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BUSINESS VALUATION DIGEST

BY GEOFFREY CULLINAN, JEAN-MARC LE ROUX, AND ROLF-MAGNUS WEDDIGEN

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For more information, please contact:
The Canadian Institute of Chartered Business Valuators
277 Wellington Street West, 5th Floor
Toronto, Ontario M5V 3H2
Tel: 416-204-3396
Fax: 416-977-8585

When to Walk Away From a Deal

Deal making is glamorous; due diligence is not. That simple statement goes a long way toward explaining why so many companies have made so many acquisitions that have produced so little value. Although big companies often make a show of carefully analyzing the size and scope of a deal in question – assembling large teams and spending pots of money – the fact is, the momentum of the transaction is hard to resist once senior management has the target in its sights. Due diligence all too often becomes an exercise in verifying the target's financial statements rather than conducting a fair analysis of the deal's strategic logic and the acquirer's ability to realize value from it. Seldom does the process lead managers to kill potential acquisitions, even when the deals are deeply flawed.

Take the case of Safeway, a leading American grocery chain with a string of successful mergers to its credit and a highly respected management team. In 1998, Safeway acquired Dominick's, an innovative regional grocer in the Chicago area. The strategic logic for the \$1.8 billion deal seemed impeccable. It would add about 11% to Safeway's overall sales at a time when mass retailers like Wal-Mart and Kmart were stocking groceries on their shelves and taking market share away from established players, and it would give Safeway a strong presence in a major metropolitan market.

Although Dominick's 7.5% operating cash flow margin lagged behind Safeway's 8.4%, Safeway CEO Steve Burd convinced investors

that he would be able to quickly raise the acquired firm's margin to 9.5%. Capitalizing on this momentum, Safeway closed the deal in just five weeks, about a third of the average closing period for large acquisitions.

Safeway would come to regret not taking time for due diligence. Dominick's focus on prepared foods, in-store cafes, and product variety did not fit Safeway's emphasis on store brands and cost discipline. Dominick's strong unions resisted Safeway's aggressive cost-cutting plans. And with its customers unwilling to accept Safeway's private label goods, Dominick's was soon losing share to its archrival, Jewel. A thorough due diligence process would certainly have revealed these problems, and Safeway could have walked away with its pockets intact. Instead, it is stuck with an operation it cannot sell for even a fifth of the original purchase price.

Safeway is just one of many companies to suffer from weak due diligence. In December 2002, Bain & Company surveyed 250 international executives with M&A responsibilities. Half the participants said their due diligence processes had failed to uncover major problems, and half found that their targets had been dressed up to look better for the deals. Two-thirds said they routinely overestimated the synergies available from their acquisitions. Overall, only 30% of the executives were satisfied with the rigor of their due diligence processes. Fully a third admitted they hadn't walked away from deals they had nagging doubts about.

What can companies do to improve their



due diligence? To answer that question, we've taken a close look at 20 companies – both public and private – whose transactions have demonstrated high-quality due diligence.

We calibrated our findings against our experiences in 2,000-odd deals we've screened over the past ten years. We've found that successful acquirers view due diligence as much more than an exercise in verifying data. While they go through the numbers deeply and thoroughly, they also put the broader, strategic rationale for their acquisitions under the microscope. They look at the business case in its entirety, probing for strengths and weaknesses and searching for unreliable assumptions and other flaws in the logic. They take a highly disciplined and objective approach to the process, and their senior executives pay close heed to the results of the investigations and analyses – to the extent that they are prepared to walk away from a deal, even in the very late stages of negotiations. For these companies, due diligence acts as a counterweight to the excitement that builds when managers begin to pursue a target.

The successful acquirers we studied were all consistent in their approach to due diligence. Although there were idiosyncrasies and differences in emphasis placed on their inquiries, all of them built their due diligence process as an investigation into four basic questions:

- What are we really buying?
- What is the target's stand-alone value?
- Where are the synergies – and the skeletons?
- What's our walk-away price?

In the following pages, we'll examine each of these questions in depth, demonstrating how they can provide any company with a solid framework for effective due diligence.

What Are We Really Buying?

When senior executives begin to look at an acquisition, they quickly develop a mental image of the target company, often drawing on its public profile or its reputation within

the business community. That mental image shapes the entire deal-making process – it turns into the story that management tells itself about the deal. An effective due diligence process challenges this mental model, getting at the real story beneath the often heavily varnished surface. Rather than rely on secondary sources and biased forecasts provided by the target company itself, the corporate suitor must build its own proprietary, bottom-up view of the target and its industry, gathering information about customers, suppliers, and competitors in the field.

Bridgepoint, a leading European private equity firm, is particularly adept at this kind of strategic due diligence. In 2000, Bridgepoint was considering buying a fruit-processing business from the French liquor giant Pernod Ricard. The business, which for the purposes of this article we'll call FruitCo, looked like an attractive acquisition candidate. As the leading producer of the fruit mixtures used to flavor yogurt, it was well positioned in a growing industry. Western consumers had been spending between 5% and 10% more each year on yogurt, and the market was growing faster still in the developing world, particularly in Latin America and Asia. FruitCo was posting profits and had won praise for its innovativeness and its excellence in R&D and manufacturing. Moreover, there was nothing suspicious about Pernod Ricard's reasons for selling – fruit processing simply lay outside its core business.

FruitCo looked like a winner to Benoit Bassi, a managing director of Bridgepoint in Paris. He saw attractive opportunities to boost FruitCo's revenues and profits by expanding the business into adjacent categories, such as ice cream and baked goods, as well as into new channels. After laying out the case for the acquisition in a grueling five-hour meeting with his partners, Bassi got the OK to pursue the deal. Yet it never happened; just four weeks later, Bassi killed it.

During those four weeks, the due diligence team had discovered many worms in the shiny FruitCo apple. They tested the argument that FruitCo could make money by scaling up and competing on cost, for instance. And they found that while the company boasted considerable global scale, regional scale turned out to be the more relevant driver of costs. That was because the economics of

transportation and purchasing made the global sourcing of fruit – a major cost component – unfeasible. At the same time, advanced processing technologies enabled FruitCo's rivals to achieve competitive economics at the country level. When the team tested FruitCo's price and revenue forecasts, they found further cause for concern. The market for fruit yogurt was indeed growing, but profitability in many markets – particularly in Latin America – was falling rapidly, indicating that the product was turning into a commodity. Stemming this trend seemed unlikely; consumers told Bridgepoint's researchers that they would be unlikely to tolerate increased prices. The team then pored over the target company's customer lists. They found that FruitCo was highly dependent on sales to two large yogurt producers, both of which seemed intent on achieving more control over the entire production process in each major market that they competed in. FruitCo seemed fated to an erosion of market power – it would have to fight for every contract.

Bassi recognized that the original business case for the acquisition did not hold up under close scrutiny. He walked away from the deal he had once coveted, probably saving Bridgepoint millions of dollars in the process. "What we thought we knew turned out to be wrong," Bassi unsentimentally explains.

As the story suggests, effective acquirers systematically test a deal's strategic logic. Like Bridgepoint, they typically organize their investigations around the four Cs of competition: customers, competitors, costs, and capabilities (often but not necessarily in that order). Within each of these areas, due diligence teams ask hard questions as they study their targets. Although they will rely on information provided by the targets, they do not accept those data at face value. They conduct their own field analyses.

Get to know the customers. Good due diligence practitioners begin by drawing a map of their target's market, sketching out its size, its growth rate, and how it breaks down by geography, product, and customer segment. This allows them to compare the target's customer segments – their profitability, promise, and vulnerability – with those of its competitors. Has the target fully penetrated some customer segments but neglected others?

What is the target's track record in retaining customers? Where could you adjust its offerings to grow sales or increase prices? What channels does the target use to serve its customers, and how do those channels match your own? In researching these questions, effective due diligence teams remember always to identify the target's most profitable customers and look at how well the target is managing them. They don't rely on what the target tells them about its customers; they approach the customers directly.

Check out the competition. Good due diligence practitioners always examine the target's industry presence.

