

CRA Insights: Credit Crisis

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Traditional tests of solvency remain unchanged, but a much more comprehensive approach is required. The fast changing financial crisis means there is no legacy answer as to when a firm is solvent. Some of the determinants have changed. As we assess the solvency of our clients in 2009, we face these new challenges through research, innovation, and conventional solvency tests.

In this article, we summarize each of the solvency tests and discuss some of the factors that make them more challenging in today's economic climate.

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Solvency in the current financial crisis

Declining equity values, tight credit markets, recessionary fears, and flat-out financial fraud have made solvency determinations an important issue in the current financial crisis. The traditional tests of solvency remain unchanged, namely balance sheet, cash flow, and capital adequacy. However, some of the determinants of the solvency tests have changed requiring a much more comprehensive approach in 2009. Changes in accounting conventions, complex financial instruments, and the turbulent state of the financial and real estate markets mean that solvency assessment is much more challenging than in prior years.

As our clients ask us to assess solvency, we are facing these new challenges through research, innovation and adopting conventional solvency tests to present situations. The fast changing financial crisis means there is no legacy answer as to when a firm is solvent.

In this report, we briefly summarize the financial attributes of solvency. While the courts may use different terminology, the underlying financial analysis is the same.^{1 2} After very briefly summarizing each of the solvency tests, we discuss some of the factors that make each test of solvency in 2009 so much more challenging than in the past.

Balance sheet test

This test measures whether the fair market value of an entity's total assets is greater than its total liabilities. The value is determined on a going concern basis unless the firm is on its deathbed or the value of the individual assets on a breakup basis is greater than its enterprise value. Generally, the value of the business enterprise constitutes the value of all of the business' assets rather than the assets recorded on an accounting balance sheet. The most widely used approaches to determine enterprise value are the income, market comparable, and cost approaches.

Because of the significant impact that financial instruments and special investment vehicles have on a company's balance sheet, it is more likely than ever that business units or individual assets will need to be valued to determine solvency on a balance sheet basis. If a business unit or individual asset approach is used, transaction costs and tax ramifications need to be considered.



¹ There are differences in the definition of insolvency in the US Bankruptcy Code, Uniform Fraudulent Conveyances Act, Uniform Fraudulent Transfer Act, state and foreign laws that are beyond the scope of this Insight. We consider solvency from a financial point of view.

² Fair market value and fair salable value are considered synonymous in this paper. Accounting fair value is not the same and the difference can be significant depending on the facts and circumstances.

Regardless of whether an enterprise, business unit, or individual asset accumulation approach is used, non-operating, underutilized, and off-balance sheet assets need to be considered at fair market value. Liabilities in the form of guarantees, commitments, contract obligations, and contingent liabilities, to name a few examples, also need to be estimated or considered at fair market value. In the case of both assets and liabilities, market value may differ significantly from GAAP value.

2009 Issue: GAAP balance sheets have many of their financial assets recorded at “Fair Value.” These values may or may not comport with fair market value of fair salable solvency value.

For example, at the end of June 2008, Merrill Lynch reported a fair value of \$11.1 billion for \$30.6 billion gross notional amount of subprime assets, or 36 cents on the dollar. Yet less than a month later sold these assets for only 22 cents on the dollar.³

2009 Issue: The standard definition of fair market value assumes that there is a hypothetical buyer who is willing and able to buy a business or asset. In a rapidly changing market, there may be no willing buyers except at fire sale prices. Does this mean the entity or asset has only distressed value? The definition of fair market value would appear to assume away this issue, but this is not totally true. Part of the definition is that there is adequate time for the asset to be exposed in the marketplace to attract potential buyers. This means that the sale does not have to be immediate.

But how long is it reasonable to hold the asset for sale to avoid fire sale prices? The cash flow and capital adequacy tests discussed below shed light on whether the enterprise has the resources to hold the assets for sale over the short (less than 90 day) or intermediate (up to one year) timeframe. If there are sufficient cash and capital resources, then the enterprise and asset valuations can consider the potential for more normalized market conditions.

2009 Issue: A wide variety of financial instruments and accounting changes have increased the complexity of determining solvency. The most important issue is the dramatically increased difference between reported GAAP income and cash flow. Reported gains and losses from

equity investments, debt and derivative instruments (CDO, CDS, forwards, swaps, and other financial instruments) may not have been realized in cash and the difference may be very significant.

Southwest Airlines recently stated⁴ “Due to the fact that items associated with FAS 133 have resulted in large adjustments to ‘Other (gains) losses, net,’ the Company believes that operating income provides a better indication of the Company’s performance for both 2008 and 2007 than does net income.”

