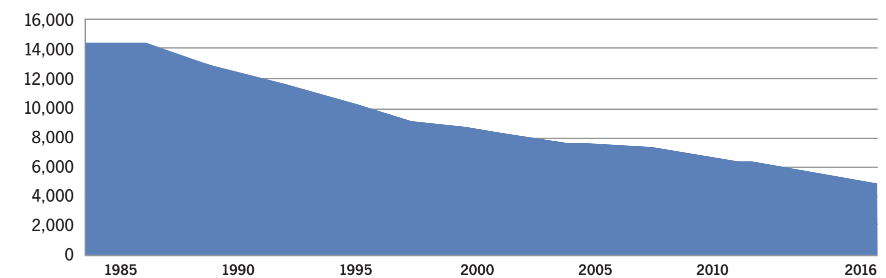
FIGURE 3: ACCUMULATED ASSETS OF COMMERCIAL BANK FAILURES PAINT A DISTURBING PICTURE
Total Assets of FDIC Failed Banks (2008-15)



Source: FDIC

manufacturing showed a wide scattering, much of this due to vast differences between durable and nondurable goods (discussed in detail in Part 1). During the last recession, the automobile sector was decimated. Production in industries highly correlated with housing starts, such as furniture and household appliances, took a beating. Food product manufacturing held up well, as did guns and ammunition production. Companies operating in industries in the declining phase of their life cycles, such as textile, carpet, and apparel knitting mills, took it on the chin.

FIGURE 4: WATCH FOR CONTINUING M&A ACTIVITY IN BANKING
Number of Commercial Banks



Source: FDIC

Wholesale and retail trade is closely synchronized with the overall economy, although there are distinct differences between discretionary and nondiscretionary spending (an exception being beer and wine sales). Transportation and warehousing similarly track the general economy. However, public transportation appears to be countercyclical (recall the discussion of inferior goods in Part 1).

The information sector was left largely unscathed. Nonetheless, the declines in industries like newspapers and magazines and music production accelerated because of ongoing structural change. Telecommunications resellers suffered a similar fate during the last downturn. News syndicates were a relative bright spot and rolled on reasonably well. It was hard to find any winners in finance and insurance, however. Third-party administrators and insurance claims adjusters were exceptions.

Within the two-digit real estate and rental and leasing category, commercial leasing firms found themselves in dire straits during the Great Recession. However, storage and warehouse leasing appeared to be countercyclical. In the professional, scientific, and technical services sectors, interior, industrial, and graphic designers as well as management and human resource consulting companies suffered. Translation and veterinary services held up well, however, as did some highly skilled areas like research and development.

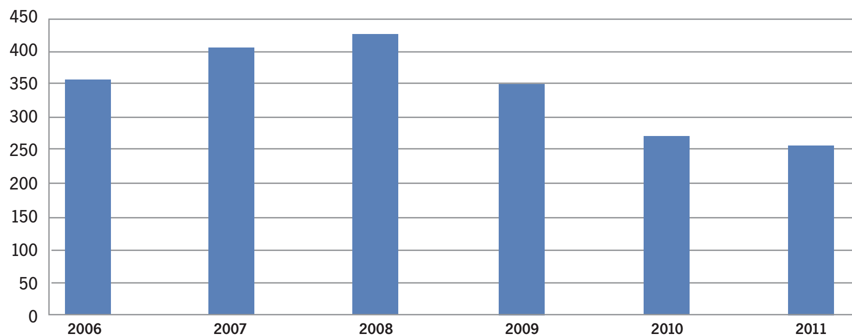
Administrative and support and waste management and remediation services is an incredibly broad group that is often befuddling. It comprises a diverse mosaic of five-digit service industries ranging