How does it compare to its rivals in terms of market share, revenues, and profits by geography, product, and segment? They look at the pool of available profits and try to determine whether the target is getting a fair (or better) share of industry profits compared with its rivals. How does each competitor make the profits expected from a company with its relative market share? Where in the value chain are profits concentrated? Is there a way to capture more? Is the target underperforming operationally? Are its competitors? Is the business correctly defined? The due diligence team should carefully consider how competitors will react to the acquisition and how that might affect the business. Once again, effective teams don't rely on what the target tells them; they seek independent advice.

Verify the cost economics. Successful due diligence teams always ask the following questions about costs: Do the target's competitors have cost advantages? Why is the target performing above or below expectations given its relative market position? What is the best cost position the acquirer could reasonably achieve? The team also needs to look at the extent to which the target is using its experience in the market to drive down costs. When considering postmerger opportunities for cost rationalization, the team needs to assess whether the benefit of sharing costs with other business units will outweigh the lack of focus that sharing costs across multiple

businesses might introduce. It needs to determine how low it can take costs by instituting best practices. Benchmarking can be an important aid here. It's also vital to look at how to allocate costs going forward. Which products and customers really make the money, and which ones should be dropped?

Take stock of capabilities. Effective acquirers always remember that they are not just buying a P&L and a balance sheet but also capabilities such as management expertise. Capabilities may not be easy to measure, but taking them for granted is too large a risk for any company because competencies largely determine how well a company will be able to pursue its postacquisition strategy. Acquirers should ask themselves: What special skills or technologies does the target have that create definable customer value? How can it leverage those core competencies? What investments in technology and people will help buttress the existing competencies? What competencies can the company do without? Assessing capabilities also involves looking at which organizational structures will enable the business to implement its strategy most effectively. How should all other aspects of the organization (such as compensation, incentives, promotion, information flow, authority, and autonomy) be aligned with the strategy?

In testing a deal's strategic logic, most companies will be on the lookout for potential problems – the smoking guns, the skeletons in the closets. But the due diligence process can produce nice surprises as easily as nasty ones, and it may give a would-be acquirer a reason to pursue a deal more aggressively than it otherwise might have. Centre Partners' acquisition in the late 1990s of American Seafoods, a fishing company, is a case in point. (See *Uncovering Hidden Treasure* on page 9).

What Is the Target's Stand-Alone Value?

Once the wheels of an acquisition are turning, it becomes difficult for senior managers to step on the brakes; they become too invested in the deal's success. Here, again, due diligence

should play a critical role by imposing objective discipline on the financial side of the process. What you find in your bottom-up assessment of the target and its industry must translate into concrete benefits in revenue, cost and earnings, and, ultimately, cash flow. At the same time, the target's books should be rigorously analyzed not just to verify reported numbers and assumptions but also to determine the business's true value as a stand-alone concern. The vast majority of the price you pay reflects the business as is, not as it might be once you've won it. Too often the reverse is true: The fundamentals of the business for sale are unattractive relative to its price, so the search begins for synergies to justify the deal.

Of course, determining a company's true value is easier said than done. Ever since the old days of the barter economy, when farmers would exaggerate the health and understate the age of the livestock they were trading, sellers have always tried to dress up their assets to make them look more appealing than they really are. That's certainly true in business today, when companies can use a wide range of accounting tricks to buff their numbers.

Here are just a few of the most common examples of financial trickery used:

- Stuffing distribution channels to inflate sales projections. For instance, a company may treat as market sales many of the products it sells to distributors – which may not represent recurring sales.
- Using overoptimistic projections to inflate the expected returns from investments in new technologies and other capital expenditures. A company might, for example, assume that a major uptick in its cross selling will enable it to recoup its large investment in customer relationship management software.
- Disguising the head count of cost centers by decentralizing functions so you never see the full picture. For instance, some companies scatter the marketing function among field offices and maintain just a coordinating crew at headquarters, which hides the true overhead.
- Treating recurring items as extraordinary costs to get them off the P&L. A company might, for example, use the restructuring of a sales network as a way to declare bad receivables as a onetime expense.

- Exaggerating a Web site's potential for being an effective, cheap sales channel.
- Underfunding capital expenditures or sales, general, and administrative costs in the periods leading up to a sale to make cash flow look healthier. For example, a manufacturer may decide to postpone its machine renewals a year or two so those figures won't be immediately visible in the books. But the manufacturer will overstate free cash flow – and possibly mislead the investor about how much regular capital a plant needs.
- Encouraging the sales force to boost sales while hiding costs. A company looking for a buyer might, for example, offer advantageous terms and conditions on postsale service to boost current sales. The product revenues will show up immediately in the P&L, but the lower profit margin on service revenues will not be apparent until much later.

To arrive at a business's true stand-alone value, all these accounting tricks must be stripped away to reveal the historical and prospective cash flows. Often, the only way to do this is to look beyond the reported numbers – to send a due diligence team into the field to see what's really happening with costs and sales.

That's what Cinven, a leading European private equity company, did before acquiring Odeon Cinemas, a UK theater chain, in 2000. Instead of looking at the aggregate revenues and costs, as Odeon reported them, Cinven's analysts combed through the numbers of every individual cinema in order to understand the P&L dynamics at each location. They were able to paint a rich picture of local demand patterns and competitor activities, including data on attendance, revenues, operating costs, and capital expenditures that would be required over the next five years. This microexamination of the company revealed that the initial market valuation was flawed; estimates of sales growth at the national level were not justified by local trends. Armed with the findings, Cinven negotiated to pay 45 million less than the original asking price.

Getting ground-level numbers usually requires the close cooperation of the acquisition target's top brass. An adversarial posture almost always backfires. Cinven, for example, took pains to

explain to Odeon's executives that a deep understanding of Odeon's business would help ensure the ultimate success of the merger. Cinven and Odeon executives worked as a team to examine the results of each cinema and to test the assumptions of Odeon's business model. They held four daylong meetings in which they went through each of the sites and agreed on the most important levers for revenue and profit growth in the local markets. Although the process may strike the target company as excessively intrusive, target managers will find there are a number of benefits to going along with it beyond pleasing a potential acquirer. Even if the deal with Cinven had fallen apart, Odeon would have emerged from the deal's due diligence process with a much better understanding of its own economics.

Of course, no matter how friendly the approach, many targets will be prickly. The company may have something to hide. Or the target's managers may just want to retain their independence; people who believe that knowledge is power naturally like to hold on to that knowledge. But innocent or not, a target's hesitancy or outright hostility during due diligence is a sign that a deal's value will be more difficult to realize than originally expected. As Joe Trustey, managing partner of private equity firm Summit Partners, says: “We walk away from a target whose management is uncooperative in due diligence. For us, that's a deal breaker.”

Where Are the Synergies – and the Skeletons?

It's hard to be realistic about the synergies an acquisition will deliver. In the fevered environment of a takeover, managers routinely overestimate the value of cost and revenue synergies and underestimate the difficulty of achieving them. It's worth repeating that two-thirds of the executives in our M&A survey admitted to having overestimated the synergies available from combining companies.

Realizing that synergy estimates are often untrustworthy, some companies have made it

their policy not to take potential synergies into account when determining the value of acquisition candidates. Although the concern behind the policy is understandable, such an approach can be destructive: Some synergies are achievable, and ignoring them may steer companies away from smart acquisitions. A better approach is to use the due diligence process to carefully distinguish between different kinds of synergies, and then estimate both their potential value and the probability that they can be realized. That assessment should also include the speed with which the synergies can be achieved and the investments it will take to get them.

We've found it useful to think of potential synergies as a series of concentric circles, as shown in the exhibit, "A Map of Synergies." *(As a result of copyright issues, we are unable to reproduce the exhibit referred to above. - Editor).* The synergies at the center come from eliminating duplicate functions, business activities, and costs – for instance, combining legal staffs, treasury oversight, and board expenses. These are the easiest synergies to achieve; companies are sure to realize most of the potential savings here. The next closest circle represents the savings realized from cutting shared operating costs, such as distribution, sales, and regional overhead expenses. Most companies will realize the majority of these savings, as well. Then come the savings from facilities rationalization, which are typically more difficult to achieve because they can involve significant personnel and regulatory issues. Farther out are the more elusive revenue synergies, starting with sales of existing products through new channels and moving to the outermost circle, selling new products through new channels. Each circle offers large rewards, but the farther out the savings or revenues lie, the more difficult they become to achieve and the longer it will take. Categorizing synergies in this way provides a useful framework for valuing them. Analysts can assign to each circle a potential value, a probability for achieving the value, and a timetable for implementation, which can be used to model the synergies' effect on the combined cash flows of the companies.

