

Why Bad Deals Happen

This really is a merger of equals. I wouldn't have come back to work for anything less than this fantastic opportunity. This lets me combine my two great loves—technology and biscuits.

—Lou Gerstner, former chairman and CEO, IBM,
commenting on Cisco's proposed acquisition
of Nabisco from Kraft Foods

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A PRACTICAL APPROACH TO MERGERS AND ACQUISITIONS

What do you look for when deciding on a bank to deposit your money? Given the recent large bank failures, the financial strength of the bank is certainly one main consideration. You may also be interested in the bank's customer service, checking account options, hours of operation, and so on. More financially experienced individuals will try to find the bank with the highest interest rates paid on customer deposits. For the most part, choosing a bank is a purely fact-based, rational decision.

Now assume that you are the CEO of a global company and are trying to decide what company to buy. Criteria will include the company strategy, quality of personnel, and of course the rate of return and profit you can earn. So it should be easy. Rank the companies for sale by their level of return and pick the highest one. For those of you who took business in college, remember the concept of net present value? You calculate the expected cash flows of the company and discount them by your firm's weighted average cost of capital. The project with the highest internal rate of return¹ (IRR) is the one you choose.

Many of the university students I teach assume that this simple, scientific, and straightforward approach is how it works in the real world. This is the way the math works. This is how it was explained in the college corporate finance classes.

My professor is a brilliant person—it must be right. It takes a long time to convince students that the real world is much more complicated than this. Subjective judgments, personal agendas, egos, and a whole host of other human emotions often have more impact on these decisions than the pure numbers suggest.

In my experience, a purely academic approach to mergers and acquisitions is rarely the best way to make a decision. For example, an absolute comparison of returns versus cost of capital may have been a primary driver at the start of Royal Bank of Scotland's (RBS's) process to purchase ABN AMRO. However, as the auction went along and competition for ABN intensified between RBS and Barclays bank, it became less about the numbers and more about the softer items such as each firm's reputation, the impact to stock price of winning or losing the auction, public perception of the deal, and the attitudes of employees and customers.

A CASE STUDY: RBS BUYS ABN AMRO

Many postmortems have been written on Fred Goodwin's relentless pursuit of ABN AMRO. Early in the process, several internal and external RBS constituencies began to question the true motivations around this acquisition. One RBS analyst said at the time, "Some of our investors think Sir Fred is a megalomaniac who cares more about size than shareholder value."² But either these concerns never filtered up to the boardroom or, more likely, they were discussed and discounted; the momentum of a deal and commitment toward closing can often override very legitimate issues.

It must have been difficult to justify the ultimate purchase price of \$96.5 billion when the initial bid from RBS in March 2008 was \$92.4 billion. Did the fundamental operations and value of ABN AMRO improve by over \$4.0 billion in the span of six months? In reality, a combination of poor integration, unrealistic projections, and a softening economy drove a significant *loss* in the value of ABN operations during this six-month period, and the price should have gone down, not up. An RBS trader commented at the time that "once you started to look around ABN's trading books, you realized that a lot of their businesses, where valuations were based on assumptions, were based on forecasts that were super-aggressive."³

In hindsight, losing this deal may be the best thing that ever happened to Barclays and the CEO of Barclays Capital Bob Diamond. RBS never recovered from difficulty in integrating ABN AMRO, the poor asset quality, and the massive losses it incurred. In June 2007, RBS raised £12 billion of capital by issuing new shares in a rights offering to try to save the company from the massive overpayment and operating losses resulting from the ABN acquisition. At the time, this rights offering was the largest fundraising in the history of the British public equity markets; however, it still proved to be insufficient.

News of the serious issues associated with the acquisition of ABN was leaking to the market and the firm's capitalization decreased by more than a quarter—more than the total amount of capital raised by the rights offering itself. By October 7, 2008, RBS, its management team, its shareholders, and the U.K. government all realized that it was too late. The U.K. Treasury Select Committee started to provide emergency liquidity to RBS; in effect U.K. taxpayers were becoming the major shareholders in the new RBS.