TABLE 2: TWO-DIGIT INDUSTRIES RECOVER MODESTLY

NAICS Codes	Industry Two-Digit	INFLATION-ADJUSTED REVENUE ($ BN)		Recovery Growth Annual % Change
		End Bust Year 2009	Recovery 2011	
11	Agriculture, Forestry, Fishing & Hunting	360	435	9.9%
21	Mining	489	534	4.4%
22	Utilities	805	800	-0.3%
23	Construction	1,535	1,393	-4.8%
31-33	Manufacturing	4,904	5,895	9.6%
42,44-45	Wholesale & Retail Trade	10,488	12,352	8.5%
48-49	Transportation & Warehousing	967	1,092	6.3%
51	Information	1,358	1,450	3.4%
52	Finance & Insurance	5,300	6,064	7.0%
53	Real Estate & Rental and Leasing	668	705	2.8%
54	Professional, Scientific & Technical Services	1,560	1,674	3.6%
56	Administrative and Support & Waste Management and Remediation Services	619	678	4.6%
61	Educational Services	1,180	1,376	8.0%
62	Health Care & Social Assistance	2,098	2,187	2.1%
71	Arts, Entertainment & Recreation	315	323	1.3%
72	Accommodation & Food Services	711	750	2.7%
81	Other Services	578	588	0.8%

Source: IBISWorld

FIGURE 5: COMMERCIAL REAL ESTATE RECOVERY LAGS DURING ECONOMIC RECOVERY
Commercial Construction Inflation-Adjusted Revenue ($ B)



Source: IBISWorld

from office and facility support, employment placement and temporary help, call centers, collection and travel agencies, janitorial services, physical security, and landscaping to, yes, waste management and remediation. Most of these are inordinately sensitive to economic downturns, the most recent recession being no exception. Two industries seemingly immune to economic malaise are correctional facilities and remediation and environmental cleanup services, which ties in with our discussion in Part 1 about the distinction between nondiscretionary and discretionary spending.

Two areas that held up well during the last cycle, showing less revenue deterioration and stronger relative risk ratings, were educational services and health care and social assistance. Nonetheless, private K-12 schools, colleges and universities, and business certification firms didn't fare particularly well, whereas community colleges and vocational and technical schools did, likely demonstrating the ability of students to trade down to less costly education alternatives.

Relatively speaking, in health care the underperformers were primary care physicians (deductibles can be pricey and Obamacare wasn't around in 2009) and adoption and child care services. Going forward, the lay of the land will be very different for education and health care. There have been several paradigm shifts, which we'll address later in this series.

The aggregate arts, entertainment, and recreation group can be an enigma, so borrowers in this arena need to be examined with care. Households still seek out entertainment even in the worst of times, as long as it's affordable. But casinos, which often entail travel, were clobbered. Sports franchises survived, thanks largely to television revenue guaranteed by long-term contracts.

Accommodation and food services are in a similar boat, but with many exceptions. Hotels, motels, and bed and breakfasts were hit hard. On the other