It's important that this analysis also explicitly consider the cost of achieving the synergies, in both cash and time. In one dramatic case, the Canadian real estate companies O&Y Properties and Bentall Capital called off their planned merger in 2003 after tallying up the integration costs necessary to realize the synergies. O&Y managed properties throughout eastern Canada, while Bentall's holdings were concentrated in the West. In addition to complementing each other geographically, the two companies believed they could rationalize expenses over a larger collection of properties and still have representatives on the ground in every major North American city. Yet, after due diligence, both sides realized that the high costs of integration would likely overwhelm any long-run savings and revenue gains. Bentall president Gary Whitelaw told the press that his company had grown "increasingly concerned that the scale of the integration could divert resources away from our primary objective. The merger risks would have been significant, demanding increased management attention, and resulting in larger integration costs than at first may have been thought." The deal was scuttled, to the benefit of O&Y's and Bentall's shareholders.

It is perhaps understandable that managers might want to put off thinking about the sensitive issues inherent in integration planning until after the deal is signed and sealed. But that is often a serious mistake. Integration planning – and the costs of integration – are among the biggest determinants of an acquisition's ultimate success or failure, and you can't really declare a due diligence process complete unless you've looked closely at those costs. The due diligence team's deep knowledge of the acquisition target makes it an ideal body to develop an initial road map for combining two companies' staffs and operations.

In addition to examining the cost of achieving positive synergies, the due diligence team also needs to consider how potential conflicts between the merged businesses may sap revenues or add costs. These negative synergies – the skeletons in the closet of every deal – can take many forms. Once two companies combine their accounts, for example, some of their joint

customers may curtail their purchases for fear of being overly reliant on a single supplier. Difficulties in integrating back-office operations or systems may at least briefly impede customer service and order fulfillment, leading to a loss of sales. Seeing more competition for promotions, talented employees may leave, sometimes taking customers with them. And the inevitable distractions of a merger may force management to pay less attention to the core business, undermining its results. Despite their often immense importance, negative synergies are routinely overlooked in due diligence. A common mistake, for example, is to create a valuation model that adds up the revenues of the two companies, plus the synergies, without subtracting an estimated amount for revenue erosion or increased costs.

Even the best acquirers will encounter negative synergies. An executive who left cereal giant Kellogg after its 2001 merger with biscuit maker Keebler told us that the company experienced negative synergies when it decided to put new-product launches on hold in order to focus on integrating the two companies. Some potential revenues were lost as a result even though Kellogg met its targets for cost reductions. A more devastating example of negative synergies occurred in the 1996 merger of the Southern Pacific and the Union Pacific railroads. Incompatibilities in the companies' information systems, combined with other operating conflicts, created massive disruptions in rail traffic throughout the western United States, leading to delayed and misrouted shipments and irate customers. In the end, the government had to declare a federal transportation emergency.

What's Our Walk-Away Price?

The final leg of a sound due diligence process is determining a walk-away price – the top price you are willing to pay when the final price negotiation is conducted.

The walk-away price should never include the full potential value of the synergies, which is why it's important to calculate the deal's stand-alone value separately. Synergies – especially the elusive outer-circle synergies – are something that you target in managing a completed acquisition; they should not unduly influence the negotiation of the deal unless you can be fairly certain about the numbers.

For a walk-away price to have meaning, you really have to be willing to walk away. A useful lesson in that regard comes from Kellogg's CEO, Carlos Gutierrez, who negotiated the purchase of Keebler. Gutierrez dearly wanted to close the deal. Keebler's vaunted direct-to-store delivery system enabled it to carry products to stores in its own trucks, bypassing the retailers' warehouses altogether. Gutierrez saw enormous potential for funneling Kellogg products through Keebler's highly efficient system. But Kellogg's rigorous due diligence analysis made it clear that the maximum he should pay for Keebler was \$42 a share, which he expected was less than what Keebler was looking for. "Even though this was a deal that we desperately wanted," Gutierrez later recalled, "I conditioned myself mentally to say we might not have it." In a final bargaining session in New York, Gutierrez told Keebler's management that a share price of \$42 was his maximum offer – and that if they could get more from someone else, they should take it. Gutierrez went off to watch a Mets game, determined not to give any more thought to the negotiation. Two days later, Keebler accepted Gutierrez's offer.

To establish a walk-away price, successful deal makers convene a decision-making body of trusted individuals who are less attached to the deal than senior management is. They insist on senior management's approval of the body and establish a decision-making process that clearly delineates who in the company recommends deals, who holds veto power, whose input should be solicited, and who decides yea or nay in the final instance. They adopt formal checks and balances that rely on predetermined walk-away criteria.

Bridgepoint assembles a team of six managers, each of whom represents one of four viewpoints. One is the prosecutor, who plays the role of devil's advocate. The second is the less-experienced manager, whose involvement is a key part of his or her training. The third is a senior managing director, who no longer has any hierarchical

function at the company and who therefore cannot be undermined by corporate politics. The final members of the panel are managing directors who still have operational roles. The team's goal is to provide a thorough, balanced, and unbiased examination of the acquisition candidate and hold everyone's feet to the fire on walk-away criteria. "That makes quite a balanced whole," says Bridgepoint's Bassi. "Is it perfect? I don't know. But it works."

Companies can also adjust their compensation systems as added incentive against overpaying for deals. For instance, at Clear Channel, an international radio, billboard, and live entertainment company, line managers have to sign off "in blood," as CFO Randall Mays puts it, on the cash flows that any acquisitions will deliver. The company ties managers' future compensation to meeting the division's cash flow projections, which include results from those acquisitions. The salaries for Clear Channel's M&A teams are also tied to the contribution that acquisitions make to the company's financial performance. The division presidents and M&A teams meet Mays at year's end to study all the acquisitions they have made in the previous three years to see whether they delivered what they promised and to review compensation at the same time. As Mays puts it, the deals they make "are tied to them forever."

The backward-looking science of due diligence is vital. But it is a meaningless exercise without the forward-looking art of strategic due diligence. In the wake of so many disappointing mergers and acquisitions, more and more organizations are realizing that there are few better ways of spending managers' time and investors' money than in a careful and creative analysis of an acquisition candidate.

In the end, effective due diligence is as much about managerial humility as anything else. It's about testing every assumption and questioning every belief. It's about not falling into the trap of thinking you'll be able to fix any problem after the fact. The best private

equity firms are particularly good models in this regard, since they look at every potential deal coldly, without bias or over-confidence. As Bridgepoint's Benoit Bassi puts it, "When you work for a corporation and you buy something you think is in your core business or fits with your core business, you assume you know what you are buying. By contrast, .125 private equity investors .375 have to rediscover everything. There can be a certain arrogance in corporations, which causes them to make silly mistakes." And those silly mistakes can end up costing companies millions, or even billions, of dollars.

Uncovering Hidden Treasure

A comprehensive due diligence effort can uncover good news as well as bad. In some cases, it can even lead a company to make a strong acquisition that it might otherwise have passed up. That's what happened when the private equity firm Centre Partners looked into buying a fishing company called American Seafoods in the late 1990s. The company caught and processed Alaskan pollock and other species from seven fishing trawlers operating in U.S. waters in the Bering Sea. At the time, American Seafoods was owned by a Norwegian parent company. But when the U.S. Congress enacted a law that made it illegal for a foreign concern to own companies fishing in American waters, the Norwegian parent was forced to sell.

Although American Seafoods' profits jumped in 1999 – its EBITDA hit \$60 million that year, more than double the annual average of approximately \$26 million in the three preceding years – the fishing business did not, at first blush, seem particularly attractive to Centre Partners. Historically subject to wide swings in supplies and prices and under increasingly tight regulation, the business seemed fated to volatile and potentially weak returns. But when Centre Partners sent in a crack due diligence team, combining experts in consumer products, fishing operations, and marine biology, it found that, far from being a blip, American Seafoods' profit boom appeared sustainable.