In contrast, Barclays went on to be very successful. The bank has had some more recent issues, but Barclays had a strong enough balance sheet to withstand the Great Recession without bailout support from the government. Bob Diamond was ultimately promoted from the head of Barclays Capital to succeed John Varley as the head of the entire bank. While Diamond was dismissed from his post in 2012 for issues related to the LIBOR

scandal, he was fortunate enough to have prolonged his tenure at Barclays by avoiding a disaster deal in ABN. In the world of M&A, winning the deal is not always the best outcome. The party that wins a competitive auction for a company is normally the party that is willing to pay the most! While this works out fantastically in some cases, it can cause problems for the buyers. As we saw with RBS, winning a deal may be the biggest curse of all.

MOTIVATIONS FOR DEALS

RBS's purchase of ABN AMRO seems truly illogical in hindsight. So why did it happen? Simple human nature is involved in all of these deals. It is easy to lose perspective, to forget the facts, and to become emotionally vested in the purchase. Many people can sympathize with this phenomenon. Have you ever paid more than you should have for a new home, a car, or a designer handbag because you became emotionally invested and just had to have it? Marketers all over the world depend on this human trait to sell product. As we see time and time again, it is no different in the "scientific" world of corporate finance.

Many CEOs are "Type A" personalities who like being in charge and enjoy the spotlight of the press. The battle for ABN was covered daily in the national press. While not intentional, it could be that the competitive nature of each CEO had as much to do with the rising price for ABN as the detailed acquisition models used to derive a fair price. In fact, by the time the purchase price rose to \$96.5 billion, I imagine that the internal rate of return of the escalating bids for ABN AMRO was largely ignored while many of the softer issues were driving the ultimate decision.

A CASE STUDY: BANK OF AMERICA BUYS MERRILL LYNCH

The merger between Bank of America (BofA) and Merrill Lynch in September 2008 is another high-profile example of this phenomenon. Bank of America, headquartered in Charlotte, North Carolina, operated retail bank branches throughout the United States and the rest of the world. Originally founded in 1904, BofA had grown to be the largest retail bank in the United States.

Ken Lewis grew up in the southern United States, graduated from Georgia State University, and joined North Carolina National Bank in 1969. He became CEO of the successor organization, Bank of America, in 2001 upon the retirement of Hugh McColl. Lewis was admired for his strategic vision, execution of acquisitions, and ability to improve the

operations of companies he acquired. By the mid-1990s, BofA had become a premier retail bank and Lewis was awarded “Banker of the Year” by *American Banker* in 2008 (*American Banker*, October 2008).

However, as a retail bank based in the southern United States, BofA did not have the prestigious reputation of the high-powered investment banks on Wall Street that were advising on multibillion-dollar acquisitions. Although widely respected, BofA was a large retail bank that took in consumer and corporate deposits and lent them out for car loans, home mortgages, leveraged loans, and other financing to individuals and corporations. BofA was headquartered in North Carolina, not New York City. Their core business was not as sexy as the billion-dollar transactions and initial public offerings being negotiated by investment banks making millions of dollars in fees for their firms and for themselves. While Lewis ran a first-class organization in its own right, it was and would always be considered second-tier to the global investment banks on Wall Street.

Merrill Lynch was a venerable investment bank on Wall Street with a heritage dating back to the early twentieth century. Founded by Charles Merrill and Edmund Lynch, Merrill became one of the leading providers of wealth management, securities, trading, corporate finance, and investment banking. The reputation Merrill held was very different from that of BofA. As a full-service investment bank headquartered on Wall Street, Merrill was absolutely included in the Wall Street elite. Over the years, Merrill’s investment bank directed some of the largest and most visible transactions in the world of global financial services. Merrill’s equity division had taken some of the most famous companies in the world public via initial public offerings. Merrill was able to attract the best recruits out of top colleges while improving the quality of management by tempting senior players from other Wall Street firms with employment contracts worth tens of millions of dollars.

