Uncovering blind spots in deal valuations

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At a glance

Making successful deals in today's market requires a sharp focus on the relationship between risk and return.

Enhanced diligence is required of valuation issues inherent in every transaction to ensure consistent and unbiased application of fundamental principles.

Robust valuation diligence enhances assessment of price against intrinsic value and reduces acquirers' risk of overpaying for targets.

Introduction

The recent economic downturn in the US is yielding excellent opportunities for buyers to find value in the mergers and acquisitions (M&A) market. But transactions carry risks: the risk of over-or underpricing a business, the risk of failing to integrate effectively and efficiently, and the risk of not realizing expected synergies, to name a few. The uncertainty created by the current economic and regulatory climate amplifies these risks.

Sharpening your valuation tools

Successful deal making requires a sharp focus on the relationship between risk and return, which ultimately translates into enhanced diligence of valuation issues inherent in every transaction. Such as:

- How are expected cash flows and future performance captured in the model, and is this consistent with your underlying diligence findings?
- Are the synergies identified in diligence likely to be realized, and when will this incremental value be captured?

Price versus value is the foundational equation in every transaction. Yet deal makers often skew this reality at best, or at worst, simply ignore it.

- What is the required return?
- Has financial theory been properly reflected, as necessary?
- Has judgment been applied in a reasonable and supportable fashion?
- What options exist after a transaction closes, and do these options have value now?

Best practice in valuation can help mitigate transaction risks and uncover hidden value in an M&A context.

"Price is what you pay. Value is what you get."

Warren Buffett, well known for those words, has the right idea. Price is what the market requires to effectuate a transaction; value is the intrinsic worth of a business. The latter is a function of cash flow to be generated by the acquired business, which in turn is a function of core operations, expected synergies, integration success, and other factors. Price versus value is the foundational equation in every transaction. Yet deal makers often skew this reality at best, or at worst, simply ignore it. Buyers and sellers need to focus on the gap, if any, between price and value, because that gap may decide the ultimate winners and losers in a given transaction. One way or another, the considerations described below all relate to finance and the equation of price versus value. Although many of these are straightforward, in our experience, buyers and sellers frequently fail to apply them consistently.

The single biggest threat to sound transactions is bias. Identifying and managing bias is key to successful transactions.

Beware of bias

Perhaps the single biggest threat to sound transactions is a perfectly natural and unavoidable human condition: bias. In a recent PwC survey, a majority of respondents indicated bias had posed the greatest risk on prior transactions. Often described as "judgment" by deal participants (more on that later), bias is ever-present in deal making. Chief executives have big visions, which sometimes result in narrow consideration of alternate views. Bankers are not motivated by *doing* deals; they are motivated by *closing* them. Sellers are selling. Internal politics or compensation strategies at acquiring companies and target companies may drive behaviors that diverge from defined deal objectives. A lack of independence between management and the board of directors may leave important risks uncovered. The list goes on.

These behaviors are commonplace and are often in response to legitimate incentives. But bias creates additional deal risks, most typically by producing biased valuations. Forecasted cash flows may reflect stronger performance than industry trends reasonably support. Speculative synergies may be included, and costs to achieve the synergies understated. Required returns may fail to properly account for market risks. Selected market peers, with higher value multiples, may not be correspondingly comparable. Lower observed control premiums may be excluded from an analysis. Failure to pay attention to bias is a common story line for transactions that produce insufficient returns.

The warning is simple: Be aware that bias will always exist in deal making, and do everything possible to uncover it, scrub it, and kill it as needed. Establishing clear deal objectives and performing a valuation diligence exercise that is comprehensive and substantive are two ways to counter deal risk created by bias. As a risk uncovering tool, valuation diligence is a natural extension of standard financial diligence.