The team's global analysis of the health of major fisheries turned up the most interesting data. Centre Partners discovered that the total biomass of the U.S. Alaskan pollock fishery was expected to grow in coming years, while the biomasses of

competing fisheries – Russian Alaskan pollock and Atlantic cod, most notably – were dropping, some at a fast clip. Overall supplies of pollock and cod would fall, in other words, but the share of the market represented by U.S. Alaskan pollock would probably rise. That was good news from a revenue and pricing standpoint, and the news got even better when the due diligence team looked more closely at trends in fish prices.

Although pollock prices had recently increased, as overall supplies fell, they remained well below the levels of competing whitefish like cod, tilapia, and hoki. As a result, there seemed little chance that pollock would be subject to significant price competition for the foreseeable future. The big Japanese market for pollock roe, meanwhile, remained strong while supplies were falling, leading to a sharp and sustainable increase in roe prices that seemed likely to benefit American Seafoods well into the future.

Based on the results of the due diligence analysis, Centre Partners made a successful bid for American Seafoods. It turned out to be quite a catch. Within three years, EBITDA grew to \$109 million, and the private equity firm had recapitalized the company and sold a portion of its stake. Today, the firm is exploring an initial public offering. In the process, Centre Partners realized nearly four times its initial investment and retained control of the business as it sought to further grow revenue and increase profits.

Geoffrey Cullinan (Geoffrey.Cullinan@bain.com) directs Bain & Company's European private equity practice from London. Jean-Marc Le Roux (Jean-Marc.LeRoux@bain.com), in Paris, and Rolf-Magnus Weddigen (Rolf-Magnus.Weddigen@bain.com), in Munich, also work in Bain's European private equity practice

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BY MARKUS KOEHNEN

Shareholder Rights and Valuation Issues: Dramatic Developments in *Ford Motor Co. of Canada, Ltd. v. OMERS*

Introduction

A recent decision of the Ontario Superior Court of Justice in *Ford Motor Company of Canada v. OMERS*² re-opened a number of valuation and corporate law issues that most observers believed to be well resolved. The relevance of these legal/valuation issues to American businesses with Canadian operations makes these issues worthy of examination.

The Litigants

Ford Motor Company of Canada ("Ford Canada"), as the name suggests, is the Canadian subsidiary of Ford Motor Company ("Ford U.S."). Ford U.S. owned 94 percent of Ford Canada's issued and outstanding shares. The remaining 6 percent were publicly traded and were, in part, owned by OMERS, the Ontario Municipal Employees Retirement Board, one of Canada's largest pension funds.

In 1995, Ford decided to "go private," a mechanism whereby a shareholder who owns a certain percentage of the shares of a corporation can buy out the remaining shareholders.

If the minority shareholder does not like the price being offered on such an event, either the corporation or the minority shareholders can apply to the Court to have the fair value of the shares determined. This judicial valuation will then determine the price at which the shares are purchased.

Valuation/Corporate Law Issues

Ford raises two important valuation and corporate law issues:

1. corporate liability to minority shareholders for improprieties in transfer pricing arrangements, and
2. whether rights attach to shares or to shareholders.

The critical issue in the case was Ford's historical transfer pricing policies. The minority shareholder invoked the shareholder oppression remedy found in Canada's federal corporate statute (as well as in most provincial corporate statutes). The shareholder oppression remedy gives individual shareholders,³ the right to bring a personal claim for corporate wrongdoing.

In *Ford*, minority shareholders argued successfully (1) that the transfer pricing policies between Ford U.S. and Ford Canada were oppressive to minority shareholders and (2) that compensation to correct that oppression should be factored into the fair value calculation of their shares.

Although the minority shareholders were successful on this point, the Court distinguished this case from prior case law. The Court held that a complainant under the shareholder oppression remedy had to have standing as a complainant at the time the oppression occurred.

In other words, a shareholder could only complain about the transfer pricing issues that occurred while he or she was a shareholder. A shareholder could not complain about transfer pricing issues that arose before he or she became a shareholder.

This conclusion raises a fundamental corporate and valuation issue of whether rights attach (1) to shares or (2) to shareholders. Until *Ford*, the issue had been relatively settled in Canada in favor of the rights attaching to shares.

Facts of the Case

During the course of going private, Ford Canada offered \$185 per share to its minority shareholders. Fifty-three percent of the minority shareholders dissented and asked to be paid fair value. The dissenting shareholders asserted that fair value amounted to \$642.50 per share once compensation for an oppressive transfer pricing scheme (that had been in place since 1966) was taken into account.

OMERS' most fundamental complaint was that the Ford transfer pricing scheme caused Ford Canada to lose money every year between 1977 and 1995. No arm's-length business would have tolerated such losses without (1) re-negotiating its transfer price arrangements or (2) going out of business.

Intercompany Transfer Pricing Issues

The main transfer pricing issues involved design and development expenses. In the automobile industry, these expenses can amount to billions of dollars for a single model.

Ford's policy was to allocate these expenses rateably between its Canadian and U.S. operations based on the number of cars sold, regardless of the model of car being sold.

This policy disadvantaged Ford Canada because the Canadian market favored less expensive models, while the U.S. market favored higher end models. The design and development expenses that Ford Canada paid to Ford U.S. amounted to billions of dollars over the 19-year period that Ford Canada sustained losses.

Uniform Selling Prices

In addition to design and development expenses, Ford administered a price parity policy. Under this policy, the prices at which Ford sold its products to dealers were based in U.S. dollars and were the same in Canada and the U.S. Those prices, as well as the prices at which Ford Canada could sell to dealers, were set by Ford U.S.

This meant that Ford Canada often had to sell its products to dealers at a loss. This Ford policy differed from the pricing policies of other automobile manufacturers. Other automobile manufacturers took Canadian market conditions into account when establishing product pricing.

The Court's Decision

The Court found that, far from being an arm's-length arrangement, the transfer pricing system showed that Ford U.S. treated Ford Canada as a wholly owned subsidiary. This was because the effect of the system was to understate profits or overstate losses from the Canadian market for Ford Canada.⁴

Ford U.S. would profit at the expense of Ford Canada, as the higher price of Ford U.S. vehicles could not be passed on to Canadian dealers. This policy would result in a loss to Ford Canada. Therefore, Ford U.S. bore 94 percent of the losses from Ford Canada. This is because Ford U.S. owned 94 percent of the shares of Ford Canada.

However, Ford U.S. accrued 100 percent of the profits. And, the minority shareholders of Ford Canada could never recoup their 6 percent of the loss. Indirectly, there was an implicit transfer of money from the minority Canadian shareholders to Ford U.S.

The fact that the transfer pricing arrangements had passed muster with both U.S. and Canadian tax authorities was irrelevant to the determination about their propriety between shareholders. This is because transfer pricing arrangements are governed by different standards for income tax purposes than they are for assessing fairness to minority shareholders.

Shareholder Oppression

The Court found that Ford Canada had oppressed its minority shareholders by continuing to acquiesce to the intercompany transfer price system. He set the fair value of the shares in accordance with the OMERS valuation, but he limited recovery by applying the oppression remedy restrictively.

Justice Cumming first found that a fair value proceeding under the dissent and appraisal remedy did not exclude a claim for oppression. The rights of dissent and appraisal are expressly subject to the right to bring an oppression claim. The rights of dissent and appraisal are, under the statute, in addition to any other right the shareholder may have.

Shareholder Damages

Rather than awarding damages for the entire amount of the oppression caused by the transfer pricing, Justice Cumming pro-rated the damage over a number of years. The judge awarded each shareholder a damage amount on account of only those years that the various applicants were shareholders.

In the Court's view, the oppression remedy is "protective of reasonable expectations of shareholders." Since a shareholder's reasonable expectations come into existence only when they purchase shares, a dissenting shareholder may make a claim for oppression only from the date he or she acquired shares.⁵

While attractive on one level, the reasoning goes against accepted case law in Canada. That judicial precedent allowed shareholders to make oppression claims (1) even if the oppression arose before they became shareholders and (2) even if the shareholders purchased shares with knowledge of the oppression or for the purpose of bringing an oppression claim.

