Guarded Optimism

The U.S. Economic Recovery
The Great Recession Issue

*Boston College Financial*—a magazine written and managed by our graduate students—seeks to bridge the gap between financial research and practice, provide a platform for our students to publish their work, and connect with the industry. Building on the success of previous issues, we are pleased to present the fifth issue of the magazine, which focuses on financial trends and developments following the recessionary setbacks of 2007–2009. The coming year offers numerous opportunities for the U.S. economy to continue growing, however, certain industries remain more challenged than others. Our students have produced thorough background articles and have conducted insightful interviews that aim to analyze and explain key financial issues facing firms in today’s economic environment. In addition to inspiring and informing the larger graduate school population, this issue will benefit professionals working in these tumultuous times, with observations about the current market, as well as potential strategies for dealing with some of its challenges.

Like its predecessors, this issue of *Boston College Financial* demonstrates a spirit of passion for finance that we hope will inspire its readership. *Boston College Financial* not only has an important impact on our students’ careers, but also enhances the reputation of the Carroll School’s graduate programs in finance.
Recent GDP growth figures suggest the U.S. economy may be emerging from one of the worst recessionary periods in the country’s history. Although green shoots are appearing in the business and financial landscape, this article examines some of the existing challenges to overcome before a full recovery can take place.

How to Raise a Search Fund
BC alumnus Stephen Tonkovich examines a niche segment of the financial world, the search fund. Similar to writing a blank check to today’s most promising business minds, these funds can represent a fast track to success for both parties, if executed with due consideration to risks and rewards.

The Near-Term Outlook for the U.S. Auto Industry
As a cornerstone of the U.S. manufacturing sector, the auto industry will play an important role in any meaningful recovery the economy experiences. Overall trends and a company-by-company review of U.S. auto companies are examined by Jonathan Baker, MBA 2011.

Media: Facing a New Landscape
Sebastian Henkel, MBA 2011, reviews the confluence of forces at work that are currently reshaping the media industry throughout the United States. Lasting trends such as digitization of content will permanently change the way we as consumers seek entertainment.

The Emergence of Infrastructure as a New and Attractive Asset Class
The infrastructure in this country as a whole has earned a deplorable D grade, according to the American Society of Civil Engineers. This article highlights some of the history behind infrastructure funds, and relays insights from the Royal Bank of Canada’s Infrastructure Investment Group.

Commercial Real Estate
Ken Hatfield examines the issues behind the commercial real estate market, balancing the current risks against the potential rewards. While there are numerous hazards present in this sector, opportunists are taking advantage of potentially lucrative situations.

The Impact of Health Care Reform in the United States
As one of the most controversial measures to pass through Washington in recent memory, there are prolific cases to be made both for and against the health care bill. Janna Radtchenko, MBA 2011, examines the differences between health care proposals.

BC Endowment Fund Weathers the Storm
Andrew Hickok, MBA 2010, discusses the strategy, funding, and performance of the Boston College endowment through these past tumultuous years—the University fared better than most during this period.

Joy Global, Inc. (JOYG—NASDAQ) Recommendation: BUY
Delo Adams, MBA 2010, examines the current market environment, competitive position, and stock valuation of Joy Global, Inc.

The Case for Gold During Times of Economic Uncertainty
Gold has experienced a meteoric rise in value throughout the course of the Great Recession. Peace of mind in times of inflationary fears, a shift in sovereign bank holdings, and speculation have helped to push prices even higher in recent times.

By Aaron Copeland

The State of the U.S. Economy
Although some uncertainty remains, the worst of the economic downturn, or “Great Recession,” appears to be behind us. It is important to examine what happened in 2009 and where we are headed in the projected recovery of 2010.

Gross domestic product (GDP) is considered the broadest measure of the U.S. economy. Technically, GDP is the total market value of all goods or services produced within an economy within a time period. From the third quarter of 2008 through the second quarter of 2009, the U.S. economy’s real GDP growth rate was negative, representing one of the longest and worst recessions since the Great Depression (Exhibit 1). The first sign of recovery came in the third quarter of 2009, with positive GDP growth of 2.2 percent, and was followed up with an even stronger “advance” reading of 5.7 percent in the fourth quarter. Much of the strength in these numbers was driven by companies rebuilding inventory. As store inventories dwindle, manufacturers must focus on new production, which serves as a catalyst for continued growth. The Federal Open Market Committee (FOMC) reiterated this belief on January 27, 2010, with this statement: “Firms have brought inventory stocks into better alignment with sales.”

While the economic environment has improved, headwinds still exist. One example is the lingering debt that U.S. households have built up over the past five years. From credit cards to home equity lines, consumers have spent beyond their means for years and are now burdened with the responsibility of paying back these debts. Exacerbating the problem is the uncertain U.S. job market, which is slowing down the rate at which consumers are able to save money and repay debt.

Jobs Market Improvement Is Vital to Sustainable Economic Recovery
Economic growth is on the path to recovery, but such is not the case with U.S. employment. The unemployment rate is the most closely scrutinized statistic when evaluating the U.S. jobs market. Defined as the total number of people in the labor force who are out of work but actively trying to find employment, this rate is released monthly by the U.S. Bureau of Labor Statistics. As Exhibit 2 shows, the numbers trended upward throughout 2009, and with a reading of 10.0 percent in December 2009, it appears to have reached a plateau. To put the dire condition of the employment environment into perspective, average unemployment between 1948 and 2009 in the U.S. was 5.7 percent. Thus, although
GDP figures have started to improve, the fact remains that this has been a “jobless” recovery. Still, there are indications that 2010 will be the start of a hiring resurgence. GDP and employment are traditionally complementary and in most cases recover together. First, although the unemployment rate at year-end was substantially above historical averages, it showed signs of stabilizing and even marginally decreased from 10.1 percent in October to 10.0 percent in November (Exhibit 2). Second, as U.S. consumers become more optimistic about their job security and financial standing, spending will rise and stimulate GDP growth. From October to November of last year, average weekly hours worked rose from 33.0 to 33.2 per week, and, although average hourly earnings remained relatively stagnant during that same period ($18.74 vs. $18.77), this trend leads to increased weekly earnings and more dollars in consumers’ wallets. Consumer spending continues to be the largest component of GDP, at 70.1 percent as of 2009. As such, the U.S. consumer is the engine that will drive recovery once the fiscal and monetary stimuli are removed from the U.S. economy.

However, as the economic environment slowly stabilizes, employers are expected to be slow to hire full-time employees, focusing instead on temporary help. Since July 2009, roughly 166,000 temporary employees have been hired. Traditionally, this is an indicator that employment growth is on the horizon. Before any true economic recovery can be validated or maintained, out-of-work U.S. consumers must find employment, and those who are employed need confidence that their current job will continue to exist well into the future.

Demographics could also play into the employment recovery. With the global collapse of equity markets in 2008–2009, large numbers of baby boomers postponed retirement because of the depressed value of their 401(k) and other retirement accounts. As the financial markets recover, followed by a similar recovery in personal retirement accounts, those boomers are likely to start moving into retirement.

**Rising Prices: Inflation Remains Contained**

Just as GDP and employment rates are important measures of the U.S. economy, so too is inflation. The two most commonly referenced measures of changes in prices of goods and services are the Producer Price Index (PPI) and the Consumer Price Index (CPI), figures that are released monthly by the U.S. Bureau of Labor Statistics. By definition, the Producer Price Index is a family of indices that measures the average change over time in the selling prices received by domestic producers of goods and services. Thus, PPI measures changes in prices from the perspective of the seller. In contrast, the Consumer Price Index is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. In other words, CPI provides the same data as the PPI, but from the perspective of the consumer. CPI price changes are what typical consumers are most likely to notice in their daily consumption of goods and services.

CPI and PPI have “headline” and “core” readings, which include the same basket of goods and services except that the “core” CPI excludes food and energy. The core readings give market analysts and economists an overview of actual price movements of core goods and services, without adversely affecting the index with highly volatile prices such as energy, food, and other commodities. At 2009 year-end,
headline CPI in the United States moved up 0.1 percent from November and up 2.7 percent from a year earlier. Excluding food and energy, core CPI rose 0.1 percent month over month and up 1.8 percent on a year-over-year basis. Headline PPI rose 0.2 percent from November, while core PPI showed no change (0.0 percent). On a year-over-year basis, headline PPI grew 4.4 percent, with core PPI up only 0.9 percent. Another important indicator of average price changes of U.S. personal consumption is the Personal Consumption Expenditures price index (PCE price index), which, like PPI and CPI, has both a headline and core reading. The core PCE price index rose 1.5 percent year-over-year as of the end of 2009.

These three prominent price movement indices have broad economic significance, and the Federal Reserve studies them intently in planning policy moves to counteract increases in inflation. The Fed references CPI and PPI, and specifically focuses on PCE price index numbers at FOMC meetings before making any monetary policy decisions on open market operations, changes to the discount rate, federal funds rate, or reserve requirements.

CPI's economic significance goes beyond monetary policy decisions—it is also used as a basis for many personal cash flow mechanisms like pensions, Medicare, cost-of-living adjustments, insurance products, and fixed income investments. As evidenced in the historically low inflation numbers from 2009, individuals should expect lower fixed income returns and lower adjustments to formal cash flow mechanisms. Unfortunately, low inflation cannot last forever, especially given the massive fiscal deficit and extremely low interest rates. Although it has been subdued by weak economic growth this year, the Federal Reserve will at some point have to develop a strategy to combat rising prices.

Monetary Policy Stimulus and the Federal Reserve’s Strategy

The Fed’s overall goal is to influence the availability and cost of money and credit to help promote national economic goals. One of the biggest monetary policy questions today is when the Federal Reserve will implement its tightening cycle, or more specifically, when it will launch a campaign to increase interest rates. The FOMC has been very successful in communicating current and future monetary policy plans to the financial markets, and this anticipated tightening cycle is no different—the market should not expect to be surprised. In the past, this strategy has prevented surprises as policy changes take place, and has kept the markets abreast of the Fed’s strategies and plans. The FOMC’s recent statements have made it clear that significant concern still exists regarding the weak jobs market. The Fed will not pursue a rate increase until the unemployment rate has gone down. Increasing rates too early or too fast could derail the current economic recovery, and with inflation at historically low levels, there is no pressure to start raising rates. Rate increases are not likely until the third or fourth quarter of 2010 at the earliest.

Meanwhile, the Fed has started to wind down the special liquidity facilities that were put in place over the past year to foster credit and financial market stability. Although many of these programs officially expired on February 1, 2010, the Fed halted purchase of commercial paper and long-term Treasury securities much earlier than that. Another example is the more familiar Troubled Asset Relief Program (TARP), which ended as major U.S. banks improved their balance sheets and paid back loans from the Fed. These pullbacks can be viewed as tightening actions by the Fed, though they are not officially billed as such. Closing out these programs is a first step in the Fed’s exit strategy and demonstrates the Fed’s confidence as the credit and financial markets make their way back to normalcy.

On Track for Improvement in 2010

As indicated by the strong GDP numbers in the last two quarters of 2009, the U.S. economy appears to be on the road to recovery. Even with improvements in the broad economic environment, however, concerns still exist, and no resurgence will be sustainable unless the employment market improves and jobs are created. Increased hiring of part-time help indicates that employers are getting comfortable with growing their payrolls. Fortunately, inflation has been kept at bay, allowing the Fed to take a dovish approach to monetary policy and preventing drastic policy moves that could disrupt the current recovery. Although there is reason to be optimistic for 2010, patience is necessary as we embark on a long path to normal economic conditions.

Endnotes

4  http://www.investopedia.com/university/releases/ppi.asp.
How to Raise a Search Fund

By Stephen Tonkovich

A growing number of MBA graduates are becoming CEOs of established companies within just a few years of graduating from business school. How are they doing it?

With the help of search funds.

A search fund is a two-stage private equity fund in which investors finance an entrepreneur’s efforts to identify, acquire, and operate an existing business. In the first stage, investors typically contribute between $400,000 and $600,000 to cover the entrepreneur’s salary and expenses as he or she searches for a company with growth potential. This stage tends to last one to two years. In the second stage, the entrepreneur presents the acquisition opportunity to the investors, who have a right of first refusal to fund the acquisition of the target company, which will then be run by the entrepreneur. In general, search fund acquisitions have a purchase price in the $10 million to $50 million range and focus on businesses with some or all of the following characteristics: They do not require special training or experience to run; they are in a fragmented industry; and they are not subject to near-term technical changes. The goal is to purchase a company with stable cash flows where stronger management skills and new ideas can improve profits. Companies in the service and manufacturing industries are the most common targets.