TABLE 3: WIDE DISPARITY IN RECOVERY RATES FOLLOWING THE GREAT RECESSION

NAICS Codes	Industry Two-Digit	INFLATION-ADJUSTED REVENUE ($ BN)		Cycle Growth 2007-2011
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11	Agriculture, Forestry, Fishing & Hunting	395	435	10.1%
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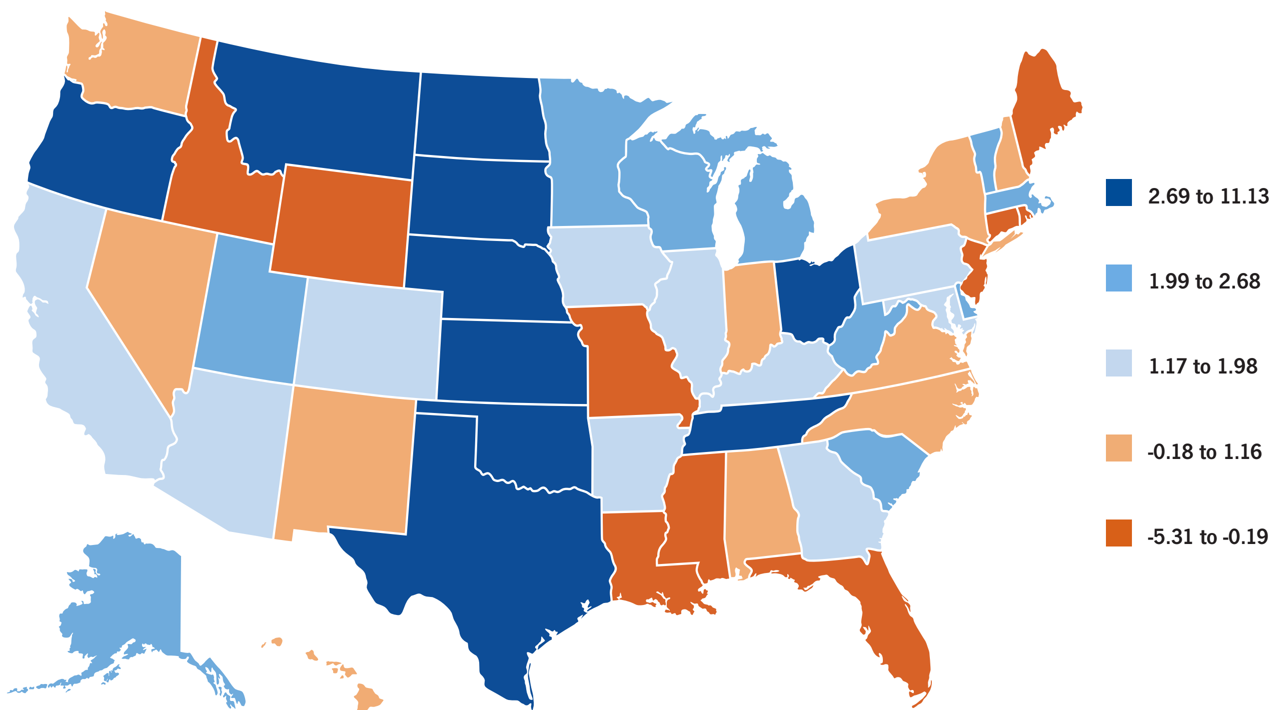
Source: IBISWorld

FIGURE 6: WIDE VARIATIONS IN STATE REAL GDP GROWTH, 2010-11



Source: Bureau of Economic Analysis

hand, campgrounds did just fine for the most part. Restaurants typically fall prey to recessionary pressures and are risky as start-ups even in good times, but fast food establishments, particularly franchises, are on more secure footing.

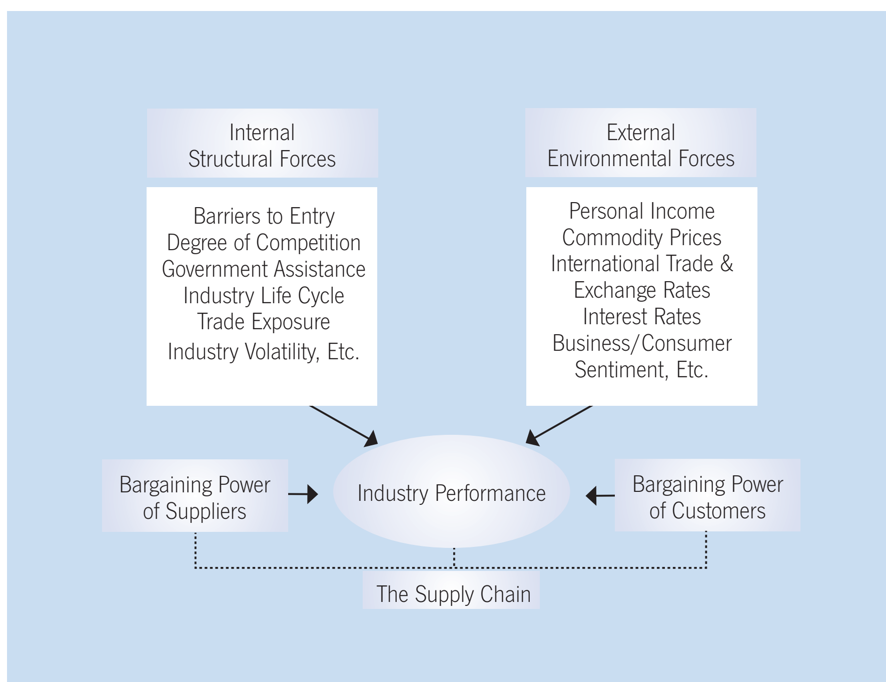
The NAICS two-digit category of Other Services encompasses another wide-ranging assortment of five-digit players. This group didn't pose a great threat to banks during the 2008-09 recession. The most adversely impacted were car body shops, laundromats and dry cleaners, parking lots, dating services, and nail and tanning salons.

