



Accounting Rules, Risk-based Pricing & Reporting Arbitrage

Within virtually all commercial enterprises, there is a relentless tension between short-term earnings and long-term value creation. Left unchecked, this trade-off can be dangerous, given that investment and asset allocation decisions can easily be driven by short-term earnings targets, to the detriment of long-term value. This article considers some of the consequences and possible alternatives.



BY DAVID M. ROWE AND THOMAS DAY

Short-term Earnings vs. Long-term Value

The tension between short-term earnings performance and long-term value creation is not unique to banks. All public corporations in today's market economies feel intense pressure from earnings-focused analysts. Failure to meet consensus earnings estimates—even by as little as a penny per share—can have a significant negative impact on equity prices. This pressure is further intensified by executive incentive plans driven by return-on-equity (ROE) metrics. These market pressures often create internal demands to “manufacture earnings” when internal models and risk forecasts show that earnings from the core business may run short of market expectations. Discretionary books can be used to leverage positions, take gains, or “buy risk” in order to fill gaps in the earnings stream. This is natural and not altogether a bad thing; but when earnings pressures result in on- or off-balance-sheet actions that lack transparency, rigorous portfolio management, and sound risk assessment, the result can be a dangerous cocktail of hidden risk.¹

The potential for earnings manipulation in banks is exacerbated by the existence of conflicting accounting rules for related and often similar business activities. Traditional bank lending and funding is treated on a historical cost basis, while securitized loans and many derivatives are marked-to-market daily, with price changes immediately affecting earnings or capital, depending on accounting treatment.² From the beginning, the coexistence of multiple accounting methods for the same firm tended to create questionable incentives for those who wished to “manage” (a cynic might say distort) their GAAP earnings. This awkward hybrid accounting environment continues to create opportunities for “earnings strategies” involving questionable forms of arbitrage.³

In theory, a more comprehensive application of fair-value accounting would eliminate this conflict. Such an approach is more realistic today than in the past given the growth in traded credit exposures.⁴ Forcing all credit-sensitive assets to be reported at market value would require

ILLUSTRATION BY ARIELLE INGBER

Complexity, Opacity, and Hidden Risk

The recent headline events in the subprime mortgage market are a classic example of how complexity can destroy transparency and mask significant risk. In this market there has been significant overreliance on rating agencies to perform the due diligence around structured investment assets (CDOs). Many supposedly sophisticated investors essentially outsourced their analysis, due diligence, and fiduciary responsibilities to the rating agencies.

There is some cause for concern over the nature of the incentives for originators, sponsors, and rating agencies, but a broader question relates to investor asset selection, portfolio management, and risk governance discipline. A sufficiently rigorous internal risk management infrastructure should have recognized that rapid growth in subprime mortgages and associated modeling weaknesses (e.g., lack of data, little or no historical experience, systemic sensitivity to housing price declines, etc.) represented a high-risk issue and should have sought to quantify the potential impact. Pervading the rapid rise and recent crisis in the market for subprime mortgage-backed CDOs is intense pressure to manufacture short-term earnings: yield for the investor, fees for the rating agencies, commissions for the distributing banks, structuring fees for the investment bankers, administrative fees for the trustee, and so on.

Fair value is more difficult to ascertain and requires considerable effort to uncover.



banks to recognize the losses implied by weakening credits and allow them to book the gains from strengthening credits whether or not the underlying assets were held on the books or sold in the market. It would also require banks to price credit in a far more consistent fashion relative to external market conditions. Failure to do so would have an immediate impact on earnings given that loans with below-market interest rates would be subject to immediate markdowns. It would also create a need to hedge credit risk more effectively, since deteriorating credit conditions would have an immediate adverse effect on fair value and therefore on net income.

Unfortunately, as one wag has said, “In theory, theory works in practice...just not in practice.” In the complex and messy circumstances of the “real world,” fair-value accounting alone can produce an incomplete picture of fundamental long-term value and risk. In this context, traditional earnings estimates are by no means a completely flawed measure. Each approach has its uses, and focusing on one to the exclusion of the other will result in a distorted picture of financial performance. Accrual earnings are important precisely because they measure actual realizations that are independent of uncertain longer-term expectations—expectations that are subject to significant revisions through time, both favorable and unfavorable. The size of currently *realized* profits tells much about the power of today’s balance sheet and the firm’s financial momentum. Current performance is critical for a balanced assessment of long-term value.