Judicial Precedent

Justice Cumming distinguished some of these cases on the basis that they were derivative claims in which the applicant was stepping into the shoes of the corporation. Since the corporation could always maintain a claim for wrongs done to it regardless of who its shareholders were, share ownership at the time of the wrong was irrelevant.

A more troublesome case for Justice Cumming to distinguish was *Palmer v. Carling O'Keefe*.⁶ It involved an attack on a related-party transaction. The claim was brought by shareholders who purchased shares with knowledge of the pending transaction and for the specific purpose of bringing the claim to attack the transaction.

Justice Cumming distinguished *Palmer* on the basis that the shareholders (1) purchased before the transaction had occurred and therefore (2) had a right to complain about what was occurring during the course of their shareholding.

What is especially noteworthy about *Palmer* is that it specifically addresses the point of someone who purchases with knowledge of the oppression. *Palmer* holds that such shareholders are not precluded from complaining and seeking damages. This is because they (1) are simply appreciating what rights run with the shares and (2) are purchasing either (a) with the value of those rights reflected in the purchase price or (b) with the risk of not achieving those rights reflected in a discount in the purchase price.

Justice Cumming seems to have been persuaded to distinguish *Palmer* because the statute also permits actions by former shareholders. Unless claims are limited to oppression that occurred while the applicant was a shareholder, the possibility of a claim by former shareholders could result in multiple, duplicative damages for the same conduct: a multiple limited only by the number of subsequent shareholders.⁷

In Justice Cumming's view, damages for oppression should remain with the person who has suffered the loss, that is, the shareholders at the time the oppression occurred. Those shareholders either (1) sold their shares at a discount or (2) continue to hold the shares with an unrealized loss.⁸

The Limitations Act

Justice Cumming further limited the application of the oppression remedy by applying the Limitations Act to restrict the claim of the minority shareholders. He held that the claim ought to have been discovered by 1984.

By that time, financial analysts were aware of the overall effect of the transfer pricing policies, if not the individual details of it. This conclusion also runs against the grain of most case law on limitations.

Most limitations cases hold that the plaintiff must be aware of the material facts to support a claim for the limitations period to begin running. Knowing the effect of a transfer pricing policy is not necessarily the same as knowing that one has a legitimate complaint about it. The effect of applying the limitations statute was to restrict the plaintiff's claim for oppression damages to the consequences of the transfer pricing policy for one year.

In addition to awarding limited damages for past transfer pricing issues, Justice Cumming dealt with the impact of transfer pricing on the forward-

looking valuation by considering Ford Canada as an integral part of Ford U.S., rather than on a stand-alone basis.

Justice Cumming then determined that Ford Canada's fixed assets accounted for 13.88 percent of Ford's consolidated fixed assets of the American and Canadian operations; and he allocated profit and loss of the consolidated operation accordingly.

Summary and Conclusion

Ford is currently under appeal. If upheld, it is likely to have a chilling effect on oppression claims by institutional investors in Canada.

The conclusion implicit in *Ford*, that rights attach to shareholders rather than to shares, significantly limits the value of oppression claims in the public company context. Its analysis on limitations issues-based on the effect of policies rather than on an understanding of their underlying factual elements—further restricts the economic value of shareholder claims.

However, *Ford* also serves as a warning to investors to speak up when faced with undesirable effects.

Notes:

1. Mr. Koehnen would like to thank Adrienne Lee, a litigation associate with McMillan Binch, for her invaluable assistance in preparing this article.
 2. [2004] O.J. No. 191 (S.C.J.), Cumming J. para. 98, 142, 143, 151 [hereinafter *Ford*].
 3. Standing extends beyond shareholders to directors, officers, or any other person the court deems appropriate to make an application.
 4. *Ford*, supra, at paras. 349 and 309.
 5. *Ford*, supra, at paras. 231-232.
 6. (1989), 67 O.R. (2d) 161 (Div. Ct.) (hereinafter Palmer).
 7. *Ford*, supra, at para. 247.
 8. *Hordo*, supra, at 92.
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Markus Koehnen is a litigation partner at McMillan Binch LLP in Toronto. He practices extensively in the area of shareholder litigation and arbitration, class actions, and complex commercial litigation. He is the author of *Oppression and Related Remedies*, a text dealing with shareholder and corporate governance litigation to be published by Carswell (the Canadian division of Westlaw) in June 2004. He has also co-authored the Canadian chapter in *Arbitration World* (London: European Lawyer, 2004), a cross-jurisdictional text on the law of international arbitration. Markus can be reached at (416) 865-7218 or at Markus.Koehnen@mcmillanbinch.com.

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BY JAMES H. SCHILT ASA, CBA, CFA

CAPM and Business Valuation

The Capital Asset Pricing Model (CAPM) stems from Modern Portfolio Theory (MPT) that was developed as a result of a 1952 article published by Professor Harry Markowitz and updated in 1959, and sought to explain the relationship between risk and return in securities portfolios for investors. Markowitz introduced the outlines of a systematic framework for investment management and showed that an investor's portfolio choice can be reduced to balancing the expected return on the portfolio and its variance. Variance or variance of return is a "measure of dispersion about the expected," according to Markowitz. MPT is a risk-premium model that assigns increasingly higher returns to increasing risk. Risk is defined as the covariability of an asset or portfolio returns with the market returns. Portfolio risk is now tied to the interaction of the components.

Before MPT, according to many observers, financial analysts, portfolio managers, and investors looked at each investment opportunity as being unique... well not quite. As far back as the Code of Hammurabi, around 1800 B.C. (Hammurabi being a king in the first dynasty of Babylonia), established the maximum rate of interest that a money lender or investor might charge a borrower on loans of grain, which was repayable in kind, at 33 1/3 % per annum. On loans of silver, the maximum rate was set at 20%. Not much in the way of diversification, but investors were being compensated for the increased risk.

Based on Markowitz's work, Professor William Sharpe, in the mid-1960s, developed, along with others independently of one another, what has become known as the Capital Asset Pricing Model. Markowitz and Sharpe, along with Professor Morton Miller, shared the Nobel Prize in Economic Sciences in 1960. Sharpe's paper entitled "Capital Asset Prices: A Theory of Market

Equilibrium Under Conditions of Risk," was finished in 1962 and published in 1964. The model defines "risk" as the volatility of a security's returns to that of the market.

I believe that herein lies one of the problems in using the CAPM – at least in business appraisals. "Risk" is exposure to possible loss or injury. It is a danger, a hazard, a gamble. If a stock price goes up more or less than the market index in the short term, where is the risk? If the momentum carries the stock down more than the index, where is the risk? Is it that the investor has a short time horizon and may wish to sell at the very time the market declines? Investors have always known that money in the market is at risk and stocks fluctuate. Even an excellent long-term investment may be a disaster if the holding period is too short. As most privately-owned companies are held for the long pull, shouldn't appraisers have a better definition of risk? Expected returns and risk are the mainstays of a portfolio according to Markowitz. Expected return relates to the expected return of the index, but risk is more complicated. It relates to the risks of the individual components of the portfolio and the correlation.

The CAPM defines risk as the covariability of the security's returns with the market returns. The risk that can be eliminated is called "nonsystematic" or "non-market-related," because it is caused by changes that are specific to the company issuing the security. Risks associated with individual firms can be diversified away. The systematic risk is the risk associated with the market and can not be diversified away. The CAPM designates systematic risk as Beta, which stands for the volatility of an asset or portfolio relative to that of the market. Already we have additional problems. The Beta is based on historical results of asset behavior and may not be predicible of the future. Forecasts of future volatility are hard to make and to validate. Moreover, it is possible that systematic risk or Beta is too limited to define a security's risk. It certainly is when it comes to valuing the privately-owned company as it ignores the specific business risks of the business interest under appraisal.

The CAPM assumes that:

- The investor is risk adverse with an objective to maximize his terminal wealth.
- Investors have diversified portfolios.
- There are no taxes or transaction costs.
- All investors have identical time horizons.
- All investors have identical perceptions regarding the expected returns, volatilities and correlations of available risky investments.