The Next Phases

The analysis above unveils the variability of performance, by sector and by industry. The tasks of the lending officer and the credit officer are to 1) identify which opportunities present a reasonable risk profile, 2) determine risk-based pricing, and 3) develop a risk appetite statement.

The following guiding principles are worth keeping in mind:

FIGURE 7: IBIS/RMA RISK RATINGS: FACTORS THAT DETERMINE AN INDUSTRY'S CREDITWORTHINESS



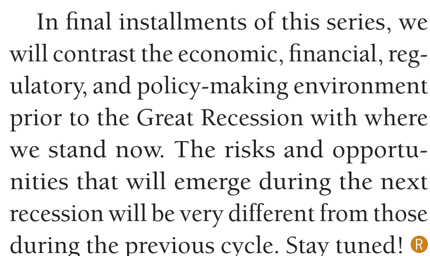
Source: IBISWorld

TABLE 4: INDUSTRY RISK AT THE TWO-DIGIT LEVEL

NAICS Codes	Industry Two-Digit	IBIS/RMA INDUSTRY RISK SCORES		Boom/Bust % Change 2007-09
		End Boom Year 2007	End Year Bust 2009	
11	Agriculture, Forestry, Fishing & Hunting	4.64	5.63	21.3%
21	Mining	5.30	5.51	3.9%
22	Utilities	4.51	5.64	24.9%
23	Construction	4.22	6.04	43.0%
31-33	Manufacturing	4.36	5.86	34.4%
42,44-45	Wholesale & Retail Trade	4.55	5.83	28.2%
48-49	Transportation & Warehousing	4.33	5.99	38.3%
51	Information	4.62	5.60	21.3%
52	Finance & Insurance	4.23	5.83	38.0%
53	Real Estate & Rental and Leasing	4.06	5.65	39.4%
54	Professional, Scientific & Technical Services	4.06	5.65	39.4%
56	Administrative and Support & Waste Management and Remediation Services	3.90	5.91	51.8%
61	Educational Services	4.14	5.09	22.8%
62	Health Care & Social Assistance	4.61	5.20	12.9%
71	Arts, Entertainment & Recreation	4.18	5.70	36.3%
72	Accommodation & Food Services	3.97	5.90	48.3%
81	Other Services	4.21	5.42	28.9%

Source: IBISWorld

- Generalizations can be dangerous. Drilling down to the five-digit level is necessary in order to understand the risk profile of any individual borrower. For example, the two-digit level for mining includes both energy and the mining of other minerals, both of which behaved very differently in the last recession.
- It's important to understand the dynamics of the borrower at the more granular five-digit level. What is the borrower's business model and does it reflect the upstream and downstream risks along the supply chain? For example, the automobile industry was decimated during the Great Recession, but certain component suppliers found a solid niche in supplying key components for less-expensive vehicles.
- In addition to understanding the risk dynamics of the borrower at the five-digit level, the credit officer needs to challenge the borrower's management and validate the sustainability of the business model for that specific niche. Not every company, even with a promising niche, is successful. The "character" element of the Five C's of Credit raises its hand again.
- Analysis is the key to ensuring a bank understands the risk it is willing to accept. At times, what appears to be a positive may turn out to be a negative. For example, a borrower may have maintained a highly stable customer base for 10 years, so it decides to focus first on retaining those customers and second on bringing in new customers. The negative can happen if one of the borrower's large customers gets a new owner that has its own preferred supplier. That could lead the customer to exit the relationship with the borrower, causing a significant drop in revenue for the borrower and threatening its ability to service its debt.



In final installments of this series, we will contrast the economic, financial, regulatory, and policy-making environment prior to the Great Recession with where we stand now. The risks and opportunities that will emerge during the next recession will be very different from those during the previous cycle. Stay tuned!

The views presented here are those of the authors and do not necessarily represent those of any current or past employers or affiliations.

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Notes

1. See Richard J. Parsons, *Broke: America's Banking System, Common Sense Ideas to Fix Banking in America,* The Risk Management Association, 2013.
2. An IBISWorld white paper on industry risk ratings is available upon request.
3. The IBISWorld white paper includes model validation results.