Price and Value

The efficient markets hypothesis (EMH) argues that current market-clearing prices are always the best estimate of long-term value. Speculation is viewed as necessarily stabilizing because de-stabilizing speculators inevitably lose money. While the theory does not require that perfect information be universally available, it does require that a sufficiently large number of market participants have enough information to move markets to their correct level. It also requires that market liquidity be sufficient to produce objectively observable prices for all relevant traded items, and that no single investor or group of investors can reliably exploit the market.

Real-world complexities make practical application of mark-to-market accounting a far from straightforward proposition. In addition, the dominant assumptions of the EMH—good information (transparency), deep markets, and inability to exploit the market—are not always fulfilled in practice. Many bank customers do not have publicly traded debt or common stock. Their equity may be closely held and their debt obtained exclusively from banks. This means that considerable judgment is necessary to establish an objective assessment of credit quality and a resulting estimate of the hypothetical market value of their debt. Said differently, the fair-value prices for a

Earnings Strategies

Investment portfolio "gains" trading

- Strategy: Sell securities trading above book value and retain those trading below book value.
- Income result: Gains on security sales and higher earnings.
- Value effect: Lower-quality remaining portfolio.

Allowance for loan and lease losses

- Strategy: Reduce overall level of reserves.
- Income result: Higher earnings.
- Value effect: Lower (and potentially inadequate) coverage of inherent portfolio credit losses.

Leverage trades

- Strategy: Use FHLB (or other wholesale advances) to fund portfolio investments.
- Income result: Immediate higher level of earnings.
- Value effect: More portfolio volatility and potential difficulty in unwinding. Complexity of the transactions and embedded optionality often contribute additional risks.

Equity investment

- Strategy: Buy high-yielding stocks (just prior to ex-dividend) and hold at the holding company level.
- Income result: Immediate increase in income and potentially a better use of BHC/FHC excess cash.
- Value effect: Introduces equity price volatility into the firm's balance sheet.

Sell optionality

- Strategy: Embed short options in cash management instruments.
- Income result: Lower funding costs (liabilities) or higher yields (assets).
- Value effect: More complex payoff profiles that benefit if conditions remain stable but carry the risk of greater losses in turbulent markets (sometimes known as "delaying the pain" or "rolling the dice").

Go "down market" in credit

- Strategy: Buy or originate riskier credits.
- Income result: Immediate increase in income.
- Value effect: Increased risk capital utilization; potentially greater future credit losses.

Invest in more complex securities (e.g., structured notes, bonds, investments)

- Strategy: Invest in less liquid, more difficult to analyze investments.
- Income result: Complexity pays off in the short term with an immediate increase in earnings/yield.
- Value effect: As seen in recent months, the greater complexity of new and innovative instruments (especially when coupled with rapid growth) is a volatile mix that can have severe adverse consequences.

large portion of a bank's balance sheet cannot simply be read off market data tape. Fair value is more difficult to ascertain and requires considerable effort to uncover. Even where market prices are available, ensuring that investment dollars are properly applied to their highest and best use requires the application of fundamental analysis and a healthy skepticism of new products that claim to offer exceptional return without associated higher risk. An excellent rule of thumb is "If you can't understand the product, don't invest." Too often difficult and rigorous analysis is either ignored or not undertaken at all. However, those who don't mind rolling up their sleeves can and will be able to find opportunity where others fail.

This situation has been complicated further by the rapid growth of (sometimes gratuitous) complexity in credit structures.⁵ As noted in the sidebar, historically unprecedented instruments such as subprime mortgages have been introduced into collateralized loan obligations. Since these instruments have never before been tested in conditions of economic stress, this injected a further source of uncertainty about the value of securities that ultimately relied on the performance of these loans. In this situation, as we have seen in recent months, consensus market prices may prove to be seriously misleading indicators of long-term value.

Fair Value Is a Necessary but Not Sufficient Measure of Performance

Anyone who has performed a property appraisal or made a valuation of a business knows the dirty little secret of all such estimates. The conclusions are highly dependent on the assumptions and structure of the model being used; small changes in the assumptions can have a significant impact on the results. There is nothing malicious or inherently wrong with this, given that there is no clearly superior alternative. The subjectivity of such estimates is simply a fact of life. It is vital, however, to keep this subjectivity clearly in focus at all times and to remember that these *are* estimates and are *not* objectively observed values associated with arm's-length transactions. One implication of this is the importance of the processes, the incentives, and the checks and balances surrounding the preparation of such estimates.