In the late 2000s, Merrill decided to quickly expand its mortgage operations via internal growth and the acquisition of 12 major mortgage originators. The number of mortgage loans had exploded with the continued rise in the U.S. housing market. Merrill viewed mortgage lending as a way to diversify from its core M&A and equity underwriting business and bring in new revenue streams. A large part of this mortgage business included “subprime” mortgages, or mortgages made to borrowers with poor credit histories. These loans were attractive to Merrill because the bank could charge these customers a higher interest rate. Some of these borrowers had nowhere else to go and had to pay higher rates to secure financing. Many banks were worried about lending to these customers who had not paid back other loans, or historically paid loans late, resulting in a poor credit rating. However by 2006, over 20 percent of mortgage loans were to consumers considered to be subprime.

To manage exposure and generate fee income, the mortgages were packaged together into a pool and *securitized* to other investors. In other words, hundreds of mortgages were grouped into one pool of assets. Individual securities were then created that represented a percentage ownership in this broad pool of mortgages. An investor in one of these securities held a fraction ownership in the entire pool, enabling the investor to share in the risks and rewards of owning mortgage loans.

Financial professionals spoke about a “new paradigm” of risk. No one bank held the liability for the entire pool of mortgages any more. Rather, ownership of the individual securities was distributed among hundreds, if not thousands, of individual investors all over the world. The new theory was that if the pool of assets went bad and the mortgages were not repaid, it would not be a major global economic problem because the risk for any individual security holder was small. This eliminated the *systematic* risk posed by large borrowings to subprime mortgage holders held by one large bank because the securities were distributed in smaller sizes to multiple investors.

Securitization of mortgages became a massive business on Wall Street. Investment banks earned large fees by originating these loans or purchasing them from other borrowers and selling off the securities to others in the secondary market. Securitizations for other types of loans soon surfaced, such as automobile loans, corporate loans, credit card debt, and so on. These securities were called collateralized debt obligations (CDOs) or collateralized loan obligations (CLOs), depending on the type of loan pool.

As the global housing market boomed, banks started to lend more and more aggressively to weaker credits. This created more residential loans to supply the insatiable demand in the CDO market. It got to the point where “liar loans” were created that allowed individuals to take out home mortgages with no written evidence at all. In other words, a homebuyer could walk into a bank and list his net worth, level of income, and ability to pay back the mortgage. The mortgage broker would ask a few questions, but not require *any* documentation supporting the representations of the applicant. They trusted the applicant to not lie about his financial position.

Lenders started to loan up to 110 percent of a home’s market value (i.e., more than the home was worth when the loan was taken out). This allowed a buyer to purchase a home without any of her own money committed. To make matters worse, the homeowner then received another 10 percent in addition to this amount and was allowed to keep the cash. The bank’s theory was that home prices never came down. Given the escalation in home values, the loan would be worth more than the mortgage again after several months when the always-rising home prices would make the loan secure over time. This had become a very profitable business for Merrill Lynch and others on Wall Street.

All of this worked well until the housing bubble burst in late 2006. Individuals were no longer able to afford the significant mortgage payments they had signed up for in the boom years. The stock of homes for sale and foreclosed homes grew exponentially, further driving down values. As a result, banks holding large portfolios of subprime CDO assets started to incur defaults on their payments as the quality of the loan portfolios plummeted. As one of the largest holders of subprime assets, Merrill Lynch was hit particularly hard by the abrupt change in the economy. In October 2007, Merrill Lynch announced a \$7.9 billion write-down resulting from exposure to CDOs. This produced Merrill's largest quarterly loss, \$2.3 billion, in the history of the firm.

As a result of this crisis, CEO Stan O'Neal was replaced by John Thain, then CEO of the New York Stock Exchange, in October 2007. With an MIT and Harvard education and a prior job as president and co-chief operating officer of Goldman Sachs, Thain was the quintessential Wall Street executive, a stark contrast to Ken Lewis, the southern, state university-educated retail banking head based in North Carolina.