In the real world this is not the case, but appraisers have made many leaps of faith when it comes to the CAPM and its use in business valuation. Another difficulty is that different Betas are reported by different Beta services, and they can vary widely. The length of time over which one calculates a Beta is important as they change significantly as the period changes. To use a Beta to measure the "risk" in an individual private company, one should use a Beta that arises from the results of a group of publicly-traded stocks that represent firms that are similar to the company under appraisal, then, for simplicity, you might select the median average Beta of the guideline companies. But how many companies are you going to find with similar product lines, size, operating and financial ratios, depth of management, and diversification? Dr. Rolf Barry in 1981, then with Alliance Capital in London, found that during the 1936-75 period, the average return to stocks of small firms (those with low values of market equity) was substantially higher than the average return to stocks of large firms after adjusting for risk using the CAPM. In 1992, Professors Eugene Fama and Kenneth French found the same thing as regards to size in addition to the ratio of book value of a firm's common equity to its market value as an explanatory variable. In fact, book-to-market equity appears to be more powerful than size. Fama and French used stock returns for 1963-90. However, it should be pointed out, when they ran their regressions for 1941-65, they found a positive relationship between average return and Beta. As Sharpe said in an interview taken from the *Dow Jones Asset Manager*, May/June 1998, "In the data it's hard to find a strong, statistical significant relationship between measured betas and average returns of individual stocks in a given market." We know that amplitude of future stock market movements cannot be forecast by basic regression technique.

In a January 2004 draft of a working paper entitled "The Capital Asset Principal Model: Theory and Evidence," Fama and French state that "in the late 1970s, research begins to uncover variables like size, various price ratios, and momentum that add to the explanation of average returns provided by Beta. The problems are serious enough to invalidate most applications of the CAPM."

Many authors in the field of business valuation provide excellent explanations of the working of the CAPM. (See References.) Jay Fishman does a particularly good job in bringing together the build-up method and the CAPM method along with the use of guideline companies for business appraisers in Section 503 in the 2003 Edition of *Guide to Business Valuation*. Other author/appraisers in the cautious group regarding use of the CAPM would include Ian Campbell and George Hawkins.

It is my belief, however, that there still remains a large leap of faith between the use of Beta in the management of security portfolios and the appraisal of closely-held business interests in spite of several authoritative authors who warn about its use. Could it be the problem with the Emperor's new clothes that such a large group of appraisers don't see it?¹ In a recently published informative article in *The Valuation Examiner*, Michael Elmaleh states that "If the risk/return model cannot accurately predict the price movement of publicly traded equities, where the ability to measure risk and future income is relatively good, why would you expect the model to yield accurate predictions about the price of closely held equities, where the ability to measure risk and future income is generally much worse?"

My own research on the subject has been published in *Business Valuation Review* September 1991, December 1994, March 2000 and December 2003. The data was taken from *Value Line Investment Survey* going back to 1986 and showed changes in Beta and safety ratings at three to five year intervals. For the original article, I randomly selected ten industries and took the first

seven stocks that were reviewed by *Value Line*. From the original 70, there remained 31 in the final *Survey* due primarily to companies having been acquired or lowered investment interest.

Value Line uses the term "Safety" rather than "Risk." Safety incorporates the finances of each company in addition to volatility which means a better look at "risk" of a business enterprise than just the volatility of a security's return in the CAPM model. The data disclosed that most of the stocks under examination failed to show any change in risk as defined by *Value Line*, while the Beta changed in almost every case. This should not be a surprise since the Beta coefficient is a measure of the "variance of return" and not a quality rating.

As suggested by Diana Harrington in her book on MPT and CAPM, "The definition of risk as relative volatility of returns has some disadvantages, however. First, forecasts of future volatility are difficult to make and to verify. Second, it is possible that systematic risk or beta is too limited a definition of a security's risk."

In addition to the use of a Beta, many appraisers will apply an additional discount rate to cover company-specific business risks as they realize that ownership of a privately-held business has much greater risk than a portfolio investment. The question remains as to why use a Beta at all in the valuation of a single, privately-owned long term equity investment? Beta does not say anything about the business entity. It is simply a mere computation using historical data of market and stock prices! Apparently, too many business appraisers live in a world where fantasy has more status than reality. Readers should take heart. Even without the CAPM, there are some wise men who know about investing besides the sage of Omaha. Will Rogers, for example, wrote some good advice:

Don't gamble; take all your savings and buy some good stock, and hold it till it goes up, then sell it. If it don't go up, don't buy it.

Endnote

1. *The Emperor's New Clothes* comes from a fable by Hans Christian Andersen. In it, a foolish Emperor is convinced he has bought an enchanted wardrobe of lightweight garments from two con men, that are invisible to him, but are seen by his subjects as elegant royal costumes, heavily brocaded with gold and silver threads. None of the sycophants around the Emperor dared tell him the truth. One day, as the Emperor was out in public displaying his finery, a child among the spectators, too young to know how to lie, cried out for all to hear, "Look. He's naked. That guy in the crown is naked."

References

- Barry, R., "The Relationship Between Return and Market Value of Common Stocks," *Journal of Financial Economics* 9, March 1981, pp. 3-18.
- Campbell, J. and H. Johnson, *The Valuation of Business Interests*, Toronto: Canadian Institute of Chartered Accountants, 2001.
- Elmaleh, M., "What Do the Ibbotson Historical Studies Really Prove About Firm Size, Risk and Return?" *The Valuation Examiner*, January/February 2004, pp. 9-11.
- Fama, E. and K. French, "The Cross-Section Of Expected Stock Returns," *Journal of Finance* 47, June 1992, pp. 427-65.
- "Common Risk Factors in the Returns on Bonds and Stocks," *Journal of Financial Economics* 33, February 1993, pp. 3-56.
- "The Capital Asset Pricing Model: Theory and Evidence," Unpublished Paper, January 2004.
- Fishman, J., S. Pratt, J. Cliffith and D. Wilson, *Guide to Business Valuation*, Forth Worth: Practioners Publishing Co., 2003.
- Harrington, D., *Modern Portfolio Theory and the Capital Asset Pricing Model*, Englewood Clifts, N.J.: Prentice-Hall, 1983.
- Hawkins, G. and M. Paschall, *CCH Business Valuation Guide*, Chicago: CCH Incorporated, 2003.
- Kasper, L., *Business Valuation: Advanced Topics*, Westport, Conn.: Quorum Books, 1997.
- Markowitz, H., "Portfolio Selection," *Journal of Finance*, March 1952, pp. 77-91.
- Mercer, Z.C., *Quantifying Marketability Discounts*, Memphis: Peabody Publishing, 1997.
- "The Adjusted Capital Asset Pricing Model for Developing Capitalization Rates," *Business Valuation Review*, December 1989, pp. 147-156.

- Pratt, S. *Cost of Capital*, New York: John Wiley & Sons, Inc., 1998.
- Schilt, J., "Alpha Comes Before Beta," *Business Valuation Review*, September 1991, pp. 116-120.
- "Another Look at Betas," *Business Valuation Review*, March 1995, pp. 22-25.
- "Still Another Look at Betas," *Business Valuation Review*, March 2000, pp. 16-18.
- "Bye, Bye Betas," *Business Valuation Review*, December 2003, pp. 168-171.
- Sharpe, W., "Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk," *Journal of Financial Economics*, 19.3 (1964) pp. 425-442.

Addendum

After submitting the foregoing paper for publication, I received the March/April 2004 issue of the *Financial Analyst Journal* (published by the Association for Investment Management and Research), which included some comments on valuation that should be of interest. The article in question entitled "Value at Risk and Expected Stock Returns," by Professors Bali and Cakici states the following:

The primary implication of the capital asset pricing model (CAPM) of Sharpe (1964), Lintner (1965), and Black (1972) is that a positive linear relationship exists between expected returns on securities and their market betas and thus variables other than beta should not capture the cross-sectional variation in expected returns. Over the past two decades, many researchers have found that idiosyncratic factors, such as stock size, book value of equity to market value of equity (BE/ME), and the earnings-to-price ratio have significant explanatory power for average stock returns but that beta has little or no explanatory power at the individual-stock level.