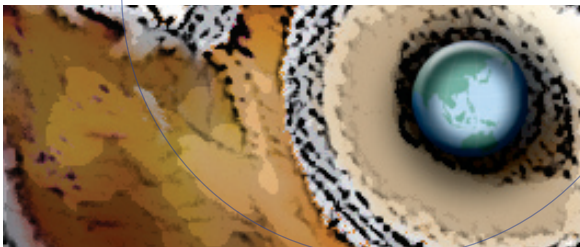
The efficient markets hypothesis mentioned earlier argues that currently observed prices embed all available public information. One problem is that long-term value often depends on considerations that are *not* public. The role of proprietary nonpublic information takes on special importance in times of crisis when markets are driven primarily by fear. A recent example is the temporary collapse in liquidity in the interbank lending market when subprime mortgage problems began to surface. It was unclear who might have oversized exposure to such loans. In this situation, banks were unwilling to lend at the usually liquid three-month maturity because it was over this time

An Example of Questionable Valuation

One example of complexity in valuation is the capitalized value assigned to mortgage servicing rights (MSRs). These capitalized asset values are based on numerous arcane modeling assumptions. In assessing the reliability of and uncertainty around the results, inside experts always have the advantage. It is, unfortunately, easy to make the model support an uncomfortably wide range of plausible values. This is an environment in which, within limits, earnings literally can be created from the ether.

For MSRs, there are scant quoted market prices. Where such prices do exist, they are based on such small blocks relative to the total capitalized asset values of this type that market depth is very limited. The impact of any “orderly” unwind of a sizable firm’s MSR assets would substantially depress market prices. This is not to say that the value of servicing cash flows shouldn’t be measured, rather that the value attributed and earnings recognized should be looked at conservatively and skeptically, and in combination with the risks and judgmental assumptions involved in creating these values.

To its great discredit, the world is a complicated place. This complexity will not disappear by wishing it so, and a retreat to the seemingly comfortable verities of the historical cost-accounting world is neither likely nor desirable.



frame that further subprime mortgage problems were likely to surface. In effect, the market was not reflecting a consensus interpretation of available public information but the fear of crucially important information that clearly was not publicly available.

Situations like this raise the question of how value can be assessed most effectively and whether more attention

should be placed on “fair valuation reserves.” A form of contra-assets, similar to allowances for loan and lease losses, these would reflect haircuts assigned to fair values based on considerations such as market illiquidity, instrument complexity, irregular sources of data input, limited confidence in model estimates, reliance on third parties, and other factors. The subprime mortgage crisis also raises questions about the need for more rigorous and more frequent stress testing with regular disclosure of results required in financial statements.

Stress Testing

Stress testing typically involves applying extreme shocks to the factors that determine the value for a portfolio of assets and liabilities—both on and off the balance sheet. The 1996 Market Risk Amendment to the Basel Capital Accord mandates stress tests for the traded book. In contrast, very little supervisory guidance has been proposed, let alone enshrined in regulatory requirements, for bank-wide stress-testing procedures.

Similar to the need for governance related to enterprise model validation, large financial institutions with complex risk-taking activities should be required to apply rigorous stress testing to their retained book of business. Indeed, even business that has been transferred to others by way of syndications or collateralized loan obligations can, in some market circumstances, revert to a bank’s balance sheet because of moral recourse or legal and reputational considerations.

Over time, the stress tests that should be applied will need to be consistent across risk types, based on econometric and judgmental considerations that drive the relevant configuration of risk factors to be examined. Useful supporting tools for this approach are available today, but very few firms are currently striving for a consistent enterprise-wide stress-testing regime.

As new lessons are learned through various crises, it is inevitable that new regulatory policy rules will be written that require:

- A more holistic approach to global stress testing.
- Disclosure of stress-test results.
- Improved narrative in financial reports around risk management policies, practices, and methodologies.

Pillar 2 of the proposed Basel II Capital Accord requires banks to develop an Internal Capital Adequacy Assessment Process, or ICAAP. As the requirements for such a process are established and refined by global regulators, stress testing and cross-risk aggregation and allocation are certain to emerge as topics of increasing importance.

Valuing Credit-Risky Assets: A Work in Progress

As fair-value accounting becomes more broadly applied to credit-risky assets, the valuation process becomes distinctly more complex and its implications more significant. Some relevant issues include the following:

- Should credit be valued based on observed credit spreads?
- Should credit be valued based on a bottom-up default and recovery paradigm?
- If credit is originated based on a bottom-up approach and the price in a local market is below the implied “model” rate, should a loss be booked immediately? Should a gain be booked in the opposite situation?
- How should conditional credit exposure such as guarantees be treated?
- How should basket exposures be reflected in management reports?
- How should the protection from lower-ranking tranches be evaluated?
- How much reliance can be placed on traditional letter ratings from traditional credit agencies?