Earlier in 2007, the U.S. economy had suffered several severe shocks. Bear Stearns was a global investment bank founded in 1923. In March 2008, the Federal Reserve Bank of New York provided an emergency loan to try to save Bear from losses stemming from its own CDO business. However, the company could not be saved and was sold to JP Morgan Chase for \$10 per share. This was up from the original offer from JP Morgan Chase of \$2 per share, but still sharply below Bear's 52-week-high share price of \$133. The Federal Reserve also guaranteed up to \$30 billion of troubled mortgage and all other assets that got Bear Stearns into trouble.

In mid-September, the U.S. Federal Reserve had to step in and bail out yet another Wall Street firm. This time it was American International Group (AIG), with an \$85 billion credit facility that entitled the U.S. government to a 79.9 percent equity ownership in the company. AIG also had a distinguished history. An insurance company and bank founded in 1919 with more than 88 million customers in 130 countries, by 2000 AIG was listed as the twenty-ninth largest public company in the world. The fall of AIG was set in motion by a credit downgrade for the company from AAA to AA. This caused counterparties to various complex financial instruments to insist on AIG posting additional collateral or settling the contract immediately. AIG did not have sufficient cash capacity to deal with all of these contracts at once, resulting in the need for an emergency loan from the U.S. government.

Finally on the weekend of September 12, 2002, this sequence of severe economic events came to a head. Lehman Brothers was the next largest Wall Street firm on the brink of bankruptcy due to massive losses in the existing portfolio. Founded in 1850, Lehman had grown to be the fourth largest

investment bank in the United States behind only Goldman Sachs, Morgan Stanley, and Merrill Lynch. With over 26,000 employees, a Lehman failure would add considerable systematic risk to an already fragile economy.

However, the Federal Reserve had seen enough. They were concerned about the moral hazard of continuing to bail out financial institutions that had taken imprudent amounts of risk. If bankers were confident that the government would always bail them out for mistakes, there was incentive to take as much risk as possible. If the risks turned out well, bankers would be handsomely rewarded. If the trades went bad, the government would step in to pick up the losses. The banks could not lose, no matter how aggressive they became. The U.S. Federal Reserve believed that they had to set a precedent. They had to show Wall Street banks that executives were going to start taking accountability for their mistakes—both for their banks and for themselves.

By Friday, September 12, 2008, most expected that Lehman would not have enough cash to open for business on Monday morning. At 6:00 P.M. on Friday evening, an emergency meeting was called for the most powerful CEOs on Wall Street at the Federal Reserve Building in New York. The government urged these bank leaders to find a solution to prevent a potential global economic meltdown on Monday morning if Lehman did not open its doors. Each CEO claimed that their bank was not at fault for the problems encountered by Lehman, and they could not justify spending their own shareholders' money to bail out a competitor. The government stressed that it was in the best interest of the shareholders of all banks in the room to stabilize the U.S. economy as soon as possible.

Negotiations continued throughout the weekend, but no solutions emerged. With the possibility of a Lehman Brothers' bankruptcy growing more likely by the minute, Merrill became worried about its own survival. At 6:30 A.M. on Saturday morning, John Thain received a call from his COO suggesting they call Ken Lewis at Bank of America for help. Thain initially resisted. He insisted that Merrill could survive as an independent bank if they could sell off non-core assets to raise cash quickly. However, as discussions continued through Saturday morning, Thain relented and asked for a meeting with Ken Lewis. But he could not bring himself to make the call to Lewis personally. After pressure from his legal counsel, Thain again relented and agreed to make the call to Lewis directly.

Lewis immediately traveled to New York City and met Thain at the BofA corporate apartment in the Time Warner Center. Thain opened the conversation bluntly: "I'd like to explore whether you would have an interest in buying 9.9 percent of our company and providing a large liquidity facility."⁴ Lewis countered that he was not really interested in buying 9.9 percent of the company—he wanted to buy the whole bank.