Bias in action

On one valuation diligence project, an investment bank indicated that the market price for a business was likely to be several billion dollars and built a cash-flow model to prove it. In performing valuation diligence, we uncovered an error in the model that reduced value by 40 percent. The bank's reaction: Fix the error, change other assumptions, and revert to the original value. The bank was likely right about the market price; the transaction was contemplated at the height of a market bubble. The model, however—which purported to measure intrinsic value—was clouded by the bankers' bias, thus rendering it unusable.

Science adds objectivity to a valuation, and provides a foundational framework from which to measure the reasonableness of judgment.

A delicate balance of science and art

Valuation has traditionally been described as part science, part art. The "science" portion is rooted in decades—indeed, centuries—of academic and applied financial and economic research, which has established widely accepted theories about the relationship between risk and return. The "art" portion is an appropriate reflection of the need to consider experiential knowledge. Of late, however, valuation is too commonly described only as art. It is not readily apparent why the focus on science has diminished. But not surprisingly, in fact appropriately, this has created a level of cynicism about the validity of valuation processes. Valuation entirely by gut feel is not especially compelling, or accurate.

Reliance on too much art also further amplifies deal risks. For example, the distinction between informed judgment and bias is often blurry: While judgment can greatly improve clarity about the financial aspects of a transaction, bias can disguise it. Additionally, when judgment becomes the primary consideration, outcomes are circular and self-fulfilling. When judgment is modifying science in appropriate and reasonable ways, or vice versa, valuation is more credible and compelling in a negotiation. Science adds objectivity to the process and provides a foundational framework from which to measure the reasonableness of judgment. Smart deal making requires practitioners to have a deep understanding of the science of finance.

As one example, science is often abandoned for art in the area of control premiums. A control premium is frequently paid in the acquisition of a public company, and it reflects the amount above market price a buyer is willing to pay to acquire control of a target company. Although premiums may reflect multiple factors, the single most important factor relates to a buyer's projected ability to create value—that is, the premium is an *output* linked directly to forecasted cash flows produced by the synergy specific to a given transaction. Yet, in pricing new deals, buyers often use observed control premiums as *inputs*. They assume premiums observed in comparable transactions can be extrapolated to new deals, which, by extension, means comparable synergies will be realized. This is the art of control premium analysis, and it is reasonable as one approach. But the balance to this approach—the science of control premium analysis—would focus on specific synergy cash flows to be created by a given transaction.

Since current value is a function of future cash flow, a detailed assessment of the future is critical to successful deal making.

Buying the future, not the past

Deal makers naturally focus on what is known: actual historical results. Too often, they give only perfunctory review to what is unknown: expected future results. Yet the future matters more, because current value is a function of future cash flow. To be sure, historical results can inform projections of future performance. But transactions often signal changing competitive forces and industry trends, which may challenge the applicability of historical results. Successful deal making demands a detailed assessment of the future.

Smart deal makers engage in certain best practices when it comes to financial projections. They understand projections should not be optimistic or pessimistic, aggressive or conservative, best-case or worst-case. Instead, projections should reflect *expected* cash flows, which are a probability-weighted average of possible outcomes. The underpinning of valuation science is the relationship between expected cash flows and the systematic risk of achieving those cash flows. Expected cash flows differ from most-likely cash flows, unless upside and downside distributions around most-likely cash flows are symmetrical. Expected cash flows reflect measurable company-specific risks (as opposed to inflating required returns with unsupportable "alpha" factors to compensate for such risks). Expected cash flows are unconditional; achieving the forecasts is not conditioned on an event that is ignored in the forecasts. For example, a conditional forecast would project cash flow *if* the Food and Drug Administration approves a new drug, while an unconditional forecast would project cash flow as a probability-weighted average of cash flow with approval and cash flow without approval. Thus, expected cash flows require a more robust and challenging forecasting process but enhance the understanding of the equation between price and value.