Whereas the marketplace has plenty of experience valuing traditional fixed-income securities and single-name credit derivatives, valuing more complex credit structures is distinctly a work in progress. This too has been highlighted by the recent subprime mortgage crisis. It has become increasingly clear that valuations for some complex funding vehicles rely far too heavily on rating-agency letter grades. That is, many investors have viewed AA-rated tranches in CDOs as encompassing the same risk as AA-rated bonds of a single-name corporate obligor. The important missing component is the potential volatility of such a rating. AA-ratings for utility companies are likely to be quite stable over time. The biggest risk of a sudden revision is from a company -specific event such as a major power-plant failure. A portfolio of several such companies would diversify away most of this type of risk and lead to a reasonable basis for expecting a stable average rating. The AA-rated tranches of subprime CDOs, on the other hand, are all exposed in a similar way to a downturn in the housing market. This is not to say that such investments were in any danger of sustaining immediate losses. Nevertheless, a measurable increase in the potential for such losses in the future can increase the credit spread demanded by the market and easily lead to simultaneous downgrades and a commensurate drop in the value of all such tranches. Hedge funds that typically invest with significant leverage are particularly vulnerable to this type of systemic event.⁶

Expectation and Variability

As illustrated in the example just cited, valuation tends to focus primarily on expected net present value with little or no reference to variability.⁷ Should accounting attempt to incorporate uncertainty into estimates of the fair value of assets and liabilities? Beyond possible reserves for uncertainty, the answer is probably no. A more fruitful direction is to increase the visibility and transparency of risk and economic capital allocation. Such analysis could constructively be extended to reflect broader systemic risk, such as

the impact of a housing downturn on the subprime CDO market. Modern financial theory emphasizes the inevitable trade-off between return and risk. Confounding these two distinct concepts is likely to hide more than it illuminates.

To its great discredit, the world is a complicated place. This complexity will not disappear by wishing it so, and a retreat to the seemingly comfortable verities of the historical cost-accounting world is neither likely nor desirable. In this context, simplistic reliance on summary indicators such as traditional letter-based credit ratings represents a dangerously narrow perspective. The way forward includes a more rigorous and transparent disclosure of the source and magnitude of potential risks, greatly improved enterprise-wide stress-testing regimes, investment in internal capital allocation models and methods, and an increased emphasis on valuation reserves, particularly for assets and liabilities relying heavily on “model” values. Credit and risk decisions will increasingly require analysis of a broad range of eclectic and new types of information, and recognition of larger portfolio dynamics, if they are to balance return and risk effectively. ❖

Contact David M. Rowe by e-mail at David.Rowe@sungard.com.

Contact Thomas Day by e-mail at Thomas.Day@risk.sungard.com.

Notes

1. See the sidebar for a recap of these influences in the subprime mortgage market.
2. According to current accounting standards (FAS No. 115), discretionary investment portfolio positions must be held in one of three books: trading, available for sale (AFS), or held to maturity (HTM). Only the trading book has an immediate earnings impact given price changes, whereas AFS gains/losses are an adjustment to capital and HTM remains on the balance sheet at the amortized cost basis.
3. See the sidebar for several examples of such strategies, some of which would be available even without the bifurcated accounting treatment for different types of bank activities.
4. Similar instruments in the traded market can be used to imply the fair-value marks on nontraded credit instruments held on the balance sheet.
5. See Rowe, David, “The Dangers of Complexity,” *Risk*, April 2005, p. 73. Available at http://www3.sungard.com/SunGardFinancial/menus/documents/risk_managers/200504%20the%20dangers%20of%20complexity.pdf.
6. For example, if the credit spread on a given CDO tranche rose by 50 basis points, if the duration of the tranche were eight years, and if the investment were leveraged 15 to 1, this would result in a decline in value of $.005 \times 8 \times 15 = 60\%$. This makes it quite easy to see how a fund could lose over half its value while investing in only AAA- and AA-rated tranches.
7. The seeming exception to this involves determining the fair value of an option. In this case, the market consensus estimate of the volatility of the underlying price is central to the valuation process. Even here, however, the ultimate objective is to estimate the expected net present value of a series of one-sided payoffs, so options are essentially an exception that proves the rule.