Negotiations became tense. As the day progressed, it became apparent that the only way discussions would proceed would be if BofA were allowed to buy 100 percent of Merrill. BofA initially took the position that they needed \$70 billion in government guarantees to proceed with the purchase. They did not have time to adequately assess the assets over the weekend. They were being pushed by the government to close before Monday morning to avoid economic chaos. Merrill Lynch insisted on a purchase price of \$30 per share. At 8:00 A.M. on Sunday, Thain and Lewis met again. Thain tried to make the case for a high valuation of Merrill, despite the fact that Merrill's stock price was in a downward spiral.

As Sunday went on, the pressure from the government to do a deal continued to increase. Thain became more and more concerned that Merrill would not survive the next week without a deal in some form. The balance of negotiating power was slowly moving from Merrill to BofA. Late on Sunday, BofA agreed to \$29 per share for Merrill stock. This was equivalent to a 70 percent premium over Merrill's stock closing price on Friday. Further, the federal government refused to provide any support to backstop failed assets. BofA shareholders were taking 100 percent of the risk associated with the Merrill portfolio while paying a 70 percent premium to the market value of the company!

The deal was announced on Monday, September 15. BofA agreed to purchase Merrill for approximately \$50 billion with each Merrill shareholder receiving .8595 shares of BofA stock for each share of Merrill they held. BofA shares immediately fell 21 percent on the announcement, and Merrill's shares rose to \$17 per share, still a massive discount to the amount BofA had agreed to pay. Clearly, the market was not a big fan of this deal. While Thain had saved his company, Lewis had entered into a huge transaction with many unknown risks that put his own shareholders in danger. As we will see later in this book, the ultimate outcome of the transaction was materially worse than the negative market sentiment on that Monday.

So why did Lewis go forward with the deal? Unlike his highly levered peers on Wall Street, BofA was in very good condition relative to the rest of the market in this unstable environment. As investment banks only, Merrill, AIG, and Bear Stearns relied purely on the capital markets for funding. When this capital dried up along with the economy, they had nowhere to turn other than the federal government. Alternatively, BofA had a huge retail base to fall back on. Retail and corporate deposits at the bank provided BofA with billions of dollars of liquidity to wait out the financial crisis.

Lewis forged ahead. He effectively had one weekend to complete due diligence on a massively complicated, global investment bank. He put himself, his company, and his shareholders at a massive risk. What was driving Lewis forward? Had he lost his perspective? Was Lewis trying to protect the

global economy? Or did he actually think that the troubled Merrill operations were worth \$50 billion?

BofA's purchase of Merrill is a perfect example of the nonscientific reasons often causing two parties to enter into a deal. It was not about the financial returns on the deal. It was not about ranking the companies available for sale from highest expected returns to the lowest and picking the best one. I would argue that the purchase was much more about the softer issues around strategy, status, and growth. If the decision were purely numbers-based, it is hard to believe that Ken Lewis and the BofA board of directors would agree to spend \$50 billion to purchase Merrill Lynch between a Friday afternoon and Monday morning. How on earth was Bank of America able to analyze an organization with 288,000 employees, 57 million customers, and operations in 41 countries from the close of business on Friday to Monday morning? Yet it happened.

To make matters worse, BofA's agreement to purchase Merrill was signed on September 15, 2008, with an anticipated closing date of December 31, 2008. This period between signing of the deal and closing is a very risky period for a buyer. The buyer has essentially committed to purchase the company, yet the existing management team continues to run it for the months up to closing. The buyer is on the hook for anything that management team decides to do during this transition period. For example, in the case of BofA/Merrill, John Thain and his people were promised multibillion-dollar bonus payments at the time the deal was signed under the assumption that Merrill would perform in line with management's financial projections for the year.