What Is the Appeal?
Since search funds first came to light in the mid-1980s, search fund entrepreneurs have emerged from a number of backgrounds. Most often, they are recent MBA graduates with skills and training that can be applied to undermanaged companies with positive results. The search fund model appeals to these graduates because it offers a more direct route to running a business than traditional avenues usually do. In most cases, the entrepreneur also receives equity in the acquired entity equal to 30 percent of the entity’s common stock. The investors usually get preferred equity in the acquired company, which may have an annual preferred return. Upon a sale or recapitalization of the acquired company, the preferred return and the amount invested by the investors to purchase the company is paid out first. This includes the amount invested in stage one of the search fund, which is given a step-up of 50 percent in value of the investment upon the rollover of the investors’ interest in the search fund into the equity issued in connection with the acquisition. The remaining proceeds are then split 70/30 between the investors and the entrepreneur as common stockholders. Usually, one-third of the entrepreneur’s common stock vests upon the closing of the acquisition, one-third is subject to time vesting, and one-third vests if certain internal rate of return (IRR) hurdles are met. This incentive equity can be quite lucrative upon the sale or recapitalization of the acquired company, so the appeal for the entrepreneur is clear. At the same time, the model also appeals to investors because it provides successful investment opportunities. According to a 2007 study published by the Center for Entrepreneurial Studies at the Stanford Graduate School of Business, the blended pre-tax IRR for investors in first-time search funds was 52 percent.

Raising Capital
The first step in raising a search fund is to prepare a Private Placement Memorandum (PPM), an offering document drafted by the entrepreneur and distributed to potential investors in the search fund. Designed to help potential investors decide whether to invest in the fund, the PPM provides information about the investment proposal and the entrepreneur. The format of the PPM has become relatively standardized in recent years, and includes details of the
In most cases, the entrepreneur has just one opportunity to convince an investor to invest in his or her fund—so it’s important to make the most of that opportunity.

entrepreneur’s background and résumé, the expected term of the fund (usually 24 to 30 months), the fund’s search strategy, the estimated size of the fund, the fund’s budget, the anticipated terms of the equity interests to be issued by the search fund, and other fund-specific information, as well as information about search funds generally, including their history and historical investment returns.

The entrepreneur’s goal for the first step is to find 10 to 20 investors to buy one or more units at a typical price of $20,000 to $40,000 per unit. This can be challenging given that most search fund entrepreneurs have relatively little experience in fund raising, and that fund raising is most difficult during the first stage of the process. In most cases, the entrepreneur has just one opportunity to convince an investor to invest in his or her fund—so it’s important to make the most of that opportunity. Here are some tips for successfully funding the first stage of the search process:

1. **Get financial backing from friends, family, or former business associates.** Before you approach professional investors, try to convince a few personal or business associates to invest in the fund. It isn’t required, but it shows potential investors that the people close to you believe in you. Your associates’ investment does not need to be large to be effective; in fact, it should not represent too high a percentage of the search fund—you do not want Sunday dinner to turn into an investor meeting, and your investor base needs deep enough pockets to support a sizeable acquisition.

2. **Approach experienced search fund investors.** Some investors routinely invest in search funds. Rather than attempting to explain the search fund model to professional investors who are new to the model, start with experienced search fund investors. You may even be able to fund both your search and the eventual acquisition solely from this group. To find experienced search fund investors, contact your lawyer, your accountant, or other search fund entrepreneurs.

3. **Choose investors wisely.** Obviously, you need to make sure your investors have sufficient net worth to fund your eventual acquisition. However, that’s not the only thing to consider when choosing potential investors. You might want to pursue a potential investor who has experience in the industry that you intend to target, for example, or one who can connect you with helpful contacts. In any case, you and your investors need to come to an agreement on fundamental topics such as your salary, your incentive equity compensation, and the direction of the acquired company, as well as the terms of their investment. Speaking honestly and making difficult decisions now will save you from facing more difficult issues later.

4. **Keep it simple.** Search fund entrepreneurs tend to be bright, creative individuals who may try to create complex terms for the investors’ and entrepreneur’s equity. However, a complex equity structure can slow down the process and cause investors to lose interest. A better approach is to discuss with your lawyer and accountant the equity terms that make the most sense for you. There are a number of standard terms that investors will require. It’s critical to employ an experienced search fund lawyer who understands market terms and is familiar with the issues facing the parties. In short, finding simple solutions that satisfy both parties will result in a faster and smoother process.

Overall, remember that your search fund investors are investing in you as an entrepreneur, rather than in a predetermined business. Your experience, strategy, and preparation are the most important factors for potential investors.

**Setting Up the Search Fund**

Once the search fund is fully funded, it will be governed by two principal documents: the fund’s limited liability company agreement and subscription agreement. Search funds are usually organized as limited liability companies, or LLCs. The LLC is treated as a partnership for federal income tax purposes, which means that, unlike a traditional corporation, the LLC itself pays no federal income taxes. Instead, the profits and losses of the LLC pass through the LLC to its members, as provided in the LLC agreement, and the members pay federal income tax on their individual shares of any profits. During the formation and search phases, a search fund typically has very little in the way of profits since the fund’s activities are limited to spending money in search of an acquisition. Thus, the members of the fund may have no tax liability with respect to the fund during these periods, but are entitled to deduct their proportionate share of LLC expenses or losses on an annual basis.

A standard search fund LLC agreement provides that the LLC will be managed by the entrepreneur. The LLC agreement gives the entrepreneur broad authority to operate the fund on a day-to-day basis, subject to member approval for certain material actions.
A new LLC is generally formed to acquire the target company in order to ensure that the acquiring entity is not burdened with any known or unknown liabilities that may have arisen during the search phase. The LLC agreement that covers the acquisition is far more comprehensive than the LLC agreement connected with the search fund. The acquisition entity LLC agreement will, among other terms, describe in detail the rights and preferences of the equity securities issued to investors and the entrepreneur, and the responsibilities of the entrepreneur for day-to-day management of the acquired entity.

When investing in the fund, the investor executes a subscription agreement acknowledging the terms of its membership interest, including that the purchase is an extremely risky investment that may become worthless; that the investor has had the opportunity to review the PPM and LLC agreement and acquire additional information about the fund; and that the interests are restricted and thus cannot be freely transferred. In addition, the investor makes certain representations and warranties to the fund (including that he or she is an accredited investor), and agrees to keep confidential financial and other information about the fund.

In addition, the subscription agreement usually describes the investors’ right of first refusal to purchase the equity securities issued in connection with the ultimate acquisition, and details the step-up of 50 percent in value of the investment upon the rollover of the investors’ interest in the search fund into the equity issued in connection with the acquisition.

Some search funds attach a nonbinding term sheet to the subscription agreement describing the anticipated terms of the equity interests that will be issued in connection with the ultimate acquisition. Some funds decide not to attach such a term sheet given the relatively long duration and uncertainty of the search phase and the fact that the details of the equity issued in connection with the acquisition are often influenced by the economics of the business being acquired.

Once your search fund is fully funded and you and your investors have entered into the fund’s governing documents, you can begin looking for the company that you want to buy.

Conclusion
Search funds are a type of private equity fund that provide an entrepreneur with the resources to acquire and run a business. For the entrepreneur, a search fund offers a more direct route to running a business than traditional avenues usually do, as well as equity in the company, which rewards the entrepreneur’s ability to grow the business. The investors, meanwhile, gain the opportunity to invest in a business that can profit from the entrepreneur’s skills, training, and fresh view of the business. It is a relationship that can be very successful and profitable for all parties involved.
The Near-Term Outlook for the U.S. Auto Industry

By Jonathan Baker

In determining whether or not the automobile industry is out of a recession, we must first define the scope of the question. While the trends of the overall automobile industry are an important topic of consideration, this article takes a U.S.-centric view of the recession, particularly from the standpoint of car manufacturers. In addition to an examination of some of the key overall aspects of the recession, we will take an in-depth look into the “Big 3” automobile companies—Ford, Chrysler, and GM.

One of the most obvious indicators of the health of the automobile industry is sales of new cars. Many factors are currently beleaguering consumers. With a weak economy, the housing market squeeze, limited credit availability, high credit costs, and low overall consumer confidence, many consumers find themselves unable to purchase a new car, or are at least delaying the purchase until economic conditions are more favorable.

Not surprisingly, the average age of cars on the road has risen to a record high. According to R.L. Polk and Company, a firm that specializes in information about the automotive industry, the average age of passenger cars rose to 9.4 years as of June 30, 2009, while light trucks’ average age has risen to 7.5 years. These numbers represent an increase of 0.2 and 0.4 years, respectively, over R.L. Polk and Company’s 2007 data. Though this is partly because cars have become more reliable, it is also due in large part to consumers’ delay in purchasing new cars.

Despite these negative forces, which have contributed to a 19 percent decline in the total industry since 2008, car sales have slowly begun to pick up. Though sales decreased nominally from October to November in 2009, this decrease does not take into account the seasonality of car sales, which are usually higher in spring and summer and trail off in winter months. When compared month-to-month using an industry-adjusted rate, November’s sales show a 400,000 improvement in cars sold. This points to a slow, improved growth, which is particularly encouraging following the end of the U.S. government’s “Cash for Clunkers” program.

Indeed, even major auto manufacturers are predicting significant increases in U.S. sales. In 2009, roughly 10.5 million cars were sold in the United States. For 2010, Ford forecasts U.S. car sales to be 11.5 million to 12.5 million, while GM predicts sales of 11 million to 12 million. Even analysts who expect the U.S. auto industry to be affected by another U.S.-wide “double-dip” recession in late 2010, like managing director of a motor industry analysis firm Jim Hall, forecast an increase of total car sales to 10.9 million. While these increased sales forecasts are encouraging, they still aren’t close to 2008’s U.S. sales of 13.2 million.

While today’s relatively high cost of oil presents challenges for consumers, it may actually benefit the automotive industry in the long run. The price of oil has dropped since its peak in July 2008, but future prices are uncertain, with some experts projecting prices as high as $300 a barrel as early as 2013. This has already resulted in a push to develop fuel-efficient technologies and automobiles that no longer run on fossil fuels. At the 2010 auto show, hybrids and electric cars had a much more significant presence than in previous years, including the designation of a separate “Electric Avenue” section specifically for electric cars. New electric cars, such as the Chevy Volt, will go into production in late 2010. As new jobs are created in support of electric and hybrid technologies, the health of the overall automobile industry will improve.

Of course, these new electric and hybrid technologies mean nothing unless there’s a demand for them. According to a recent study by Ernst & Young, 10 percent of the U.S. population would consider buying a plug-in hybrid or...
Auto parts suppliers have been particularly affected by the downturn in automobile production. Suppliers, who deliver about 70 percent of an automobile’s value, take their cues from auto manufacturers regarding production schedules. With a downturn in production, nearly 30 percent of all suppliers may be at high risk of bankruptcy.

electric car. Though this percentage would translate to only 20 million drivers, it is still a significant number; according to Mike Hanley, global automotive leader at Ernst & Young LLP. “Even if only a small portion of the 10 percent ... are serious, there would still be more than enough demand to sell out the 2010 and 2011 production runs of the major and new manufacturers.” Hanley also says this would be crucial in giving the technology the time it needs to build awareness and support infrastructure. While there are some barriers to mainstream adoption of the technology—including access to charging stations, battery driving range, and cost—the investment required to overcome them likely will give a boost to the overall economy, as well as spark further demand for these technologies.

Another indicator of the health of the auto industry is the number of total jobs; as manufacturers anticipate more demand for cars, they will need additional labor to produce them. Here, we see mixed indications of the state of the automobile industry, particularly within the United States. Volvo, for example, is closing a North Carolina plant, and with it cutting 228 jobs. On the other hand, Volkswagen is building a $1 billion plant in Chattanooga that will employ 2,000 people and create an additional 9,000 jobs for the surrounding area.

Auto parts suppliers have been particularly affected by the downturn in automobile production. These suppliers, which end up delivering about 70 percent of an automobile’s value, take their cues from auto manufacturers regarding production schedules. With a downturn in production, nearly 30 percent of all suppliers may be at high risk of bankruptcy, according to a Grant Thornton report. Most insiders agree that there are simply too many suppliers in the markets right now given the level of demand. However, given the complex relationship between suppliers and auto manufacturers, the loss of even one supplier could potentially shut down an entire supply chain. To make matters worse, suppliers are not exclusive to one particular manufacturer, so a downturn at Chrysler, for example, might force a supplier who also makes parts for GM to close up shop and potentially disrupt production at GM.

Therefore, a turnaround in the automobile industry will not happen without careful consideration of the industry’s suppliers. Fortunately, both the automobile industry and the government are fighting to ensure that at least some suppliers are being taken care of. The government has put into place the “Auto Supplier Support Program,” which guarantees “access to government-backed protection that money owed to them for the products they ship will be paid no matter what happens to the recipient car company.” In addition, it ensures that certain suppliers will be able to sell their receivables at a modest discount, further ensuring that suppliers will remain liquid as they continue to do business in this uncertain time.