The big picture

A broader perspective enhanced shareholder value for the Cingular Wireless-AT&T Wireless transaction in 2004, the largest all-cash acquisition in US history at the time. Although some questioned whether Cingular was paying too much—because AT&T Wireless was underperforming and had strained relationships with its customer base as a result of technology-migration issues—management at Cingular Wireless focused on broader industry trends and the need for enhanced scale to remain competitive with Verizon Wireless. Despite the issues at AT&T Wireless, ecosystem trends supported the economics of the transaction, which was borne out by subsequent performance.

Best practice in projecting future financial performance considers not only markets and business models specific to the target but also the entire ecosystem in which the target operates.

Smart forecasting also understands that business owners have flexibility in how they respond to changing economic, industry, and regulatory trends. Business owners have options—not obligations—to make different choices at different times, and these options have value. Frequently described as "real option theory," optionality value is more relevant in certain industries, but it can affect any business valuation. Effectively, discrete consideration of real options enhances the measurement of expected cash flow, because it requires deal makers to think explicitly about cash-flow assumptions at different decision points.

Best practice in projecting future financial performance considers not only markets and business models specific to the target but also the entire ecosystem in which the target operates. For example, buyers typically explore the relationship between a target company and its customers, but they don't always explore the relationship between the target's customers and *their* customers. One target company, for example, had excellent relationships with its customers. But relationships downstream between the target's customers and their customers were strained, which ultimately affected the financial performance of the target. A broader perspective might well have uncovered this issue during the valuation diligence process.

All models are not created equal

Model integrity is frequently taken for granted, but all models are not created equal. Effective model building is a skill that can take years to master, yet professionals assigned to build models on transactions are commonly junior personnel with limited experience. A model can be too big or too small. It can be right or wrong. It can be clear or confusing. A model can help or hurt the process of analyzing a transaction. It can uncover intrinsic value or it can hide it. In short, model integrity should never be taken for granted.

One sophisticated buyer had a new analyst build a complex model for a large transaction. The model required the use of iterative calculations as a function of estimating future cash flow but the analyst had failed to model the calculations properly. Whereas the iterative calculations should have been solvable—that is, with a given set of inputs, they should have yielded a constant answer—the model gave a different answer every time it was recalculated. The purchase price was a moving target simply because of poor modeling! Experienced personnel at the buyer had failed to uncover this model error; they had assumed the model was right.

Deal success is frequently defined in terms of creating value but a recognition that conservation of value is also rewarding to shareholders could improve deal analysis and execution. A merger or acquisition may be necessary to maintain the value of the buyer's existing business. Clearly, that deal is successful if it achieves that goal.

Models do not think; people do. But bad models can ruin good thinking, and great models can make good thinking better. Smart deal makers understand the added risk created by model building and the potential for over-or under-engineering the modeling process. Importantly, they take steps to mitigate this risk by assessing model integrity as part of valuation diligence. Model reviews may include simple mathematical verification (a surprising number of models contain material mathematical errors), a critique of model structure, validation of data linkage (within models and to original source data), and commentary on the proper application of valuation methodology as embedded in a model.

Redefine deal success

Transactions can create value, conserve value, or destroy value. Deal success is frequently defined only in terms of creating value. For a buyer, deal success by this standard implicitly means paying less than intrinsic value for a business—e.g., not paying for synergy value, but then realizing that value nonetheless. A successful deal in this context means a buyer earns a return in excess of a required return. However, empirical evidence suggests that, by this definition, a majority of deals fail for buyers.[1] This should come as no surprise because in competitive markets, with knowledgeable buyers and sellers, significant bargain purchases should be unusual. To the contrary, the risk of overpayment is clearly more pronounced in competitive situations.