However, as we now know, several material changes in the business occurred during this 45-day period. The Great Recession brought the world's economy to its knees with companies as legendary as Goldman Sachs and Morgan Stanley worried about their own survival. Why would anyone in his right mind go through with this transaction given what happened to the world and to Merrill's performance? Despite this subpar performance, Thain accelerated approximately \$4 billion in bonus payments to employees of Merrill just prior to the close of the deal to avoid having them canceled by BofA upon acquisition. This case raises some very difficult questions. Did Ken Lewis know that Thain was about to pay \$4 billion of his shareholders' money to executives that had overseen the downfall of Merrill?

Further, was there no Material Adverse Change Clause in the contract that allowed Lewis and BofA to back away from the deal entirely after the economy collapsed? Did Lewis honestly believe that Merrill was still worth the \$50 billion he agreed to pay on September 15, 2008, particularly given events after this time? Was the reputation of Lewis and BofA a factor in his decision to keep moving forward? Or were there external pressures

from shareholders, employees, the U.S. government, or other stakeholders to proceed with a transaction that everyone knew was doomed to failure? As we will see later in the book, many of these questions can be answered not by cold, hard facts, but by human emotions and the actions of strong personalities.

USING M&A TO DIVERT ATTENTION

A diversion from the real issues is often another irrational reason for M&A. A large, highly visible deal can distract shareholders and analysts from the core issues facing a corporation. It is actually hard to believe that smart corporate senior managers would use this as an excuse to enter into a deal. But it happens.

Some have argued that Johnson & Johnson's 2011 takeover of Synthes was done for just this reason.⁵ In April 2011, J&J had a problem. Between 2010 and 2011, over 50 drugs and devices J&J produced were recalled from the government due to questions surrounding their safety. Such popular drugs as Tylenol and Motrin had to be recalled due to mistakes in production. J&J's medical device division even had a recall on artificial hips. And many of these hips had already been implanted in patients.

While these problems were likely not the only motivation for the Synthes deal, the deal came at a good time to provide some positive news. Given the high visibility around product recalls, a large deal to distract the public was certainly not the worst thing that could have happened. One major shareholder stated, "J&J had a severe challenge to its premier reputation given all the recalls. This relatively bold step to buy a premier company is a significant move in the right direction."⁶

USING M&A TO GROW QUICKLY

A company's need to grow is certainly a far more rational reason to acquire. Global stock markets are putting increasing pressure on companies to expand quickly. A failure to meet a quarterly earnings forecast can significantly hurt the stock price. Economic pressures have resulted in declining margins, revenue reductions, and corresponding shortfalls in profit for many large corporations. It is very hard to compensate for these issues via "organic growth," that is, growing your company by doing more business through existing product lines and channels. Alternatively, M&A is an easy way to gain scale and grow earnings quickly.

Let's take Apple as an example. For the year ended December 31, 2015, Apple produced gross earnings of \$53.4 billion and earnings per

share of \$9.22. Most companies need to grow at least 3 to 5 percent a year to show the progress needed to continue an improvement in their stock price. In the case of Apple, 5 percent of \$53.4 billion is over \$2.5 billion of incremental earnings. In other words, Apple needs to grow earnings by over \$2.5 billion year after year to show the needed improvement in earnings per share. This is the equivalent of adding a company the entire size of Nike every year.

This kind of continued growth rate is very hard to do organically. Most world-class companies like Apple have already optimized their operations and realized significant market share. They can try to grow their markets by taking business from competitors, becoming more efficient on the cost side, introducing new products, or trying to increase margins. Although all of this is possible on the fringes, making immediate wholesale changes that are material enough to matter is difficult without a large acquisition.

Another way to stimulate revenue growth is by entering new markets or geographies. This is also very hard to do organically. But an acquisition can give you an immediate presence in new areas. This makes it extremely tempting to look at M&A as a way to grow, take some of the pressure off earnings, and improve share price. CEOs need to remain balanced and resist this pressure. Good deals that provide entry into new markets or products certainly make sense. However, pursuing M&A just for the sake of quick growth or to relieve shareholder pressure can be dangerous. While this might help in the short term, the issues with fundamentally bad deals will certainly surface in the medium to long term.