Auto manufacturers also are fighting to keep their suppliers afloat. To be sure, big auto manufacturers are reducing the number of suppliers that they partner with—GM announced a reduction of one-third of its suppliers to 1,000, and Ford will reduce its 1,600 suppliers to a mere 750. But the automobile industry has a vested interest in the survival of the suppliers that remain. In one example of this protectionism, Chrysler convinced a bankruptcy judge that the company needed to pay $1.7 billion it owed to suppliers for parts delivered prior to bankruptcy. Automakers understand that ensuring a supplier base is key to their own well-being.

Finally, there has been a trend among global automakers to increase foreign expansion, particularly within China. China’s vehicle sales jumped 46 percent in 2009 to 13.6 million cars, surpassing the U.S. as the world’s largest car market. GM, for example, experienced 66.9 percent growth in sales in China, representing roughly a quarter of its total global sales. Additionally, Ford, Volkswagen, Toyota, Nissan, and Honda all posted sales growth in China amid U.S. and European declines in sales. This geographically diversified bolster manufacturing capabilities’ ability to withstand the recession.

The following sections represent a case-by-case analysis of the “Big 3” U.S. automakers: Ford, GM, and Chrysler. These three companies share a variety of similar conditions. For example, they all employ unionized workers and thus pay higher wages than competitors; they all have focused production on larger, fuel-inefficient sports utility vehicles, which recently have been less in demand than smaller, more fuel-efficient cars; and two of the three have recently filed for (and subsequently emerged from) bankruptcy.

U.S. automakers, particularly GM and Ford, have benefited from Toyota’s 2010 recall of millions of cars and trucks due to faulty accelerators. Indeed, General Motors and Ford have begun to offer $1,000 cash for owners of Toyota trucks to switch to GM and Ford autos. As a result, Ford reports a sales increase in January 2010 of 25 percent.
Ford

Of the Big 3, Ford seems to be in the best position. Ford took advantage of good market timing, both in mortgaging its assets while credit was still available, and more recently in raising $1.4 billion in equity. This gave Ford the liquidity it needed to resist bankruptcy throughout the downturn of the economy.10

Ford has made several key advantageous moves. First, the company has begun to incorporate some of its European products into its U.S. lineup, including the Transit Connect (a small commercial van) and Ford Fiesta. Additionally, Ford has changed its operating philosophy from a region-operated model to a global approach. This has given Ford greater economies of scale and gains in efficiency in manufacturing, favorably altering the economics for Ford’s production of passenger cars.11

These moves have increased market share within the U.S. market. Ford was able to increase its market share in 12 out of 13 consecutive months, ending with November. In fact, the company claimed a 15 percent U.S. market share in October 2009,12 a considerable improvement, given current market conditions, over its 2008 share of 14.2 percent.13

However, the company’s success is not without drawbacks. One such disadvantage is a higher debt load ($38 billion in debt compared with GM’s $22 billion14), as a result of avoiding bankruptcy. This could translate into higher interest and borrowing costs for Ford going forward.15

Additionally, Ford’s success has prevented the company from securing concessions from the United Auto Workers (UAW) union. The UAW rejected a proposed no-strike clause in its contract,16 meaning the UAW could strike right in the middle of what many believe to be a long, slow recovery. Such a strike could have a disastrous impact on the company.

In assessing the likelihood of a strike, I spoke with Nicholas D’Andrea, a former UAW official, who told me that while it is the union’s duty to protect workers, it is not in the union’s best interest to “kill the goose that lays the golden egg.”17 Given the automotive industry’s precarious position during this economic downturn, it is unlikely that a UAW strike on Ford would benefit the union in the long run.

GM

Emerging from bankruptcy in July, GM has come out of the gate showing signs of recovery. One of the recent key changes, in addition to obtaining concessions from the UAW to lower labor costs,18 was the decision to keep the European Opel subsidiary. Opel designs have been important in relaunching several of GM’s cars, such as the Buick Regal, Chevy Malibu, and the not-yet-released 2011 Chevy Cruze. Opel engineering departs from previous, conservative styling and puts GM more on a par with Mercedes, BMW, and Audi.19 Additionally, the company is offering customers a money-back guarantee on GM vehicles, and is launching ad campaigns—including the recent “may the best car win” campaign—designed to raise awareness of GM’s quality and fuel efficiency.20 In another signal of its current health, GM has plans to begin paying off its government loans early, five years ahead of schedule.21

Along with restyling its cars and making them more fuel efficient, GM is making large bets in the full-size truck market. GM has committed to remodeling its current line of trucks, a move that will likely cost the company a total of almost $1 billion. Though this move is primarily aimed at pickup trucks, GM intends to make the new trucks more fuel efficient than their predecessors.22 Given the efforts of other companies to make smaller cars, this move could put GM in a more competitive position in the truck sector, which typically generate thousands of dollars in operating profit per vehicle sold.23

This is not to say that there aren’t concerns for GM during the recovery. First, GM may not be doing enough to reinvent its product line—something believed to be crucial to the recovery of all U.S. auto manufacturers. While GM is making changes to some of its lines, it lags behind the efforts of Ford, which will have completely revamped its entire lineup by 2011. In addition, with the industry trending toward small, fuel-efficient cars, GM is making one lone bet on its Chevy Volt—a car based on uncertain technology, seen to be too costly, and projected to be released at a time when rivals should already have several small, fuel-efficient cars out on the market.24

GM also needs to maintain discipline and focus on profitability. Many steps may have been taken toward this end—like the company’s May announcement that it was cutting 1,110 dealerships25—and there is no direct evidence that GM is taking its eye off the profitability ball; still, GM has been boasting that it is reclaiming market share.26 If GM focuses on market share without regard to profits, the company’s long-term health may suffer.

Chrysler

Of the Big 3, Chrysler is probably at the bottom in terms of sales. Chrysler sales have fallen more quickly than the rest of the auto manufacturers, losing 26 percent of its sales while the rest of the United States remained relatively flat.27 Despite the company’s statement that it planned to reduce its reliance on incentive programs, Chrysler has begun offering significant incentives in the company’s 2010 models in an effort to boost sales.28

While Chrysler has taken similar steps as some of its rivals, including cutting 789 dealerships in May29 and obtaining union concessions,30 vehicular changes are not as drastic. By the end of 2010, Chrysler plans to update interiors and engines and improve the overall driveability of several of its cars.31 While there are high hopes that Chrysler will bring the award-winning Fiat line into the U.S. market where it can compete with other small, fuel-efficient cars, Fiat will not hit dealerships until late 2010 or early 2011.32
In fact, Chrysler will roll out its new cars much more slowly than competitors, with a new Fiat car, five new Dodge vehicles, and a revamped Jeep Grand Cherokee by 2013. One potential problem of this strategy is that even if the overall quality of Chrysler vehicles improves, the change may not be significant enough for consumers to notice until these new cars are released.

Conclusion
While the automobile industry is not yet out of the woods, we are seeing signs that recovery is on the way, albeit slowly. The outlook for U.S. automobile sales is likely to improve in 2010, though without reaching 2008’s high sales. The demand for newer, fuel-efficient cars appears to be genuine, and automakers seem to be responding by investing in these technologies—something that may give a boost to the overall economy in terms of jobs and investment in infrastructure. And though supplier concerns should be monitored closely, so as to avoid a second recession, auto manufacturers have laid out actionable plans and have taken initial steps toward an economic recovery.

Endnotes


15 Ibid.


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20 Ibid.


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26 Ibid.
32 Ibid.
35 Ibid.
36 Ibid.
37 Interview with Nicholas D’Andrea, January 6, 2010.
41 “GM on fast track to recovery; Troubled automaker ready to repay government bailouts as it gets close to mounting a turnaround,” op cit.
43 Ibid.
44 “GM on fast track to recovery; Troubled automaker ready to repay government bailouts as it gets close to mounting a turnaround,” op cit.
46 “GM on fast track to recovery; Troubled automaker ready to repay government bailouts as it gets close to mounting a turnaround,” op cit.
Media:
Facing a New Landscape

By Sebastian Henkel
The recent recession has left a heavy mark on the media sector. Numerous companies are struggling to keep afloat in the face of severe decreases in advertising revenue, conservative consumer spending, and structural changes that threaten traditional media. What’s more, the credit crunch has also complicated M&A activities that might have saved some of the now-vanished businesses.

Traditionally, the media sector has been very sensitive to macroeconomic conditions. Its heavy reliance on advertising makes it especially vulnerable, as companies of all kinds tend to slash marketing expenditures in times of economic hardship. This recession’s severity left the advertising industry in tatters, allowing less money to trickle down to other industries within the sector. Certain segments, such as publishing and broadcasting, were hit especially hard: Advertising dollars plunged by more than 10 percent in these industries.

Some companies attempted to ride out the storm by drastically slashing costs; some resorted to reducing their headcount. In 2008, the media sector suffered more than 28,000 layoffs. A number of newspapers, such as the Rocky Mountain News and the Tucson Citizen, have ceased operations in response to investor reluctance to buy into an industry that stands on such shaky ground. Others, like the Boston Globe and the San Francisco Chronicle, are barely surviving. Fortune magazine, to cite another example, decided to issue 25 percent fewer issues annually and to lay off employees to reduce costs. This was in response to a 35 percent decrease in advertising pages.

But even in such dark times, there are some bright spots in the media sector. One bright spot is cable television. With subscription fees providing a steady source of income, cable companies were able to offset the drop in advertising, which typically accounts for about half of revenues. As Mr. Moffett, a Sanford Bernstein analyst, puts it: “People would sooner unplug their refrigerators than their cable boxes.” However, that paradigm does not hold true for broadcast television, which suffered heavily as a result of being almost entirely financed through ad revenues. The other star in the sky is digital media, which continued its advancement with significant moves forward. Exhibit 1 depicts the current segmentation in the U.S. media sector.

The Digital Divide
The media sector has experienced a gradual structural change over the past few years. Internet distribution of content often circumvents traditional media outlets. Information found in newspapers is usually available on the web; some broadcasters offer entire shows on their websites. Moreover, this content usually is free of charge. Online content in the form of news, blogs, and video sites is a viable option for consumers, encouraging more and more to stop using traditional media altogether.

But was this not to be expected? The migration of advertising dollars from traditional to digital media was no secret. However, the economic downturn had a catalytic effect that supercharged these structural changes. Many traditional media companies were surprised by the severity of the blow. As companies throughout all industries reduce their mar-
Marketing budgets in reaction to the economic downturn, there is an incentive to devote more effort to targeted advertising campaigns to make better use of the dollars left to marketers. Unlike traditional media channels—such as TV, radio, and newspapers—digital media channels allow a targeted approach; for example, by tying advertisements to search terms or running them in conjunction with online videos of specific content.

One might wonder if the shift is only a temporary effect that will reverse once the economy recovers and marketing departments reign over higher budgets again. However, industry experts do not believe that this will be the case. Advertisers follow consumers, and in the past few years consumers have migrated to the web as an information and entertainment source. This movement is unlikely to stop as broadband becomes more widely available and smartphones find their way into everyone’s pockets. PricewaterhouseCoopers forecasts that advertising in U.S. magazines will decline by an additional 23 percent in 2010, with newspapers faring even worse. Given this sharp drop, the eventual predicted recovery of 14 percent in 2011 appears to be nothing but a consolation prize. Additionally, newspapers, the major player in traditional print media, face a cost problem. Most have both a free online presence and a regular paper-based service. Printing newspapers is a capital-intensive undertaking, requiring certain economies of scale to remain profitable. That is, however, not sustainable if the same content is offered free on the web, only to be supported through online ads. In addition, every paper in the nation, and moreover in the world, competes with one another; British consumers can easily access the New York Times, and Americans read the Sun. As the Internet commoditized information, newspapers are essentially facing perfect competition, heavily eroding profits. Some newspapers are experimenting with online subscription models, but with so many competitors continuing to offer free content, it is unlikely that a significant percentage of consumers will see an added value in subscription services. Other newspapers have already switched to an online-only model to avoid the costs associated with print.

Survival Instincts
Recently, some of the distressed players have started experimenting with ways to combine traditional print with digital media to retain their advertising dollars. For example, Esquire magazine started printing small boxes next to certain articles that, when held in front of a webcam, trigger interactive videos informing consumers about products. Newspapers and magazines alike are ramping up their web appearance in order to retain or even gain readers. Broadcasters, in an attempt to become less dependent on ad revenues, are rumored to be planning to charge for their programming in a cable television manner. NBC Universal, a broadcaster, is experimenting with cause-related programming to attract a focused target audience; as it turns out, marketers are indeed willing to pay a premium. Disney, primarily a content-heavy entertainment company, is trying to implement Keychest, a personal media library stored in the cloud that allows consumers to receive products such as movies-on-demand through various platforms. All of these efforts have a common theme: defending a company’s turf against the rise of digital media.