It should be remembered that the CAPM was designed for application, among other uses, by financial analysts in constructing a portfolio of stocks. When the instructors of core users begin to abandon the method it is a bad sign. Where does this leave the business appraiser who uses the model?

James Schilt was a charter member and vice chairman of ASA's Business Valuation Committee and is Editor Emeritus of Business Valuation Review. He attended California, Stanford and Cambridge Universities and is an independent business appraiser and forensic consultant in San Francisco.

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BY MARTIN L. LEIBOWITZ

The Higher Equity Risk Premium Created by Taxation

The literature on taxable investing appears to have overlooked the way in which different tax rates can lead to equity risk premiums that are actually greater than the original tax-free premiums. Moreover, this tax-based enhancement can occur in both a nominal and a real (after-inflation) framework. With the imminence of a new tax regime (at least for a few years), it is high time to revisit the nature of this premium enhancement, especially in light of the striking implications of the enhancement for asset allocation.

First, consider the interaction of taxes and inflation on a fixed-income investment. Suppose the long-term risk-free rate is 4 percent, made up of a 3 percent real rate and a 1 percent inflation expectation – all pretax. Now consider the situation of a hypothetical investor who faces a tax rate of 40 percent on interest income (remember state taxes). Applying the 40 percent tax rate as shown in **Table 1** reduces the after-tax return on the risk-free rate to 2.40 percent – but the after-inflation after-tax rate—the "real after-tax" rate – is only 1.40 percent. Now, it is well known that a low risk-free rate leads to low real after-tax rates. What is not well known is that higher inflation rates lead to even *lower* real after-tax rates. For example, if expected inflation were to rise to 5 percent, the resulting 8 percent pretax nominal rate would then produce a nominal after-tax return of 4.80 percent but a real after-tax return of -0.20 percent.

Put aside the inflation question for the moment and, turning to equities, focus on nominal returns. Suppose the pretax risk premium is fixed at 3 percent so that with the interest rate at 4 percent, the pretax equity return is 7 percent. Note that the 3 percent risk premium corresponds to 75 percent of the interest rate. Now, assume that all equity returns are taxed at 20

percent. (On the one hand, this assumption might be quite heroic for actively managed equity funds that generate short-term gains. On the other hand, the effective capital gains tax could be reduced by deferred realization, charitable contributions – or demise.¹) On an after-tax basis, this 20 percent tax takes the 7 percent equity return down to 5.60 percent (see **Table 2**). But now, if the taxable risk-free rate is used as a base, with its 2.40 percent after-tax yield, the after-tax premium rises to 3.20 percent (i.e., somewhat higher than the original pretax premium of 3.00 percent). Thus, the taxable investment actually receives a somewhat greater compensation on a spread basis for accepting equity risk. On a percentage basis relative to the risk-free rate, the taxed investor's 133 percent ratio (3.20 percent/2.40 percent) looks a lot better than the tax-free 75 percent. (A simple calculation can show that, even if the pretax risk premium were zero, these tax effects would produce a positive after-tax premium of 0.80 percent.)

Table 1. Nominal and Real After-Tax Interest Rates: Different Expected Inflation Rates

| Measure | 1 Percent Inflation Rate | 5 Percent Inflation Rate |
|---------------------------------|--------------------------|--------------------------|
| Real pretax interest rate | 3.00% | 3.00% |
| Expected inflation rate | + 1.00 | + 5.00 |
| Nominal pretax interest rate | 4.00% | 8.00% |
| Tax effect @ 40 percent | x 0.60 | x 0.60 |
| Nominal after-tax interest rate | 2.40% | 4.80% |
| Inflation rate | - 1.00 | - 5.00 |
| Real after-tax interest rate | 1.40% | - 0.20% |

Table 2. Nominal After-Tax Equity Risk Premium: Different Nominal Pretax Interest Rates

| Measure | 4 Percent Nominal Pretax Interest Rate | 8 Percent Nominal Pretax Interest Rate |
|--------------------------------------|--|--|
| Nominal pretax interest rate | 4.00% | 8.00% |
| Expected pretax risk premium | + 3.00 | + 3.00 |
| Nominal pretax equity return | 7.00% | 11.00% |
| Tax effect @ 20 percent | x 0.80 | x 0.80 |
| Nominal after-tax equity return | 5.60% | 8.80% |
| Less nominal after-tax interest rate | - 2.40 | - 4.80 |
| Nominal after-tax risk premium | 3.20% | 4.00% |

Table 3. Volatility-Matched Nominal After-Tax Equity Risk Premium: Different Nominal Pretax Interest Rates

| Measure | 4 Percent Nominal Pretax Interest Rate | 8 Percent Nominal Pretax Interest Rate |
|--|---|---|
| Nominal pretax interest rate | 4.00% | 8.00% |
| After-tax volatility as percentage of pretax volatility (20 percent equity tax rate) | 80.00% | 80.00% |
| Leveraging required to match after-tax to pretax volatility (100/80 =) | 1.25 | 1.25 |
| Nominal after-tax premium (from Table 2) | x <u>3.20%</u> | x <u>4.00%</u> |
| Volatility-matched nominal after-tax premium | 4.00% | 5.00% |
| Nominal after-tax interest rate (from Table 2) | + <u>2.40</u> | + <u>4.80</u> |
| Volatility-matched nominal after-tax equity return | 6.40% | 9.80% |

One of the key factors enhancing the after-tax premium is how equity's tax advantage is brought to bear on the underlying risk-free rate. The same 4 percent risk-free rate is taxed at 40 percent as a stand-alone fixed-income investment but at a favorable 20 percent rate when it is embedded in an equity investment. In essence, the equity structure projects its "tax shield" onto the fixed-income investment that forms the theoretical foundation beneath the equity risk premium. Because this tax advantage increases with higher interest rates, the somewhat surprising result (shown in the second column of Table 2) is that the after-tax risk premium also rises with increases in the nominal pretax risk-free rate. Of course, if the equity return in an after-tax context is contrasted with a municipal risk-free rate, the shift in the risk premium will depend on the municipal-to-taxable yield ratio.

Table 4. Real After-Tax Equity Premium: Different Expected Inflation Rates

| Measure | 1 Percent Inflation Rate | 5 Percent Inflation Rate |
|--|-----------------------------|-----------------------------|
| Expected inflation | <u>1.00%</u> | <u>5.00%</u> |
| Nominal after-tax equity return (from Table 2) | 5.60% | 8.80% |
| Less inflation effect | - <u>1.00</u> | - <u>5.00</u> |
| Real after-tax equity return | 4.60% | 3.80% |
| Less real after-tax interest rate (from Table 1) | - <u>1.40</u> | - <u>(-0.20)</u> |
| Real after-tax risk premium | 3.20% | 4.00% |

The taxable equity investment has another advantage over the tax-free investment: Its after-tax volatility may be lower. Because long-term gains are taxed and losses can act as tax offsets, the taxable investor may experience a net after-tax price volatility that is only 80 percent of the literal market volatility. If so, the after-tax equity premium of 3.20 percent in the preceding example corresponds to a lower equity volatility than in the pretax situation. Thus, with the risk premium viewed as compensation for volatility risk, the after-tax situation provides a higher risk premium for a lower level of volatility. In other words, the after-tax premium compensation per unit of volatility risk is much higher than in the tax-free case. To properly compare the risk premium in the two cases, the after-tax equity position must be notionally levered up (or the equity allocation augmented) so that the volatility risks are matched. The resulting enhanced after-tax risk premium will then be "risk comparable" to the pretax premium. (This volatility-match argument also applies when municipals are taken for the risk-free rate in the taxable context.) A 25 percent leveraging drives the total equity volatility from 80 percent up to 100 percent of the tax-free volatility. As shown in **Table 3**, with the after-tax volatility levered up by this 25 percent factor, the effective after-tax premium rises from 3.20 percent to 4.00 percent – a full 1 percentage point greater than the original pretax premium of 3.00 percent.