USING M&A TO SOLVE PROBLEMS

Assume that you are the head of Europe for a large U.S. financial services company. Your CEO has challenged you to establish a banking presence in Italy by the end of the year. In addition you are \$25mm behind your net income target for the year with no real ideas on how to make up the shortfall.

One way to establish this presence would be to build it yourself. But let's consider what is involved to get it done this way. You would need to hire a complete team in Italy including salespeople, underwriters, a finance staff, and a CEO capable of building a business quickly. You would need to apply for a license to do banking in Italy. You would encounter numerous logistical issues as simple as finding a building for corporate headquarters and locations for local bank branches.

Alternatively, if you could find an Italian bank to buy, the process would be much easier. You would immediately have a banking license, employees, and a complete operation in Italy. You would get immediate scale rather than having to take the time to build it. And perhaps most importantly, you

get immediate earnings by being able to add the earnings of the Italian bank going forward into your own earnings for the year.

Think about the terrific discussion you can have with your CEO at the end of the year after buying this Italian bank. You gained an immediate, credible, and established banking presence in the country he so desperately wanted you to enter. You have also solved your net income problem by being able to add the Italian bank's earnings into yours for the year. You have solved both of your challenges in one stroke of the pen. However, as we will see later in this book, it is never quite as easy as this. Further, as many smart CEOs have subsequently realized, the disastrous effects of doing a poor deal significantly outweigh the benefits that can be achieved in many cases.

This is why most successful firms have a very thorough corporate review process around buying companies. Each of a company's divisions normally has its own objectives for growth into new products and geographies along with very challenging net income targets. Left to their own devices, business units would likely ask for as much funding from corporate retained earnings as they can get. If they can attract more of this capital, they can grow their business more quickly. If they are starved of capital, it will be very hard to grow.

The job of most corporate senior management and boards is not about micromanaging the individual business units, but rather managing the amount of capital to allocate to each unit and for what purpose—in many cases to acquire. Unfortunately, the amount of capital for all businesses is not unlimited. Difficult choices must be made as to who gets this money.

Again, in a purely academic approach it would be easy. All the corporate board has to do is rank the projects from highest to lowest internal rate of return and allocate capital to the ones at the top. But it is not that simple. The overall corporate strategy, strategic goals of each unit, and the personalities of the persons heading the unit all factor into the equation. In many cases, the credibility of the person presenting the deal and the board's confidence in him is more important than a pure mathematical calculation of IRRs.

HORIZONTAL AND VERTICAL MERGERS

Horizontal and vertical combinations are another reason frequently cited for M&A. Horizontal mergers are where one competitor in an industry buys another. The classic example of horizontal mergers is the consolidation of U.S. banking institutions. Years ago, one could travel down any town center in America and see multiple bank branches. In my home state

of Connecticut, it was a Fleet Bank branch office, next to a Union Trust branch, next to a New Haven Savings Bank, and so on. There was really no need for three different bank branches in the space of a quarter mile on the same street.

By combining branches the buyer could improve revenues while taking out cost. These impacts are referred to as *synergies*. The best way to describe synergies is $1 + 1 = 3$. Let's use the Connecticut banking example. Do customers really need three different bank branches within one-minute walking distance of each other on one city street? Certainly their needs could be met by one bank in the area with a branch large enough to accommodate local demand. A significant amount of cost can be taken out in such a consolidation. Real estate costs would be lowered by combining several branches into one facility. Staff numbers could be reduced as economies of scale are obtained by having all employees in one spot.

On the revenue side, sharing of customer lists and cross-selling products could drive incremental income once the banks have been combined. If managed properly, these cost and revenue synergies can be achieved at the same time that customers receive equal or better service. Such synergies are normally the main drivers to horizontal mergers.