One notable event has been Comcast’s bid for NBC Universal. A majority of shareholders have been confused by the bid, as it seems counterintuitive to buy into a downward-sloping business. However, the move exemplifies Comcast’s defense against the surge in digital media, or more importantly, free media. With an acquisition of NBC Universal, Comcast not only takes over NBC’s broadcasting network, theme parks, and movie production, it also acquires additional cable channels, including USA, CNBC, Bravo, and the Weather Channel, and more importantly content rights. The latter will enable Comcast to prevent content from being offered at no charge over the Internet, serving as a method to retain subscribers to its cable services. George Shababb, president of WPP’s TNS Media Research, argues, “This deal might actually serve as a catalyst,” making “ad sales business more important to Comcast”, and thereby retaining marketers who otherwise would take their ad dollars to the Internet. Combining content and distribution is a possible scenario for the future structure of the business, as Steve Burke, Comcast’s COO, confirmed in September 2009 when he...
said, “At our core, we believe content and distribution work well together.”  

Dire Times Ahead

Overall, the value of the media industry is expected to gain footing again as early as 2010. However, as Exhibit 2 illustrates, the value growth stagnated in 2008 and fell by more than 2 percent in 2009, which amounts to a compound annual growth rate of a meager 1.8 percent for the period of 2005 to 2014. Projected ad spending on broadcast and cable television depicts an even gloomier outlook for the coming years (see Exhibit 3). While the latter is forecasted to improve slightly, the former is expected to take another hit of about 8 percent in 2010 and to stagnate in 2011.  

As the divide between the sectors becomes larger, it comes as no surprise that growth will be driven by cable television and digital media. Between 2003 and 2008, the traditional media sector lost about 32 percent of its market value, while digital media gained roughly 102 percent. Even cable companies have largely grown by offering digital services. Newspapers, magazines (B2B as well as consumer magazines), and radio are expected to lose even more ground. The same applies to recorded music. PricewaterhouseCoopers expects these “losers” to suffer a further decline over the next years. The Wall Street Journal went so far as to call the film industry’s business model doubtful, as online videos have been rising quickly in popularity. Exhibit 4 shows consumer spending growth projections, illustrating the rift between digital and traditional media, with the former clearly outperforming the latter.  

The coming years will certainly see an increase in competition as digital media drives down prices. Moreover, the potential exists for outsiders to buy into the industry. As smartphone usage increases, telephone and satellite companies will probably join the market for content delivery and potentially cable services. Some argue that the economic downturn supercharged not only the sector’s structure, but also the competitive landscape. Financially healthy companies that exhibit strong operational capabilities will gradually advance to new heights (see Exhibit 5). In addition, as the availability of capital improves in
2010, media conglomerates are likely to engage in consolidation activities.

Although the future remains clouded, given that much development will depend on consumers’ willingness to adapt, the rift between traditional and digital media is sure to expand. The sector will certainly see interesting changes over the next few years as companies experiment with new approaches to differentiate their services and gain the edge in a more demanding and competitive landscape.

Endnotes
2 “Layoffs mount, but media sector hardly worst off,” Benton Foundation, March 5, 2009.
3 “Rocky Mountain News unlikely to be the last newspaper to die,” Chicago Tribune, February 27, 2009.
8 “Media conglomerates in the downturn,” the Economist, October 8, 2009.
9 “No place to hide from the digital revolution,” PricewaterhouseCoopers, June 16, 2009.
19 Ibid.
23 Ibid.
American infrastructure is deteriorating. The American Society of Civil Engineers (ASCE) “estimates that $2.2 trillion needs to be invested over five years to bring the condition of the nation’s infrastructure up to a good condition.” As part of its 2009 U.S. infrastructure report card, the ASCE provided a comprehensive analysis and appraisal of all sectors of U.S. infrastructure systems. These areas include, but are not limited to, roads, bridges, drinking water systems, schools, and energy grids. No single area earned a grade higher than C+ in this report. And the report card gave U.S. infrastructure as a whole an average grade of D—a deplorable grade on any transcript.

Infrastructure encompasses the basic services, facilities, and institutions that modern society depends on to thrive. Traditionally, the public sector—federal, state, and local government—constructs, maintains, and repairs infrastructure systems, with capital requirements typically raised by increasing or introducing new taxes, or by issuing public bonds. Currently, however, state and local governments across the nation are saddled with increased budget deficits, limiting their ability to issue new bonds to fund infrastructure needs. According to a July 2009 report by the Nelson A. Rockefeller Institute of Government, state tax collections have been steadily declining since the third quarter of 2005; the 11.7 percent drop in collections in the first quarter of 2009 was the sharpest decline in 46 years. Moreover, given the current state of the economy, and fearing political recourse from constituents, politicians are hesitant to increase taxes or introduce new ones to create new streams of revenue. These widening budget deficits are making it almost impossible for government agencies to address their current and long-term responsibilities to essential public programs, not to mention the requisite need for public infrastructure improvements.

For America to succeed, now and into the future, essential infrastructure improvements and requirements must be addressed. Given the current economic recession and the government’s limited ability to fund vital infrastructure requirements, it is imperative that the public sector search for alternative ways to raise capital. Private sector funding and investment in infrastructure may prove to be the most plausible approach to this growing concern.

Regarded as a new and growing asset class, infrastructure, as a vehicle for investment, is growing in popularity among private investors.

A New Asset Class

Private investment in public infrastructure is not an entirely new concept. Infrastructure investing, as it is recognized today, was first initiated in the United Kingdom in the early 1980s through that country’s Private Finance Initiative (PFI). Through PFI, the UK government employed public-private partnerships (PPP) to finance infrastructure investments in everything from schools to defense facilities. The concept then spread to Australia in the 1990s when that country was facing severe financial difficulties. The Macquarie Group, a global provider of banking, financial, advisory, investment, and fund management services, pioneered infrastructure partnerships with several of Australia’s government agencies and
brought private investment in public infrastructure to the international forefront. 

How do public-private partnerships work? This can best be answered through a few examples. In 2005, the Macquarie Group, along with Spain’s Cintra, closed a $1.8 billion deal with the city of Chicago, granting them a 99-year lease on the Chicago Skyway Toll Bridge System. The project generates a constant stream of revenue that can be adjusted with inflation. More recently, the Carlyle Group, a private equity firm, through a $178 million deal with the state of Connecticut, agreed to rebuild and operate 23 of the state’s rest stops. In return, Carlyle and its investors will receive a share of the rest stops’ generated revenues.

The attraction to infrastructure as a new asset class, particularly among institutional investors, is a response to the asset’s underlying traits. This January, I sat down with members of The Royal Bank of Canada’s (RBC) newly launched Infrastructure Investment Group, located in Boston, to discuss infrastructure’s unique characteristics. The group at RBC includes managing directors Joseph Lyons, Nancy Mangraviti, Matthew McPhee, and Whit Porter.

Institutional investors today are more inclined than ever before to diversify their portfolios in an attempt to protect against unpredictable fluctuations in the market. As indicated by the RBC team, institutional investors now realize that their portfolios were not as well diversified as they had thought, including a higher-than-expected correlation among asset classes. Investors now see infrastructure as an investment asset that will increase diversification and provide stability to their portfolios. As presented by the RBC group, infrastructure as an asset class has high barriers to entry; stable, predictable, and inflation-linked, cash-driven returns; low demand elasticity; and low correlation with other asset classes.

The sheer size of the physical assets themselves is indicative of infrastructure’s high barriers to entry. For example, a road, bridge, or wastewater treatment plant would require extremely large capital expenditures to construct and maintain. This makes infrastructure assets exceedingly difficult to duplicate.

A toll road is the most common example of an infrastructure asset exhibiting these particular characteristics. Toll roads endure stable and continued use during both strong and weak economic periods; revenues, as a result of established traffic patterns, are often quite predictable. Toll revenues are also frequently coupled with inflation through a regulated return structure or a contracted rate of return, and the consumer demand profile should be comparatively inelastic in nature.

Most notable of infrastructure’s characteristics is its low correlation with other asset classes (see Exhibit 1). This low correlation, together with infrastructure’s distinctive and stable characteristics, provide effective diversification benefits and reduce volatility in portfolio returns.

The RBC team revealed that institutional investors are currently seeking internal rates of return of 10 percent to 15 percent for infrastructure investments. Returns in this range are typically higher than those of real estate, but lower than those of private equity investments. However, the average risk associated with infrastructure investments is less than that of alternative investments. These characteristics add to the attraction of infrastructure as a new asset class.

**EXHIBIT 1**

**Other Asset Classes 13-Year Correlation with Infrastructure**

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<th></th>
<th>INFRASTRUCTURE</th>
<th>EQUITY</th>
<th>EMERGING MARKETS</th>
<th>UTILITIES</th>
<th>CASH</th>
<th>BONDS</th>
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<tr>
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<tr>
<td>CASH</td>
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<td>0.16</td>
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<td>0.22</td>
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<td>BONDS</td>
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<td>(0.18)</td>
<td>0.09</td>
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</table>

Source: Evalueserve Analysis, April 2007

**Outlook for Infrastructure Investments: 2010 and Beyond**

As of June 2009, according to the Prequin 2009 Infrastructure Review Report, there were 96 infrastructure funds on the global market, seeking an aggregate $103.5 billion in funding. And while 2009 did see a significant dip in infrastructure fund raising as a result of the credit crunch, RBC believes that institutional investors remain strongly attracted to infrastructure as a new asset class. In addition, the underlying value and quality of infrastructure assets
have remained strong despite the fact that 2009 was a tough financing market. As Matthew McPhee puts it, “The imperative for infrastructure asset demand has never gone away.”

Infrastructure fund managers and analysts agree that there will be a rebound in infrastructure fund raising in 2010. Says Joseph Lyons, “On a relative basis, I think you will see infrastructure fund raising do as well as, if not better than, some other asset classes. Whereas many institutional investors are looking to scale back on some of their investments, particularly in private equity, and perhaps real estate, there is, on a percentage basis, a much more significant growth of investors who are looking to put money into infrastructure. So I think, overall, infrastructure is going to do well on a relative basis.”

Currently, due to politics and limited PPP regulation, substantial private investments in U.S. infrastructure are not expected in 2010. An estimate by the RBC team looks beyond 2010 with a more conservative outlook of three to five years. Lyons continues, “There is certainly going to be an upswing in the number of deals globally over the next three to five years. And we [RBC] do believe that the U.S. is going to be a greater source of deals over that time period as well.” Given the current state of America’s infrastructure, let us hope he is right.

Endnotes
2 Ibid.
4 Ibid.
9 Chambers, “Infrastructure Research Report.”
12 Chambers, “Infrastructure Research Report,” p. 3.
16 Ibid.
18 Jacobius, Arleen, “Infrastructure fundraising hits a wall; 3 international banks halt such operations as investment dries up,” Investment News, October 26, 2009.
Commercial Real Estate

By Ken Hatfield

Introduction
By all measures, 2009 was a tumultuous year. Despite several healthy economic indicators, including positive GDP growth and a spectacular year for the S&P 500, it may be too soon to begin celebrating. With unemployment in double digits at year-end and expected to lag or rise well into 2010, the recovery can ill afford another setback. Yet commercial real estate is poised to deliver a massive blow that may affect the nation for years to come.

The boom years of 2005–2007 resulted in an overwhelming $3.5 trillion in outstanding commercial real estate loans. The majority of this debt will need to be refinanced or repaid in the next 24 months amid tight credit and a desolate real estate sales market. Borrowers must either refinance the loans or repay the full loan amount. Unfortunately, due to the crippled real estate market and a skyrocketing national vacancy rate, the underlying assets are worth far less than expected; often the outstanding loan amount exceeds the value of the property, resulting in a no-win scenario for investors. Additionally, a decrease in value can wipe out a considerable amount of equity, leaving many borrowers forced to inject additional scarce capital or face foreclosure.

JP Morgan CEO Jamie Dimon said recently, “Commercial real estate is a train wreck, but it’s already happened.”

Despite Mr. Dimon’s statement, the current fundamentals of the commercial real estate market point to an industry-wide collapse on the very near horizon. Unless something is done soon, the nation may find itself drowning in a flood of commercial real estate default the likes of which have never been seen before.

How Serious Is the Problem?
The global economic crisis has created a perfect storm for the commercial real estate market: At present the national pool of distressed debt is rising; mark-to-market accounting is forcing unfavorably timed revaluations of commercial property; unemployment is climbing, pulling vacancy levels higher; and the Commercial Mortgage-Backed Securities (CMBS) market as a source of refinance has been crippled. According to CB Richard Ellis, real estate values have declined by 40 percent from 2007 levels and sales volume has decreased 93 percent over the same period. The continued dearth of real estate transactions suggests that property owners will find it difficult to liquidate their buildings by loan maturity, resulting in inevitable foreclosure.