The same empirical evidence suggests the majority of transactions succeed for buyers if the definition of success includes not only creating value, but also simply conserving it.[2] In this case, a buyer can pay what a business is worth, including value associated with expected synergies, and earn a normal required return for shareholders. But this is at odds with many deal makers' instructions to not pay for synergies. Why not? If synergy cash flows have been properly measured (if they reflect expected cash flow) and discounted at an appropriate cost of capital, a buyer can pay for the synergy value and earn the cost of capital if the synergy cash flows are achieved. Of course, buyers should seek to minimize payment for synergies nonetheless. One may ask: If earning just the cost of capital is the goal, why not return capital to shareholders and let them invest on their own? Fair question, but the decision tree regarding dividends or stock buy-backs versus investment is not that simple. Sometimes

1 Robert F. Bruner, *Applied Mergers & Acquisitions* (New Jersey: John Wiley & Sons, Inc., 2004), 62.

2 Bruner, 62.

a merger or acquisition is needed to maintain the value of the buyer's *existing business*— i.e., the joining together of the buyer and a target positions the combined company to compete, but, alone, the buyer's business may decline. A transaction may be the only path to maintaining value of the existing business for existing shareholders.

The quest for excess returns as the sole definition of success is commonly the source of extreme bias in many transactions. A recognition that conservation of value is also rewarding to shareholders could improve deal analysis and execution.

Accounting and tax matter

Fair value and other new accounting rules have amplified the importance of considering the accounting implications of a given deal earlier in the process, to align accounting with valuation considerations. Deal structure, buyer-specific motivations, and other factors can affect accounting results, which in turn can affect stock prices, shareholder returns, debt covenants, cost of capital, and other valuation metrics. For example, a joint venture structure may seek to mitigate certain risks and responsibilities associated with outright ownership of a business. But accounting rules may result in consolidation of total assets on a balance sheet, which tells a different story to the market. Similarly, the calculation of leverage ratios under existing debt covenants may be altered by accounting rules applied to a given transaction. If covenants are tripped, credit ratings may be lowered, thereby causing an increase in the cost of capital and a decrease in value.

The area of purchase price allocation poses a number of unique challenges for aligning accounting and valuation objectives. Fair value accounting rests on views of value of the market's participants. A gap between the views of market participants and the views of buyers may result in different allocations of value among assets and, consequently,

Tax impacts cash flow

An advisor representing a seller was promoting the tax shield to be achieved through the purchase of a target, which was a limited liability company (LLC) taxed as a partnership. A tax advisor for the buyer uncovered that approximately 80 percent of operations was in a C corporation owned by the LLC. While the banker was correct that the buyer would get a basis step-up for tax purposes in the assets of the LLC, most of the step-up would be in C corporation shares, which would provide a tax benefit only upon a subsequent sale of the shares. The buyer saved millions of dollars by negotiating a lower price based on the reduced value of the tax shield.

Potential tax costs or benefits could be critical factors in bid pricing and structuring alternatives.

different impacts on earnings per share. Contingent consideration, financial instruments embedded in deal terms, the type of consideration (cash, equity, debt), and tax structures (asset versus stock deals) raise accounting and valuation concerns that may lead to increased earnings volatility in future periods. Decisions about purchase accounting that are made at close will have far-reaching accounting and valuation implications for future impairment tests.[3]

Likewise, early consideration of tax issues is important, because potential tax costs or benefits could be critical factors in bid pricing and structuring alternatives. Tax planning can yield significant savings by identifying future tax benefits or by right-sizing a deal price based on estimated future tax costs. Emphasizing that a deal may not provide expected tax benefits, or that the deal has more tax risks than expected, is equally as important. The tax regulatory landscape is constantly changing. Tax structures that were effective yesterday may not be effective today or tomorrow, and this uncertainty impacts the valuation of a target because it impacts potential future cash flow. Smart deal makers integrate tax planning and diligence with valuation processes before and during deal negotiation, not after tentative prices have already been established.

In short, best practice in accounting and tax planning for deals requires a complete appreciation for the range of accounting and tax decisions that may impact financial statement presentation (at close and in the future) and future tax payments. Accounting and tax planning should not drive decision making about good or bad deals in terms of economics. But a complete understanding of how accounting and tax planning will reflect on a transaction is important, not only because such an understanding sensitizes a buyer to potential market reactions, but primarily because it allows buyers to ensure that accounting and tax are properly aligned with strategic priorities. Smart dealmakers consider these issues early in the transaction process.