A vertical acquisition is one where a company buys one of its supply chain providers. One example can be seen in the rise of coal-fired power plants in emerging markets. Severe shortages of power and other infrastructure limitations have started to impair the ability of the emerging economies to keep growing. Many privately held companies are starting to address this need with the building and renovation of significant power sources to supplement insufficient power generation from public utilities.

However, this extreme demand for power has driven the cost of coal up and, more importantly, limited supply. Power companies have spent significant amounts to build the power generation infrastructure with large fixed costs. They have large pools of workers on contract to work the equipment. These energy producers cannot afford to have the large plants remain idle due to a shortage of their primary raw material, coal.

As a result, major power producers are starting to buy their own coalmines, often in countries outside of their own where demand is less. This type of *vertical integration* helps ensure that the coal is ready and available to meet demand. The power company, not the coal vendor, now decides when, how much, and how to distribute coal to the plants for energy conversion. Perhaps most importantly, the owner of the power plant can much better anticipate the price he will have to pay for this coal. The cost to extract the coal from the mine may still be variable, but the plant owner is no longer subject to the price variations of the market.

Another example of a vertical acquisition would be an end manufacturer buying up the components of its supply chain to reduce uncertainty on timing of delivery. In the automobile industry, most components of an individual car are subcontracted out to smaller companies that provide the separate components to a major manufacturer like Ford or Volvo. Each of these subcontractors would be responsible for providing raw materials such as steel or glass, or a more sophisticated product like the radio, engine, or tires for the car. The main manufacturer will assemble the vehicle and put its own finishing touches on it, but many of the critical parts are built by third-party subcontractors.

In these situations, the main contractor, the car company, is reliant on the subcontractors for providing a quality product on time. If you bought a Ford with a radio that did not work, you would likely blame Ford and demand that they replace the radio rather than going to the subcontractor that made the radio. You really don't care who made the radio; you bought the car from Ford and want them to stand behind it.

Similarly, if you ordered a red Volkswagen Beetle to be delivered in time to give to your wife for Christmas, you want it ready by that time—no questions asked. You would not want to hear Volkswagen say the car was not ready, but it really was not their fault that a critical part was still missing.

A final form of vertical merger is when a company acquires one of its current distributors. Let's go back to the Ford example. Ford manufactures its own cars, but distributes them through a network of independent dealers nationwide. While Ford certainly manufactures a quality product, the local dealer completes the sale. If Ford were able to complete the car before Christmas, but the dealer was not open on Christmas Eve, we would still have a very unhappy customer. The acquisition of a dealer or distributor is another way that a company can more closely control the distribution of products to customers in a quality manner.

CONCLUSION

After all of these obvious issues, why do so many bad deals continue to happen? There is no simple answer to this in the complicated world of M&A. However, one thing we know for sure: The analysis and closing of a major international merger and acquisition is not as scientific and logical as many believe. It is often the softer issues around pressure to grow, personalities of the executives involved, and trying to take advantage of opportunistic situations that have as much influence on the process as the underlying economics of the transaction.

NOTES

1. IRR (internal rate of return) is a normal measure to determine the actual returns achieved on an acquisition. It takes the expected cash flows of the target company and discounts them back to the amount you have bid for the company. So deals with a higher IRR should be selected over lower IRR transactions. In theory, the projected IRR should be higher than the buyer's cost of capital to pay for the transaction. Otherwise, the buyer would be paying more for the company than merely keeping the cash and using it for other purposes.
2. Comment from James Eden, Dresdner Kleinwort Wasserstein, as quoted in the *Telegraph*: "Royal Bank of Scotland Investigation: The Full Story of How the World's Biggest Bank Went Bust," Harry Wilson, Philip Aldrick, and Kamal Ahmed, March 5, 2011.
3. Ibid.
4. Bank of America-Merrill Lynch, Harvard Business School. Case Study, June 7, 2010.
5. "J&J Synthes Takeover Obscuring Recalls in Makeover," *Real M&A*, Tara Lachapelle and Alex Nussbaum, April 19, 2011.
6. Michael Holland, chairman of Holland Company, New York.

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