Distressed Debt Grows
Moreover, many commercial real estate loans are structured with little or no recourse to the borrower, meaning that in the event of default the lender is entitled to seize the collateral, but has no right to pursue a claim against the assets of the borrower. This prevents banks from recouping the difference between the outstanding loan amount and the liquidation value of the asset. Under pressure of rising vacancies,
more commercial real estate projects will ultimately fall into distress—leaving banks to consider writing off increasing portions of their portfolios, potentially resulting in a domino effect that will lead to increased bank failures and a deeper hole in the economy. This phenomenon has been growing with alarming speed. Exhibit 1, compiled by Real Capital Analytics, illustrates the growth in distressed commercial real estate debt over the past two years in terms of monthly additions to the distressed pool. This pattern is consistent across all major property types and is accelerating at almost identical periods, indicating that no one sector of the real estate market offers a safe haven from the prevailing market forces. Worse still is that the shape of the curve appears to suggest that the default rate is not approaching a plateau.

The default rate began its rapid ascent in November 2008, well after the onset of the recession. Similar to changes in the unemployment rate, this delayed reaction is characteristic of the latent nature of commercial real estate and indicative of what may turn out to be a very slow-acting recovery. If the economy and unemployment remain at unfavorable levels well into 2010, it may be 12 to 24 months before commercial real estate begins showing signs of life. Exhibit 2 demonstrates the metro distribution of known distressed debt in the commercial real estate market at YE 2009. The chart illustrates the amount of distressed debt scaled against the average annual sales volume from 2005 to 2008 (shown in blue). It is a chilling representation of the state of the national CRE market that the amount of distressed debt actually exceeds average annual sales in several markets.

Faced with declining values, property owners often prefer simply to walk away and allow their loans to default, thus sacrificing their equity. In many cases, borrowers prefer foreclosure over injecting additional scarce capital to repay the banks and widening the loss. Foreclosures mean banks must sell underlying collateral assets at unfavorable prices, often losing additional capital to property managers and brokers before they can realize a disposition of the asset. Thus banks typically treat foreclosure as a last resort and attempt to encourage borrowers to stick with the project as long as possible.

**Mark-to-Market Accounting**

The problem is further exacerbated by government pressure to enhance accounting practices at financial institutions. Implementation of mark-to-market accounting in the midst of a frozen real estate market has resulted in the mandatory reappraisal of many real estate assets at drastically reduced valuations. The implication is that by reducing the appraised value of a performing real estate property, it is increasingly possible to drive loan-to-value ratios beyond acceptable levels, triggering LTV covenants that often demand increased equity injections to counterbalance. This effect often suffices to bankrupt an otherwise healthy performing loan.

Interestingly, the majority of buying activity in 2009 was fueled by private investors acquiring properties worth $20 million or less. Many of these buyers represent savvy value investors who had not purchased properties since early in the decade. While this trend may indicate that the market has reached or is approaching the bottom and thus beginning to attract the buyers that precede a bull run in property...
markets, it does not represent the type of large-scale acquisitions that traditionally signal the rebirth of the commercial real estate business.

CBRE is predicting that in 2010, “transaction volumes will return close to traditional levels seen in the early 2000s as the debt markets stabilize and the forecast of future rent growth and tenant prosperity returns.” If foreclosures continue unabated, however, there will be a large obstacle to continued commercial real estate lending, which will certainly inhibit banks’ ability to lend money. In addition, commercial lending is unlikely to experience any significant growth until aftermarket demand improves. With vacancy rates skyrocketing, there is considerable difficulty in generating cash flows sufficient to offset debt service on a typical 80 percent LTV commercial real estate loan.

Unemployment Remains High
In September 2009, Federal Reserve Chairman Ben Bernanke declared that we are technically out of the recession. At the same time, he also predicted that unemployment would remain stubbornly high well into 2010.

Historically, there has been a relationship between commercial real estate vacancies and the unemployment rate. This trend is particularly evident in the retail and office sectors. For instance, American national retail vacancy typically tracks around 250 basis points above the national unemployment rate except during periods of severe economic difficulty, such as the savings and loan crisis where unemployment hit 7.8 percent in 1992 and retail vacancy consequently spiked above 11 percent. Similarly, following the September 11 attacks, the unemployment rate rose to 6.3 percent and the national retail vacancy climbed above 9 percent. With unemployment currently at 10 percent and not expected to drop considerably any time soon, it would not be unreasonable to expect the national retail vacancy rate to hover between 12 percent and 14 percent. At present the U.S. office vacancy rate is sitting at 17 percent, having increased 0.4 percent from the third quarter of 2009.5

CMBS
Commercial mortgage-backed securities are bonds collateralized by commercial real estate mortgages. Mortgages from various commercial property types (typically retail, office, industrial, and multifamily) and sizes are bundled together, packaged as bonds, and sold in varying tranches of yield and maturity according to the credit quality of the underlying assets and prevailing market conditions. The cash flows supplied by the rental income from the properties are used to finance coupon payments to bondholders with a built-in cushion designed to absorb a degree of risk. For instance, if a given CMBS bond issue requires a $100 million coupon payment annually, then the pool would likely be structured to produce $120 million to $150 million a year. When distressed properties in a given pool of assets accumulate to a level sufficient to drive the pool cash flow below scheduled debt payment, the bonds default.

The conventional commercial real estate mortgage market is divided into portfolio loans (those that are held on the lender’s balance sheet) and securitized loans or CMBS, which are pooled together and sold as bonds. These two sources of debt financing provide the liquidity necessary to drive and sustain commercial real estate. The collapse of the CMBS market has resulted in a drastically reduced source of refinancing for real estate loans and many large investors, funds, and financial institutions. Exhibit 3 compiled by Marcus & Millichap, illustrates the rising popularity of the CMBS financing and subsequent collapse in 2007.

Historically, the CMBS market has been seen as a comparatively safe source of investment returns. This view was predicated on the assumption that pooling assets from different property types and geographies would drastically reduce asset correlation and diversify out commercial real estate market risk. Unfortunately, the great fallacy of the commercial real estate industry, which left many investors and financial institutions in ruin, is very similar to that of the residential market; during boom years, lenders structured new issues with the expectation that rental income and real estate values would increase in perpetuity as opposed to failing on a national scale as we have recently witnessed. Consequently, many commercial loans issues were underwritten very aggressively. Rather than limiting exposure to default risk as some would expect, CMBS appeared to perpetuate it by committing the same underwriting mistakes on a much grander scale. For instance, in 2007 the Fitch rating service reported that it was receiving deals underwritten with projected cash flows instead of

EXHIBIT 3
U.S. CMBS
New Issuance at a Standstill

Source Data: Marcus & Millichap Research Services, CMA.
realized cash flows. Often the projections were adjusted to reflect generous future expected market rent increases and vacancies that were assumed to be leased at market rates. This proved tantamount to building a house on wet cement with the expectation it would harden into a reliable foundation. Additionally, many loans during this period were underwritten with loan-to-value ratios of 100 percent, or rental income that had not materialized sufficient to cover debt service at the time of issue. The inherent risk of aggressive underwriting is that in recessionary periods values fall, tenants break leases, and insufficient cushions result in the inevitable bond default.

**Government Intervention**

At present there are a number of government-sponsored initiatives that are designed to alleviate pressure on the financial system and that may also have a positive influence on the commercial real estate market. The Federal Reserve instituted TALF, or Term Asset-Backed Securities Loan Facility, which offers non-recourse loans secured by ABS, or asset-backed securities. Initially, the program covered only student loans, auto loans, and SBA loans; however, it was later expanded to include newly issued CMBS as acceptable collateral as well. This may stimulate the desolate CMBS market, and in so doing revive a major source of refinancing liquidity for struggling CRE projects.

The United States Treasury’s Public Private Investment Program (PPIP) was instituted to allow U.S. government funds to match private investor dollars in acquiring troubled assets. These assets include both nonperforming portfolio loans that are languishing on bank balance sheets, and illiquid securities such as CMBS loans that are currently trading well below intrinsic value due to unfavorable market conditions. The program’s goal is to help alleviate liquidity issues resulting from negative overhang at struggling banks and also to stimulate investment in secondary markets. The Treasury estimates that this program will generate $500 billion in purchasing power. Each transaction involves the collaboration of multiple government departments, making the program both challenging and unique. The Treasury describes the process as follows:

**Step 1:** If a bank has a pool of residential mortgages with $100 face value that it is seeking to divest, the bank would approach the FDIC.

**Step 2:** The FDIC would determine, according to the above process, that it would be willing to leverage the pool at a 6-to-1 debt-to-equity ratio.

**Step 3:** The pool would then be auctioned by the FDIC, with several private sector bidders submitting bids. The highest bid from the private sector—in this example, $84—would be the winner and would form a Public-Private Investment Fund to purchase the pool of mortgages.

**Step 4:** Of this $84 purchase price, the FDIC would provide guarantees for $72 of financing, leaving $12 of equity.

**Step 5:** The Treasury would then provide 50 percent of the equity funding required on a side-by-side basis with the investor. In this example, Treasury would invest approximately $6, with the private investor contributing $6.

**Step 6:** The private investor would then manage the servicing of the asset pool and the timing of its disposition on an ongoing basis—using asset managers approved and subject to oversight by the FDIC.

The major flaw with this proposal is that the process originates with banks, allowing them to part with their worst assets first and hold onto the best in class “toxic assets” or those that have the highest probability of surviving workout. Predictably, private investors have been slow to participate in the PPIP, likely due to skepticism over asset quality and imperfect information surrounding the investment. In other words, if the bank knows this loan better than anybody, why is it trying to get rid of it?

The TALF and the PPIP are two government-sponsored initiatives that have met with questionable success so far. While it is clear that progress must be made toward repairing the credit markets, reintroducing confidence in the CMBS origination and aftermarket and increasing sales volume and stimulating valuations in the secondary commercial real estate, it is not clear how best to proceed. The one thing that is evident is that more has to be done—and very soon.

**Opportunity in the Chaos**

While most investors are safely on the sidelines until stability returns to the real estate and capital markets, many investors have seen considerable profits recently with REIT investments. It seems counterintuitive that funds based on the purchase, ownership, and distribution of real estate assets would be able to find windfall profits in such an unfavorable and unforgiving market; however, many REITs are currently showing strong returns. As of December 7, 2009, the REIT index had returned more than 22 percent over the preceding 11 months. The increase is not necessarily attributed to any investment gains, but rather to a flood of investment capital. The new investment is allowing REITs to recapitalize their balance sheets and dispose of underperforming assets in order to retire unfavorable debt and take advantage of lower interest rates.

Despite the risk that currently permeates the commer-
cial real estate market, opportunities for profit still exist. Investors are beginning to target distressed loan assets in particular, with careful scrutiny of the underlying value. For a seasoned investor, the next great investment strategy may be purchasing securities collateralized by commercial real estate assets for pennies on the dollar with the full expectation of foreclosing on the pool. Real estate mogul Sam Zell recently formed the Zell Credit Opportunities Fund LP with $625 million under a strategy Zell calls “Loan to Own.”

He plans to purchase troubled mortgages directly from banks and foreclose on the underlying properties.

**Conclusion**

Despite several economic indicators and the opinions of market experts, there is strong evidence that the commercial real estate market collapse appears to be in full swing and looming larger. The combination of a continued decline in commercial real estate valuations, increasing vacancies, and tight credit is not simply a sign of a cracked economy; it is a potential precursor to greater national economic decline and social hardship. The efforts to stimulate national recovery have not been performing up to expectations, and in the absence of growth and stability in the commercial real estate market, our national economy could get much worse before it gets better.

**Endnotes**

3 “CB Richard Ellis: 2010 Market Outlook.”
The Impact of Health Care Reform in the United States

By Janna Radtchenko
The Senate Bill

On December 24, 2009, with a 60-39 vote, the U.S. Senate approved its version of health care legislation, one of the top priorities of the Obama administration. Fifty-eight Democrats and two Independents voted “yes,” while all Republicans voted “no.” The Senate bill would expand insurance for 31 million uninsured Americans, introducing changes to the insurance market such as exchanges and no denial of coverage based on preexisting conditions.

According to the Senate bill, proposed provisions to take effect immediately include: the ability to obtain private coverage for sick people with preexisting conditions, no coverage denial for children under the age of 18 with preexisting conditions, insurance tax credits for small businesses under 25 employees (35 percent of insurance cost), and the ability to stay on parents’ policies for adults under 27. Six months following reform approval, copayments and deductibles are to be eliminated for preventative services, and insurance companies are prohibited from dropping coverage for sick people and setting lifetime coverage limits.

In 2014, state-based insurance exchanges would be created to provide options for people without employer coverage. Individuals without coverage and employers that do not provide coverage and have over 50 workers would have to pay a penalty. Penalties for individuals would start at $95 a year in 2014 up to $750 a year in 2016, or 2 percent of income capped at basic insurance plan cost.1 Exchange-based insurance would be subsidized for people between 133 percent and 400 percent of federal poverty level, $29,326–$88,200 for a family of four. Under this provision, a family of four earning less than $29,000 annually would be eligible for Medicaid with 90 percent covered by the federal government, while the rest is paid by the states.