Linking value and integration

Realizing expected value depends on realizing expected cash flow, which in turn depends on successfully executing operational strategies—in other words, ultimately, there is a quantifiable link between successful integration of an acquired company and transaction economics. When a purchase price is modeled based on future cash flow, including synergistic cash flows, the buyer is implicitly committing to the amount and timing of shareholder value expected to be maintained or created by the

3 Visit the "Publications" section at www./pwc.com/us/deals to access additional resources and in-depth insights on critical M&A issues that PwC has gleaned from advising many of the world's leading corporations and private equity firms. Look for our *TS insights: Avoiding earnings surprises* for insights on a range of variables to consider in preparing preliminary purchase price allocations.

Smart deal makers use valuation tools to analyze expected annual profit creation and map the profit to identified integration tasks, a process that creates measurable performance indicators.

transaction. Yet few, if any, buyers spend time on the front side of a transaction understanding the linkage and their underlying commitments.

Smart deal makers, on the other hand, use valuation tools to analyze expected annual profit creation and map the profit to identified integration tasks, a process that creates measurable performance indicators. This road map of value generation allows for better monitoring of value trends, including the timing and realization of synergies. In this way, buyers can prioritize synergy and rationalization steps by focusing on those items with the most significant impact on value. Additionally, management can assess performance of employees relative to quantifiable benchmarks. This type of valuation analysis is the bridge between preclose deal making and postclose integration.

Conclusion

As the economy recovers and companies chart a smarter course for growth, deal makers will be well served by investing time and effort in valuation on the front end of transactions to avoid surprises on the back end. While M&A activity represents tremendous potential for growth and transformation, that potential can be realized only through robust valuation diligence that effectively considers the relationship between price and intrinsic value. More companies have sought external advisors for this type of diligence since the financial debacles of the early 2000s set in motion new regulations for oversight and control of M&A activity. Some research indicates acquirers have been less likely to overpay for targets as a result.[4]

Although most business leaders understand the elements of a successful deal, fewer are able to translate that understanding into action, given the multiple and sometimes conflicting forces at play. Third party deal advisors offer much-needed objectivity when an acquirer gets caught up in the momentum of a deal and the promise of synergies. While underlying synergies are typically the catalyst for a transaction, success in the long term requires strategic planning and investment before, during, and after the actual deal. Advisors can translate the complexities of accounting, tax, and valuation into practical advice as companies plan, negotiate, complete, and implement deals worldwide.

4 Jeff Madura and Thanh Ngo, "How accounting fraud has changed merger valuation," *Applied Financial Economics*, June 2010.

Acknowledgments

Author

Aaron Gilcreast,
Principal,
Transaction Services
678 419 1080
aaron.a.gilcreast@us.pwc.com

For a deeper discussion on deal considerations, please contact one of our regional leaders or your local PwC partner:

Martyn Curragh
Partner,
US Practice Leader, Transaction Services
646 471 2622
martyn.curragh@us.pwc.com

Gary Tillett
Partner,
New York Metro Region Leader,
Transaction Services
646 471 2600
gary.tillett@us.pwc.com

Scott Snyder
Partner,
East Region Leader, Transaction Services
267 330 2250
scott.snyder@us.pwc.com

Mel Niemeyer
Partner,
Central Region Leader,
Transaction Services
312 298 4500
mel.niemeyer@us.pwc.com

Mark Ross
Partner, West Region Leader,
Transaction Services
415 498 4265
mark.ross@us.pwc.com

For a deeper discussion on the valuation aspects of deals, please contact your local PwC valuation specialist or:

John Glynn
Partner,
Valuation Leader, Transaction Services
646 471 8420
john.p.glynn@us.pwc.com

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