Now, what about the inflation effect on the equity risk premium? Prior to the volatility adjustment, the nominal equity return was 5.60 percent for the case of an expected 1 percent inflation (Table 2). This rate reduces the real after-tax equity return to 4.60 percent, just as it reduces the risk-free rate to 1.40 percent. But the basic risk premium remains unaffected at 3.20 percent because the risk-free rate has already "absorbed" the inflation wedge. Thus, as **Table 4** shows, the after-tax premiums will always retain the same value on both a nominal and a real

basis. For the same reason, the volatility-matched after-tax premiums also remain unchanged by the prospect of expected inflation, as **Table 5** demonstrates.

Bringing all these results together, Table 6 shows that for the case of 1 percent inflation, the risk premium goes from 3 percent on a nominal pretax basis to 3.20 percent after taxes and then remains at 3.20 percent on a real after-tax basis (i.e., both before and after expected inflation). On a volatility-matched basis, the after-tax premium rises to 4.00 percent (again on both a real and a nominal basis). In contrast, the interest rate declines from 4.00 percent pretax to 2.40 percent after-tax and then to 1.40 percent on a real after-tax basis. As a percentage of the interest rate, the risk premium rises from 75 percent on a nominal pretax basis to 286 percent on a volatility-matched real after-tax basis.

At the more severe inflation level of 5 percent, Table 6 shows that the interest rate on an after-tax basis drops even farther than in the case of 1 percent inflation – from an

Table 5. Volatility-Matched Real After-Tax Equity Risk Premium: Different Expected Inflation Rates

| Measure | 1 Percent Inflation Rate | 5 Percent Inflation Rate |
|--|--------------------------|--------------------------|
| Expected inflation | <u>1.00%</u> | <u>5.00%</u> |
| After-tax volatility as percent pretax volatility given 20 percent equity tax rate | 80.00% | 80.00% |
| Leveraging required to match after-tax to pretax volatility (100/80 =) | 1.25 | 1.25 |
| Real after-tax premium (from Table 4) | x <u>3.20%</u> | x <u>4.00%</u> |
| Volatility-matched real after-tax premium | 4.00% | 5.00% |
| Real after-tax interest rate (from Table 1) | + <u>1.40</u> | + <u>(-0.20)</u> |
| Volatility-matched real after-tax equity return | 5.40% | 4.80% |

8.00 percent nominal pretax rate down to the slightly negative value, -0.20 percent, on a real after-tax basis. At the same time, the volatility-matched after-tax premium rises to 5 percent from its nominal pretax value of 3 percent. At first, these results seem to argue that more taxation is better, but note that, although the risk premium increases, the real after-tax returns shift

Table 6. Equity Risk Premium Relative to Corresponding Interest Rates: Different Expected Inflation Rates

| Expected Inflation | Table Supplying Data | 1 Percent Inflation Rate | | | 5 Percent Inflation Rate | | |
|--|----------------------|--------------------------|------------------------------|-----------------------------|--------------------------|------------------------------|-----------------------------|
| | | Return | As Spread over Interest Rate | As Percent of Interest Rate | Return | As Spread over Interest Rate | As Percent of Interest Rate |
| Nominal pretax equity return | | 7.00% | | | 11.00% | | |
| Nominal pretax interest rate | | <u>4.00</u> | | | <u>8.00</u> | | |
| Nominal pretax premium | | 3.00% | -1.00% | 75% | 3.00% | -5.00% | 38% |
| Nominal after-tax equity return | 2 | 5.60% | | | 8.80% | | |
| Nominal after-tax interest rate | 1 | <u>2.40</u> | | | <u>4.80</u> | | |
| Nominal after-tax premium | 2 | 3.20% | +0.80 | 133 | 4.00% | -0.80 | 83 |
| Volatility-matched nominal after-tax equity return | 3 | 6.40% | | | 9.80% | | |
| Nominal after-tax interest rate | 1 | <u>2.40</u> | | | <u>4.80</u> | | |
| Volatility-matched nominal after-tax premium | 3 | 4.00 | +1.60 | 167 | 5.00% | 0.20 | 104 |
| Real after-tax equity return | 4 | 4.60% | | | 3.80% | | |
| Real after-tax interest rate | 1 | <u>1.40</u> | | | <u>(0.20)</u> | | |
| Real after-tax premium | 4 | 3.20% | +1.80 | 229 | 4.00% | +4.20 | na |
| Volatility-matched real after-tax equity return | 5 | 5.40% | | | 4.80% | | |
| Real after-tax interest rate | 1 | <u>1.40</u> | | | <u>(0.20)</u> | | |
| Volatility-matched real after-tax premium | 5 | 4.00% | +2.60% | 286% | 5.00% + | 5.20% | na |

na = not applicable.

significantly downward, from 8.00 percent to -0.20 percent for fixed income and from 11.00 percent to 4.80 percent for equities.

What do these results imply for asset allocation? In essence, all that this work has done is to quantify the well-known tax advantage afforded to long-term capital gains (an advantage that recently has been enhanced and also extended to some dividends). This quantification does suggest, however, that if a given mean-variance allocation is derived in a tax-free framework (and if risk tolerances are comparable), then a somewhat higher equity allocation will be obtained in a taxable context than in the tax-free context. This assumption of equal risk tolerances may be a stretch, however, especially given that tax-free institutions typically have longer time horizons and stronger standby resources than taxed individuals. Another confounding issue is that the symmetrical character of a mean – variance optimization might not fully capture a taxed investor's aversion to the more severe shortfall prospects associated with the tax and inflation-driven downward shift in the overall pattern of returns. And finally, there is the question of the conditions that would tip a taxed portfolio toward a more significant allocation to tax-exempt bonds.

Although being taxed brings little joy, investors and investment managers should recognize the apparently higher compensation for accepting long-term equity risk. This incremental risk premium may provide, in some circumstances, a small modicum of comfort.

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Note

1. For an excellent discussion of the effective tax rates that can apply to various investments under various tax regimes, see Arnott, Berkin, and Ye (2000), Bodie and Crane (1997), Dybvig and Ross (1986), Scholes, Wolfson, Erickson, Maydew, and Shevlin (2002), and Shoven and Sialm (2000), among others.

References

- Arnott, R.D., A.L. Berkin, and J. Ye. 2000. "How Well Have Taxable Investors Been Served in the 1980s and 1990s?" *Journal of Portfolio Management*, vol. 26, no. 4 (Summer):84-93.
- Balcer, Y., and K.L. Judd. 1987. "Effects of Capital Gains Taxation on Life-Cycle Investment and Portfolio Management." *Journal of Finance*, vol. 42, no. 3 (July):743-758.
- Bergstresser, D., and J. Poterba. 2000. "Do After-Tax Returns Affect Mutual Fund Inflows?" National Bureau of Economic Research Working Paper 7595.
- Bodie, Z., and D.B. Crane. 1997. "Personal Investing: Advice, Theory, and Evidence." *Financial Analysts Journal*, vol. 53, no. 6 (November/December):13-23.
- Dammon, R.M., and C.S. Spatt. 1996. "The Optimal Trading and Pricing of Securities with Asymmetric Capital Gains Taxes and Transaction Costs." *Review of Financial Studies*, vol. 9, no. 3 (Fall):921-952.
- Dammon, R., C. Spatt, and H. Zhang. 2000. "Optimal Asset Location and Allocation with Taxable and Tax-Deferred Investing." Unpublished paper, Carnegie-Mellon University.
- Dybvig, P.H., and S.A. Ross. 1986. "Tax Clienteles and Asset Pricing." *Journal of Finance*, vol. 41, no. 3 (July):751-762.
- Protopapadakis, A. 1983. "Some Direct Evidence on Effective Capital Gains Tax Rates." *Journal of Business*, vol. 56, no. 2 (April):127-138.
- Scholes, M.S., M.A. Wolfson, M. Erickson, E.L. Maydew, and Terry Shevlin. 2002. *Taxes and Business Strategy*. 2nd ed. Upper Saddle River, NJ: Prentice-Hall.
- Shoven, J.B., and C. Sialm. 2000. "Asset Location for Retirement Savers," National Bureau of Economic Research Working Paper 7991 (November).
- Tepper, I. 1981. "Taxation and Corporate Pension Policy." *Journal of Finance*, vol. 36, no. 1 (March):1-13.

Martin L. Leibowitz is Vice Chairman and Chief Investment Officer at TIAA-CREF, New York City.

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