Changes to Medicare would require providers to work more efficiently, since some of the treatments would be reimbursed by bundled payment rather than by a per-procedure payment. A bundled payment would be given for a treatment of a condition, while the current system pays for separate procedures associated with the condition regardless of the outcome. High-income seniors would face increases in prescription drug coverage by Medicare Part D beginning in 2011, but in 2012 the coverage gap when seniors pay full price would be reduced by $500. This coverage gap is called the doughnut hole: Traditionally, seniors pay deductibles associated with Part D prescription coverage and then they are covered by the Part D plan until the plan pays a predefined amount. After a predefined amount is paid, seniors enter the doughnut hole. Part D plan members pay for prescriptions out of pocket while in the doughnut hole, until they reach a predefined out-of-pocket maximum. Once that out-of-pocket maximum is reached, they use “catastrophic coverage” where they have to pay no more than 5 percent of cost of brand-name drugs. Each Part D plan works for a year, so in the beginning of the year the process repeats. The Senate bill proposes a 50 percent discount on brand-name drugs in the doughnut hole.

For comparison, although Medicare Part D plans differ, currently a typical Medicare Part D participant pays a $310 deductible, and the medication cost above $310 is covered by Medicare Part D with 25 percent copay paid by a patient; after the cost reaches $2,830 the senior pays full price until true out-of-pocket costs reach $4,550. After that the beneficiary pays $2.50 per month for generics / $6.30 per month for name-brand drugs, or 5 percent of retail cost, whichever cost is higher.2 The threshold reduction proposed by the Senate would lead to individuals reaching catastrophic coverage after paying $4,050 out-of-pocket instead of $4,550.

Over 10 years the Senate bill would allocate $871 billion to health care spending.3

The House Bill

The House bill with a price tag of $891 billion was approved on November 7th, 2009.4

The Senate and House bills mainly disagree on the following issues: abortion coverage, Medicaid and subsidy eligibility, availability of the public option plan, and means to pay for health care benefits. The House bill is pushing tax increases, while the Senate bill is proposing 40 percent tax on high-cost insurance packages. The House proposes national insurance exchange with a government-sponsored public plan compared with state-based exchanges without a public plan that was approved by the Senate.

The House bill would reduce the deficit by $30 billion over the first 10 years, and would continue to reduce it over the next 10 years. Without this measure The Medicare Hospital Insurance Trust fund is projected to be exhausted by 2017; the House bill would prolong the life of the Fund by five years.5 The bill exempts businesses with payroll below $500,000 from the mandate to provide insurance to employees. It would be paid for by a tax on the portion of individual income above $500,000 and couples’ income above $1 million. Similar to the Senate bill, the legislation calls for immediate reduction in the doughnut hole thresh-
old by $500 and a 50 percent discount on brand-name drugs in the doughnut hole. In addition, the House bill proposes complete elimination of the doughnut hole by 2019.7

**What does it all mean to the public?**
According to the Harris Poll that surveyed online 2,029 adults in July 2009, 72 percent of respondents know “a lot” or “some” about health care reform, while only 42 percent of well-informed people support the plan. In contrast to a similar poll conducted in January 2009, the number of people who know “a lot” about the reform increased from 17 percent in January to 36 percent in July. Although plan awareness increased, the support for health care reform waned.8

According to a *Washington Post*-ABC News poll in November, 48 percent of respondents support the reform and 49 percent oppose it, given their current knowledge. Strong support represents 30 percent and strong opposition 39 percent.9 Fifty-six percent of the respondents perceive that the overall cost of care would go up as a result.

The immediate impact of the reform is expected for young adults who can stay on their parents’ policies longer, Medicare beneficiaries on expensive oral medications who would reduce their out-of-pocket expenses, and individuals with preexisting conditions without current coverage.

**What does it all mean to the health care industry?**
With the current legislation, the U.S. health care system is projected to double from $2 trillion to 4.4 trillion by 2018;10 Medicare will be bankrupt by 2017.

The Department of Health and Human Services released new data on January 5, 2010, regarding health care spending: Total health expenditures reached $2.3 trillion in 2008, or $7,681 per person. As a share of GDP, health care expenditures set a new record of 16.2 percent, which is double the 8.1 percent share of GDP in 1975, and more than three times the 5.2 percent GDP share in 1960.

Over the last 50 years, U.S. health care has experienced declining out-of-pocket payments for medical expenses, which have fallen from 46.9 percent of total health spending in 1960 to a record-low of only 11.9 percent in 2008, and expanding public funding of health care, which reached a record high of 47.3 percent in 2008 compared with just 24.5 percent in 1960.11

Following the Senate bill approval, the insurance lobbying group, America’s Health Insurance Plans, warned that the Senate bill would result in higher premiums and fewer coverage options. Virtually every major business group claimed that reform threatens jobs, employer coverage, cost of health care, pharmaceutical discovery, and commercial opportunities.

While the debates continue, health care industry participants put investments on hold, anticipating future reform consequences. Pharmaceutical and health insurance companies struggle to assess the impact to their businesses, while investors are impatiently waiting for the resolution.

According to the opinions voiced by the leadership of pharmaceutical companies, the major impact to the industry would be expanded access to coverage followed by market expansion, increased Medicare rebates and price cuts, Medicare Part D discounts, focus on treatment outcomes and evidence-based medicine, and increased regulatory control over R&D expenses. Pharmaceutical companies plan to control R&D expenses through mergers and acquisitions, purchasing already developed compounds and taking them to market, selling compounds to partners and receiving royalty streams once the drugs reach the market, and improving decision-making processes regarding market candidates. The health care debate touches one of the most important concerns of the biotech industry, follow-on biologics (generic biologics or biosimilars). Biologics are complex proteins that require more precise quality control and process oversight than conventional small-molecule drugs. To market a small-molecule drug going off patent, the manufacturer needs to show biological equivalence to the branded drug. To produce and sell a biologic, the manufacturers will have to show that they can reproduce the production, quality control, and distribution process of the branded biologics. Biologics are innovative medicines used for treatment of debilitating diseases; the majority are used to treat cancer. They are hard to discover and expensive to test in clinical trials and take to market. One of the most important cost-cutting measures proposed by legislators was reducing the patent life of biologics so that generic manufacturers would enter the market and expand access to biologics to more patients and

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**EXHIBIT 1**
**Increased Knowledge of Reform Leads to Opposition**

*Increased knowledge about health care reform proposals leads to opposition.*


<table>
<thead>
<tr>
<th>THE REFORM IS GOOD FOR...</th>
<th>JANUARY HARRIS POLL</th>
<th>JULY HARRIS POLL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>QUALITY OF MEDICAL CARE</strong></td>
<td>47%</td>
<td>35%</td>
</tr>
<tr>
<td><strong>PEOPLE LIKE YOU</strong></td>
<td>45%</td>
<td>34%</td>
</tr>
<tr>
<td><strong>CONTAINING COSTS</strong></td>
<td>49%</td>
<td>39%</td>
</tr>
<tr>
<td><strong>PROVIDING PEOPLE WITH MORE ADEQUATE INSURANCE</strong></td>
<td>61%</td>
<td>52%</td>
</tr>
<tr>
<td><strong>STRENGTHENING THE ECONOMY</strong></td>
<td>42%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>MAKING CARE MOST EFFECTIVE</strong></td>
<td>54%</td>
<td>42%</td>
</tr>
</tbody>
</table>
reduce health care expenses. Patent life ranged from four to 12 years. Current public sentiment supports at least 12-year patent life for biologics, but even if the bill is signed, it is unlikely that the provision on biologics will be in it.

Following the reform, physicians would be forced to approach their practice as a business, keeping tighter control over cash flows. Practices would seek to consolidate and broaden the scope of their services. The transition to electronic health record (EHR) systems would potentially expand practice capacity and efficiency, but it would require time commitments for training, which smaller practices would struggle to afford. Government incentives for EHRs would drive implementations and increase demand for certified health care IT specialists. To receive government incentives, practices would have to purchase and meaningfully use certified software for at least three months in a given year. The incentives would be the highest ($44,000 per physician) for practices that used the software in 2011 and 2012. In the following years, incentives are reduced, while penalties are introduced for lagging practices.

Evidence-based medicine requirements would lead to stricter adherence to treatment guidelines and potentially more diagnostic testing, because physicians would strive to protect themselves from reimbursement difficulties as treatments become targeted to specific patient populations. Although treatment guidelines already exist for many therapeutic areas, they would be more broadly enforced by the insurance payers. Physicians would have to monitor their expenses with Medicare patients more carefully.

Health insurance companies would come up with low-cost plans with higher deductibles, increase costs on moderate employer-sponsored plans, and limit the number of expensive plans. Many of those currently uninsured would likely remain so if healthy until penalties exceed the cost of the least expensive plan.

Endnotes

BC Endowment Fund Weathers the Storm

By Andrew Hickok

The full impact of the recession hit the Boston College campus on March 12, 2009, three days after the Dow Jones Industrial Average hit the lowest point in its long slide. In an open letter to the BC community, President William P. Leahy, S.J., addressed the market’s impact on the University’s endowment and outlined the administration’s response.

Students and faculty members surely dreaded opening this e-mail, as news of severe budget cuts at other universities had been well publicized by then. Even among MBA students in the Carroll School, few had any idea of the endowment fund’s exposure to toxic derivatives or imploding investment firms. BC Financial seeks to bridge this information gap with a comprehensive portrait of the endowment fund.

In fact, Fr. Leahy’s e-mail brought a collective sigh of relief from most on campus. In contrast to the measures of fiscal austerity taken at other universities, Boston College planned to make relatively moderate changes in response to the recession. Fr. Leahy announced that nonsalary operating expenses would be reduced by 2 percent in the University budget for 2009–2010, which would also include a pay freeze for faculty members earning salaries above $75,000. These changes were implemented following a six-month period in which the value of the endowment plummeted by 25 percent. Students reading the March 12 e-mail were most relieved by the University’s clearly stated commitment to financial aid and need-blind admission.

Purpose of Endowment Fund
The importance of a healthy endowment fund to the long-term sustainability of an educational institution cannot be overstated. The purpose of an endowment is twofold: to meet current fiscal needs, and to preserve capital to meet future needs. The growth of BC’s endowment over the past three decades enabled the school to upgrade its infrastructure as well as attract top academic and athletic talent. As shown in Exhibit 1, the compound annual growth rate of the endowment fund well exceeded that of the S&P 500 over the same period. The endowment’s growth reflects annual investment returns plus gifts to the University net of payout to the annual operating budget. As a nonprofit institution, BC does not pay taxes on dividends or capital gains, making the endowment a powerful tool for investment.

Donors to institutions such as BC typically earmark their gifts toward annual operating expenses or specific long-range institutional needs, such as a student scholarship or a faculty chair. The Treasurer’s Office distributes these donations across thousands of special-purpose funds. The funds are pooled into the endowment fund and invested aggregately.

The annual spending level is based on 5 percent of the three-year moving average market value of the endowment fund. This policy is intended to balance the goals of distributing investment returns while preserving the purchasing power of the endowment. The endowment covers 10 percent of BC’s $767 million operating budget, which includes financial aid, for the 2009–2010 budget year. The endowment’s proportional contribution to financial aid is
likely to grow over time. A central pillar of BC’s “Light the World” capital campaign is to raise $300 million in financial aid gifts by 2015. Successfully meeting this goal could increase the endowment’s contribution to financial aid by $15 million annually.

For an educational institution, the breadth of giving is at least as important as the size of individual donations received. A widespread donor base that includes younger alumni ensures a constant cash flow into the endowment and sets the groundwork for larger contributions in the future. In this arena, Boston College has made improvement but still lags behind many competitors. While one in every four BC alumni makes an annual donation to the University, Notre Dame has an alumni participation rate of 50 percent. It comes as no surprise then that a central initiative of the “Light the World” campaign is to grow the participation rate from 25 percent to 35 percent.

**Structure of Endowment Fund**

The endowment fund is managed by the Investment and Endowment Committee of the University’s Board of Trustees. This committee consists of nine highly experienced investment professionals who gather at least once per quarter. The committee manages overall investment policy, asset allocation, and the selection and deployment of assets to a diversified group of professional investment managers. This model of endowment management is more typical among universities than the internal staff management approach taken by such “mega” endowments as those of Harvard and Yale.

As shown in Exhibit 2, the BC endowment fund is broadly diversified across asset classes. As of December 2009, the endowment is invested with approximately 60 separate fund managers—a relatively high number that reflects the fund’s strategy of spreading the organizational risk of investing in alternative investments across a broad range of asset classes.
EXHIBIT 3
Peer group comparison of endowment funds

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>RANK</th>
<th>ENDOWMENT IN 2009, $ BILLION</th>
<th>YOY CHANGE 2008–2009</th>
<th>ENDOWMENT SPENDING CAPACITY, PER UNDERGRAD STUDENT ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvard University</td>
<td>1</td>
<td>25.7</td>
<td>-30%</td>
<td>193,000</td>
</tr>
<tr>
<td>Yale University</td>
<td>2</td>
<td>16.3</td>
<td>-29%</td>
<td>163,300</td>
</tr>
<tr>
<td>Stanford University</td>
<td>3</td>
<td>12.6</td>
<td>-27%</td>
<td>97,100</td>
</tr>
<tr>
<td>Princeton University</td>
<td>4</td>
<td>12.6</td>
<td>-23%</td>
<td>125,000</td>
</tr>
<tr>
<td>Columbia University</td>
<td>7</td>
<td>5.9</td>
<td>-18%</td>
<td>51,900</td>
</tr>
<tr>
<td>U. of Pennsylvania</td>
<td>9</td>
<td>5.2</td>
<td>-17%</td>
<td>25,200</td>
</tr>
<tr>
<td>U. of Chicago</td>
<td>10</td>
<td>5.1</td>
<td>-23%</td>
<td>50,900</td>
</tr>
<tr>
<td>U. of Notre Dame</td>
<td>13</td>
<td>4.8</td>
<td>-23%</td>
<td>28,500</td>
</tr>
<tr>
<td>Duke University</td>
<td>14</td>
<td>4.4</td>
<td>-27%</td>
<td>35,500</td>
</tr>
<tr>
<td>Cornell University</td>
<td>17</td>
<td>4.0</td>
<td>-26%</td>
<td>14,200</td>
</tr>
<tr>
<td>Dartmouth College</td>
<td>20</td>
<td>2.8</td>
<td>-23%</td>
<td>33,900</td>
</tr>
<tr>
<td>Brown University</td>
<td>24</td>
<td>2.0</td>
<td>-27%</td>
<td>16,800</td>
</tr>
<tr>
<td>Boston College</td>
<td>37</td>
<td>1.3</td>
<td>-18%</td>
<td>7,300</td>
</tr>
<tr>
<td>Boston University</td>
<td>59</td>
<td>0.9</td>
<td>-22%</td>
<td>2,400</td>
</tr>
<tr>
<td>Georgetown University</td>
<td>62</td>
<td>0.9</td>
<td>-17%</td>
<td>5,900</td>
</tr>
</tbody>
</table>

strategies with multiple managers. A comparatively small number of managers handle the fund's investments in equity and fixed income.

The Investment and Endowment Committee is principally supported by the Treasurer’s Office, which provides the critical functions of due diligence and performance evaluation. John Zona, assistant treasurer and associate director of investments, leads a four-member team within BC. This group has traditionally been a springboard for younger analysts into graduate study in the Carroll School.

The Treasurer’s Office takes a quantitative and qualitative approach in assessing the performance of fund managers over a full market cycle. Zona and his team focus on such key issues as organizational risk, changes to key personnel, fund compensation policy, and liquidity. Zona is emphatic that the most effective due diligence tool at his team’s disposal is maintaining open and regular communication with fund managers.
Boston College Financial

BC Endowment Fund Weathers the Storm

Benchmarking
As in any industry, comparing the performance of BC’s endowment with that of other universities’ endowments is an important tool for self-assessment and motivation. The Investment Group tracks the performance of schools that have a high degree of overlap in applicant pool with BC. The peer group thus includes Ivy League schools and others, such as Notre Dame, Georgetown, and Boston University. Competition is intense among these institutions to attract the best faculty and students. Among endowment managers, however, the competition is decidedly more collegial. Investment officers will routinely share information on fund managers with their counterparts at other institutions to help in the due diligence process.

As shown in Exhibit 3, Boston College has weathered the economic downturn far better than schools such as Harvard, Notre Dame, or Boston University. Nonetheless, a substantial gap exists in endowment size between the 20 top schools and the rest. As the last column shows, the schools with the largest endowments can offer considerably more resources to each student. This illustrates the ongoing challenge that BC faces in competing with the best-endowed universities. To narrow this gap will require a long-term increase in the rate and individual amount of alumni donations.

Recession Performance
Careful stewarding by the Investment and Endowment Committee and the Treasurer’s Office helped the endowment avoid the catastrophic fund selection mistakes that affected other universities (see Exhibit 4). The endowment owes its steady performance throughout the recession to the committee’s diversified investment approach, including its selection of alternative investments. In particular, hedge fund investments enable endowments to preserve capital in down market cycles and capture upside return when the market rebounds. Hedge funds helped insulate the BC endowment from the recession, declining significantly less than the broader market through March 2009. Since that time, the endowment’s hedge fund investments have captured nearly all of the market’s return through February 2010.

The Investment and Endowment Committee places a premium on ensuring fund liquidity. As shown in Exhibit 4, BC allocates a relatively small portion of the overall endowment to private equity, venture capital, and private real assets. Meanwhile, peer institutions allocated to these illiquid asset classes much more aggressively. While the market meltdown ensued, none of the alternative asset managers in which BC invested put up “gates” to prevent the University from liquidating its funds.

As a direct consequence of the committee’s prudent decision making and the Investment Group’s diligent evaluation of fund managers, Fr. Leahy’s March 12 e-mail spoke of moderate budget cuts, rather than of drastic actions to shore up a liquidity crisis. The endowment fund’s consistent performance has thus far validated the tenets of the committee’s investing strategy. This is no small feat considering the magnitude and duration of the current recession.

Endnotes
1 “A Letter to the BC Community,” e-mail sent by Fr. Leahy on March 12, 2009.
2 BC’s Treasurer’s Office provided data on Endowment Fund growth. Historical returns for S&P 500 were accessed at www.stern.nyu.edu/~adamodar/pc/datasets/histretSP.xls.
3 http://bcm.bc.edu/issues/summer_2006/features/business-week.html.
4 http://www.bc.edu/alumni/ltw/priorities.html.
5 Calculation assumes that 5 percent of $300 million in financial aid fund would be spent annually.
6 http://www.bc.edu/alumni/ltw/priorities.html.
7 http://www.bc.edu/alumni/ltw/initiatives.html#greater.
8 Treasurer’s Office provided asset allocation information.
9 National Association of College and University Business Officers (NACUBO) Endowment Study. Author calculated endowment spending capacity per student by multiplying current market value of endowment by 5 percent and dividing by the undergraduate enrollment size of the institution.
10 Asset allocated data were compiled from University financial reports.
Summary of Analysis and Conclusions
Based on Joy Global’s current competitive position, the company’s historical performance, future prospects, and expected general market conditions, I recommend a BUY rating on Joy Global’s shares. While 2010 is expected to be a difficult year for the mining and construction industries, Joy Global’s superior business model and healthy financial position will allow the company to take full advantage of the expected uptick in demand during the second half of 2010.

Based on research performed (described in further detail in this article’s Current Market Environment and Competitive Position sections), I have concluded that with an expected slight recovery in the industry during the second half of 2010, Joy Global’s geographically diversified operations, strong business model, and leading competitive position will give the company enough strength to come out of the current downturn and take advantage of the expected recovery. Incorporating this information, along with management’s expectations for moderate reductions in revenues and EPS in 2010, projected earnings net a current price target of $55.96, and using a 10 percent increase/decrease range, the current market price of $48.68 exhibits a discount to the fair value of the firm and presents a buying opportunity for investors.

Current Market Environment
The worldwide recessionary trends that began with the collapse of U.S. financial markets in the second half of 2008 have put significant pressure on all industries. The mining industry was adversely affected by these trends, as demand for coal softened, inventories increased, and prices came down from the highs reached in 2007. This trend can be seen in Exhibit 1 as the iShares Commodity-Indexed Trust saw a 75 percent loss in value during the second half of 2008 and little recovery during 2009. Commodity prices are expected to see signs of recovery in 2H2010. This recovery will most likely be driven by increased demand in emerging markets, as North American markets, especially the steam coal industry, are expected to experience little to no growth as stockpiles remain high and prices for natural gas continue to be low. Based on these expectations and the high historical correlation of Joy Global’s share price to general sentiment about commodity markets (0.9 correlation coefficient between JOYG and GSG from 8/7/06 to 4/1/09), the company is well positioned to take advantage of a strengthening in commodity markets in 2H2010.

Competitive Position
Joy Global, Inc. is a leading manufacturer and service provider of high-productivity mining equipment used in the extraction of coal, copper, iron ore, oil sands, and other minerals throughout the world. The company structures its business into three main operating segments: underground mining machinery (51 percent of FY09 revenues); surface mining equipment (38 percent of FY09 revenues); and continental crushing & conveying (11 percent of FY09 revenues). In addition to its OEM business (45 percent of FY09 revenues), the company provides aftermarket parts and services to its broad base of customers (55 percent of FY09 revenues). As an international competitor, Joy Global derives 50 percent of its revenues from outside the United States, giving the firm critical geographic diversification. Moreover, as a company that has been in existence for over 100 years, Joy Global has been able to cement its place in the market and build significant brand recognition as well as one of the largest installed customer bases in the industry. The company’s two main competitors are Bucyrus International (USA, $2.7 billion revenues) and Sandvik AB (Sweden, $14.0 billion revenues). Due to the highly capital-intensive nature of the industry, complexity of the products, and well-established market participants, new entrants have been few and far between. This has allowed the aforementioned firms to build significant market share. At the same time, Joy Global faces several challenges. First, while the firm provides its products and services to companies operating in a number of industries, the majority of Joy Global’s custom-
ers are in the coal industry (nearly two-thirds, per company estimates), making company profits somewhat reliant on general demand for coal and vulnerable to industry regulations. Moreover, the firm’s OEM business is highly cyclical and largely dependent on commodity prices. As a result, the company’s cash flows and operating results can be erratic.

Based on company reports, Joy Global is attempting to improve its operations and address some of the competitive risks outlined above in a number of ways. The firm continues to focus its efforts on innovation and has been steadily growing its R&D budget to maintain its presence as a market leader in product design. This will allow the company to generate new products and expand its reach into a number of commodity industries, thereby providing customer/industry diversification. The firm also continues to focus on aftermarket services to generate revenue. For example, the company opened its first Smart Services center in South Africa in 2009. Through the use of wireless technology, Joy Global engineers gather and analyze data on machines working underground to provide recommendations for maintenance, repairs, and usage to optimize the productivity and life of the equipment. Initiatives such as this provide recurring cash flows and curtail some of the uncertainty related to the cyclical nature of OEM sales. I believe these initiatives, along with others, will provide a strong foundation for growth and will help Joy Global keep its status as the industry leader in its operating segments.

Stock Valuation Analysis

Based on management’s 2010 estimates of 15 percent to 20 percent revenue declines as well as general market conditions, I considered an 18 percent decrease in 2010 revenues to be fair and warranted based on current market trends, with a recovery beginning in 2011. Based on Joy Global’s superior profitability (20 percent operating margin vs. 11 percent peer average), cash flow generation (more than $300 million of free cash flows in 2008 and 2009), and long-term growth potential due to a well-diversified portfolio of products, I believe the company is well positioned to take advantage of an expected economic recovery in the next 12 to 18 months. Accordingly, I have incorporated a strong rebound in revenue and earnings growth beginning in 2011 and going forward as commodity markets begin to pick up. Using a DCF valuation analysis along with a number of comparable ratio analyses, I believe the current stock price is trading at a discount and I am issuing a BUY rating based on present conditions and the above stated assumptions. The company should be considered a strong player in the mining equipment industry and a good selection for investors looking to make an indirect play on commodity demand expectations over the next 12 to 24 months. If the assumptions used in this model change regarding the economic recovery, Joy Global’s current business operations, or commodity demand expectations, the analysis should be revisited.
The Case for Gold
During Times of Economic Uncertainty

By John Cotter

The end of 2008 marked the end of an era, one characterized by easy product securitization and loose lending standards, and culminating in a global economic crisis. Market participants developed a keen awareness of the fragility of the system, liquidity dried up, and eventually global governments stepped in to prevent a systematic collapse. These governments reacted to the crisis by increasing fiscal stimulus, which has served to stave off the collapse of the economy. “Economists say the money out the door—combined with the expectation of additional funds flowing soon—is fueling growth above where it would have been without any government action.” During 2009 the S&P 500 index recovered from a level of 840 in January to close the year at 1115 in December. What should we expect in 2010?

“If 2008 was the year of financial crisis and 2009 the year of healing via monetary and fiscal stimulus packages, then 2010 appears likely to be the year of ‘exit strategies’ during which investors should consider economic fundamentals and asset markets that will soon be priced in a world less dominated by the government sector.”

In 2010 investors will step back from the market gains of 2009 and look for asset classes that provide downside protection, increasingly so once overhang from the government intervention in the markets decreases. One asset investors have historically turned to during uncertain economic times is gold.

Gold has a low correlation with many economic factors. “There is no statistically significant correlation between returns on gold and changes in macroeconomic variables such as GDP, inflation and interest rates.” Gold provides stability to an investment portfolio, because its returns do not synchronize with the orthodox economy. “The credit crisis triggered a flight to safety from investors and gold’s perceived safety and lack of correlation with equities saw investors flock to it.” Safety is a large driver of inflow to gold assets, and is a result of its lack of correlation with economic factors. Gold asset values trend higher as investors become attracted to gold as a store of value.

Inflation causes decay in the return of many traditional assets, such as Treasury bonds and equities with high dividend yields, which investors turn to when the economic future is murky. Inflation expectations create monetary inflows into gold assets. “The inflation story has got people very concerned,” said Bernard Sin, the head of currency and metals trading at bullion refiner MKS Finance SA in Geneva. “People are trying to move dollars into commodities, especially gold. The market is really concerned about the behavior of the dollar.” Analyst Henry Blodget recently commented on inflation expectations that “Inflation expectations as measured by the difference between yields of the nominal U.S. 10-year Treasury note and the 10-year inflation protected security are now at levels seen prior to the onset of the financial crisis in August 2007.” As of January 8, the difference between the nominal yield and yield on the inflation protected 10-year U.S. Treasury securities was 242 bps. Inflation expectations have climbed 28 bps during the last 20 trading days. A simple indicator of inflation expectations can be derived by comparing the Treasury yield curve to the yields obtained by investments in Treasury inflation...
protection securities. As Blodget notes, this indicator has been increasing as of late. One explanation and implication is that the large amount of liquidity originating from the government sector has created a market environment ripe for gold investing, as inflation expectations are on the rise.

The recovery from the global economic crisis has provided a remedy for many of the liquidity problems during the economic shock. Simultaneously, it has left many investors in the marketplace wondering when the excess capacity in the economy will tighten, creating inflation and devaluing assets. The effort to hedge investor portfolios has created increased demand for the asset class, and gold investments are in demand once again. “For the first time, we have had many brokers and gatekeepers of pension funds recommending gold, having a 5 to 7 percent allocation toward gold and gold stocks,” said Frank Holmes, chief executive of San Antonio-based U.S. Global Investors, which manages over $2 billion of fund assets. Investors concerned about inflation and future economic uncertainty will seek solace and safety in gold assets.

How does one translate a bullish vision for gold into a strategic investment allocation? There are two traditional techniques for investing in gold, investing in the physical asset or investing in firms that have operations in the gold market. Investors can purchase physical gold as bullion and coins, but the storage of the asset quickly becomes a concern. “Gold ETNs and ETFs are an efficient way to invest in the metal without dealing with the associated ‘headaches’ of holding a physical amount of gold in your possession.” Gold exchange traded funds (ETFs) invest in futures or forward contracts in gold. Small investors can invest with ease in these highly liquid products. A risk surrounding these types of ETFs is the tracking error of the return in correlation to the underlying asset can vary, and more importantly the size of the tracking error is dependent upon the shape of the futures curve. This risk is related to the operations of the exchange traded funds. Portfolio managers have a constant need to roll expiring futures contracts into contracts that are further out on the forward curve. This “forward roll” can sometimes cause the ETF to fall out of sync with the underlying spot gold prices. Similarly, gold exchange traded notes (ETNs) track gold indices. ETNs are notes issued by an obligor promising to pay a rate in accordance to an index. Investors in ETNs trade the tracking error risk for counterparty risk. Both products offer the investor exposure to gold assets and a chance to diversify a portfolio. The risks associated with ETFs and ETNs can result in the return on these products diverging from the return associated with spot gold prices.

The streetTRACKS Gold Shares ETF (SPDR Gold Trust) is listed on the New York Stock Exchange under the ticker GLD. “The objective of the SPDR® Gold Trust is for the Shares to reflect the performance of the price of gold bullion.” According to the ETF’s product information, the
Commodity diversification through buying stock of gold firms is accompanied by firm-specific risks. These risks include geographic risks, labor risks, and the risk of an inefficient management team.

One-year return for the fund based on net asset value was 27.12 percent and can be compared with the one-year return based upon the London PM fix of 25.04 percent. Comparatively, the three-year return based on net asset value is 19.70 percent while the return for the London PM fix for the same period was 19.81 percent. This demonstrates the slight divergence over time of an ETF’s return from that of the underlying gold assets. The E-TRACS CMCI Gold ETN “seeks to reproduce the performance of the UBS Bloomberg CMCI Gold Total Return. The ETN measures the collateralized returns from a basket of gold futures contracts. The commodity futures contracts are diversified across 5 constant maturities from 3 months up to 3 years.” The annualized return for the note is 11.18 percent and can be compared with a return on spot gold price returns for the same period of 11.47 percent, as of September 30, 2009. The investor’s returns track the index perfectly, with no tracking error. Yet this return still deviates from the underlying asset, due to limitations in the index used as a benchmark for the notes. Investors are exposed to the credit risk residing in the UBS entity. Thus despite the absence of tracking error, the selection of benchmark index is incredibly important for exchange traded notes to replicate the return characteristics in reference to the underlying asset.

Equity holdings in gold producing firms provide another vehicle to invest in the asset. Investments in gold firms provide asset diversification, as many mining and exploration firms focus not only on gold but other hard commodities (such as silver and copper) as well. Equity investments in gold firms are highly liquid, as the stock is readily available across trading markets. However, commodity diversification from stock of gold firms is accompanied by firm-specific risks. These risks include geographic risks, labor risks, and the risk of an inefficient management team. Mining firms require significant labor inputs to retrieve the precious metal from its source. Poorly managed firms can succumb to pressures from the labor environment, making it less efficient to produce profits due to higher costs. Other large costs for the firms include investments in machinery and exploration. Geographic risks arise because the firm’s assets are located across the globe. Earnings are repatriated, which also causes currency risk. Investors seek gold to diversify an individual portfolio. The equity holdings are intended to provide stable value through turbulent currency fluctuations and rising inflation expectations. Ironically, diversifying through equity investments in gold firms opens the investor to currency fluctuations that the investor was originally trying to avoid. An investor can minimize the firm-specific risk through investment in mutual funds and ETFs that track gold firms. These vehicles invest in portfolios of gold stocks, with the understanding that profitable firms will help to offset the risks associated with less profitable firms.

Many commodity producing firms guard against future price fluctuations in assets through aggressive hedging programs. These programs can be cost intensive, and require considerable execution expertise within the company. One firm that goes against the trend in this regard is Newmont Mining Corporation. “Newmont Mining Corporation is primarily a gold producer, with significant assets or operations in the United States, Australia, Peru, Indonesia, Ghana, Canada, New Zealand and Mexico.” In 2007, the stock market responded favorably after Newmont announced that it has closed out its hedging position. “The fact that Newmont’s hedge positions are now fully closed out removes the possibility of further hedge related buying from the company,” said James Steel of HSBC Securities. Newmont provides an equity vehicle for an investor to gain a direct exposure to gold assets, because it maintains a doctrine to abstain from hedging operations. Looking at the Newmont stock price, one notices that the stock price volatility is similar to that of spot gold prices over the same period.

As the marketplace is flush with products to invest in gold assets, does the current environment provide ample reward for the risk present? Famed commodity investor Jim Rogers is bullish on the commodity, saying in November, “I own gold and I have for a while. How high can it go? I fully expect it to be over a couple thousand dollars an ounce sometime in the next decade—I didn’t say the next month, I didn’t say the next year, I said the next decade—because paper money around the world is very suspect. But right now everybody’s bullish on it, so I don’t like to buy things when that’s happening. But I’m not selling under any circumstances.” Rogers’ comment calls attention to the key variable for profitable trading, namely the timing of the trades. Before entering a trade, one should assess the trading momentum around the asset. Spot gold price saw historic highs at the end of 2009. Gold prices peaked on December 3, 2009 at $1,215 per troy ounce. More recently spot gold prices have retreated slightly from these historic levels.

Looking at historic gold spot prices, one can extend the trend into the future. Linearly extending the trend in spot gold prices for the next five years creates a forecast price of approximately $1,400/troy ounce.

One simple way to measure inflation expectations involves the analysis of the spread between nominal Treasury bond rates and inflation indexed bonds. Inflation expecta-
Expectations for inflation trended lower early in 2009; later there was a reversal in this trend that extended into 2010.

Many central banks around the globe are shifting their reserves away from U.S. dollar holdings into other currencies and assets. A recent article from Reuters noted that “Central banks are also turning to gold, which Wells Fargo global economist Jay Bryson said may partly explain gold’s surge to record highs.” Clearly a paradigm shift in central bank holdings toward gold will add future demand in the gold market.

There has been an interesting phenomenon occurring recently affecting the value of gold. Economic theory would suggest that risk aversion should drive gold spot prices higher. One caveat is that gold holdings denominated in United States dollars are in turn driven by the value of the dollar itself. If the value of the dollar increases, the value
of the spot gold prices (which are denominated in dollars) will decline in real terms. High budget deficits and lack of longer-term strategic wealth creation in some European countries (specifically Greece and Portugal) has increased the risk of default on the sovereign debt from these countries. “Amid the continued risk aversion on concerns over euro-zone sovereign debt, gold was slipping with oil futures and equities as investors bought the U.S. dollar as a safe haven.”

Inflows into U.S. dollars have caused the value of the dollar to increase in relative value. This increase has subsequently decreased the real value of gold. It will be interesting to see if the dollar will continue to rise over the longer term, making gold less enticing as a risk-adverse hedge for portfolio value.

Rising inflation expectations and a shift in central bank reserves toward gold holdings will serve to put upward pressure on gold prices in the future. The myriad of investment products for the gold asset class should continue to create a forum to drive investors ranging from retail customers to institutional goliaths into the gold asset class. Starting with the linear forecast of $1,400/ troy ounce spot prices, and combining future expectations for increased demand create predictions for longer-term gold spot prices below. The forecast falls short of the $2,000/troy ounce that Jim Rogers predicts, but it is skewed in a bullish direction. There is a strong case to include gold holdings as a part of a longer-term portfolio strategy during our current time of economic uncertainty. Yet, as in any portfolio allocation strategy, one needs to consider short-term fluctuations when making purchases of the asset class. Over the longer term the value of gold assets will trend higher, the real issue is navigating the short-term volatility of the asset to create positive yielding investments for the portfolio.

Endnotes

11 Ibid.
12 http://www.newmont.com/about; Newmont Mining Corporation.
14 http://www.newmont.com/about; Newmont Mining Corporation
16 http://www.federalreserve.gov/releases/h15/data.htm Federal Reserve Rate Data.
## Writer biographies

### Delo Adams
Delo is a 2010 MBA candidate, focusing his studies on corporate finance. He is also an officer of the Graduate Finance Association. Previously, Delo worked as a senior financial analyst for Oxbow Corporation, a privately held energy conglomerate. Over the past year, Delo has held internship positions with Burger King Corporation, working in the company’s Business Development group, and Consilium Partners, a Boston-based boutique investment bank. He can be contacted at delo.adams.1@bc.edu.

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Aaron graduated from Middlebury College with a BA in economics and a minor in mathematics. While there, he also spent four years as a member of the varsity ice hockey team. After school he spent six years working at Royal Bank of Canada (RBC) Wealth Management, where his main responsibilities within his team were investment and risk strategies for clients’ financial assets. Currently, he is pursuing an MBA at Boston College, specializing in corporate finance, and plans to continue his career in finance, specifically, in investment banking or asset management. In his free time, he enjoys ice hockey, golf, skiing, and fishing.

### John Cotter
John is a risk analyst at Edison Mission Marketing and Trading. As an MBA/MSF candidate, John is specializing in asset management and corporate finance. Prior to joining Edison, John was employed at State Street Global Advisors. He earned a BS degree at Boston College with concentrations in economics and finance. John can be reached at cotterjo@bc.edu.

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Stephen is a partner with the Boston-based law firm of Choate, Hall, and Stewart. His practice focuses on financial transactions, including debt & equity financings, mergers & acquisitions, and private equity. He has helped more than 40 search funds raise money and complete acquisitions over the past 12 years. He is a graduate of both Boston College and Boston College Law School.

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Kenneth received a bachelor of science degree from University of Miami (FL). He worked at a securities brokerage in Ft. Lauderdale, and later in commercial real estate banking at Bank of America in Chicago before returning to business school at Boston College.

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### Janna Radtchenko
Janna is an evening MBA student at the Carroll School of Management. She is also a senior market research analyst at IntrinsiQ, an oncology software and data company, specializing in improving and understanding the quality of cancer care. Janna performs custom analyses for IntrinsiQ’s data clients, pharmaceutical and investment companies, and works as a client manager for IntrinsiQ Financial, a division servicing biotech investors. She can be reached at radtchen@bc.edu.

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