Further, these gains and losses may not be indicative of the operating performance of the business or of future profits and cash flow. Similar issues such as goodwill impairment, realization of deferred tax assets, and consolidation of SIVs also increase the gap between reported earnings and cash flow. More than ever, the analysis of solvency rests on cash flow and not any measure of reported GAAP income such as EBITDA.

In recent filings, Proctor & Gamble included “non-GAAP” financial measures stating that “we believe these measures provide investors with additional information about our underlying results and trends as well as insights to some of the metrics used to evaluate management.”⁵

Two of the key Southwest metrics are free cash flow and free cash flow productivity. Free cash flow is operating cash flow less capital expenditures. Free cash flow productivity measures the ratio of free cash flow to net income. Proctor and Gamble’s target is to generate free cash flow at or above 90 percent of net income.

2009 Issue: The methodologies, assumptions, and judgments in determining the value of financial instruments provide a range of values, not a certain point estimate. Moreover, the value of a portfolio of financial assets could be more or less than the summation of individual asset values. A portfolio might provide diversification so that undervalued individual assets could be offset by overvalued assets. But a portfolio may have its own problems because the size of the portfolio may mean that it is not readily salable. This issue has always existed, but the materiality and complexity of today’s financial instruments has made it an important consideration in valuation and solvency analysis.

³ Merrill Lynch Form 8-K, July 17, 2008; Press Release, July 28, 2008; Form 10-Q August 8, 2008, Note 18.

⁴ Southwest Airlines form 10-K, p. 21.

⁵ Proctor & Gamble 2008 Annual Report, p. 55 and form 1-Q, December 31, 2008, p. 23.

Cash flow test

The cash flow test measures whether an entity can meet its “debt obligations” as they become due.⁶ If discounted cash flow (DCF) analysis has been used for balance sheet valuation purposes, this is a starting point for the cash flow test. Because cash flow is so critical to solvency, a cash flow projection is often prepared for the cash flow test even if it is not used for valuation. In addition to the factors in the DCF projection, the cash flow test measures the ability to pay debts as they become due. This includes trade creditors (i.e., “stretching the trade”), principal and interest payments, capital expenditures, and other non-operating obligations. Sales of assets not included in the DCF projection and additional cash available from equity or debt issuances may be considered as cash inflows.

The cash flow test is a projection for both the short term and out to an intermediate period based on the type of business and maturity of its debt. Historically, the cash flow test also considered whether the firm could reasonably expect to be in compliance with its debt covenants. We now consider debt compliance with other issues as part of the capital adequacy test.

2009 Issue: How do you project cash flow in the current financial crisis? We do not know of any global answer. For each client situation, we use economists, industry experts, financial market professionals, accountants and experienced valuation analysts to evaluate projected cash flows.

2009 Issue: It sounds simple, but what is “cash”? Current financial statements report cash and cash equivalents, not cash. How liquid and “cash like” are the amounts reported as cash or are they really short term investments with market volatility and counterparty risk? Will collateral be required for market movements?

Southwest Airlines disclosed that its cash and cash equivalents in 2007 included \$2.0 billion of collateral deposits from a counterparty due to Southwest’s long fuel derivative position. At December 31, 2008 this had reversed to a \$240 deposit liability.⁷

2009 Issue: What is “debt obligation”? Historically, solvency and valuation analysis considered interest bearing debt. Now many obligations that will consume cash are

recorded as swaps under ISDA contracts. The amount and tenor of swap contracts needs to be considered in the cash flow test.

2009 Issue: Many large firms have opted to use short-term commercial paper as a primary funding source. Commercial paper maturities generally range from one to three months. This means there is no long-term funding base and the firms are dependent on rolling over their commercial paper upon maturity. Any significant decrease in credit rating or capital market turbulence could impair the ability to access the commercial paper market. If the paper cannot be rolled over or if it can only be rolled over at greatly increased cost, the enterprise could be faced with a cash crisis. It could be solvent from a balance sheet standpoint and its operating business could be stable, but because of its short term borrowing it may not be able to meet its obligations without another source of funding.

2009 Issue: Many solvency opinions in the past have assumed that debt principal can be refinanced or rolled-over, and as a result did not require any net cash outflow. This is not a slam dunk assumption in 2009 and requires significant financial market and economic analysis.

Capital adequacy test

The capital adequacy test considers whether the company has sufficient sources of capital—from operations, assets sales, debt issuances, parent guarantees, or other sources—to fund the operations of the company in a reasonable manner. Funding should be available for working capital, capital expenditures, operating expenses, and other obligations. Further, the capital sources of the company should be sufficient that the company can withstand normal fluctuations of the business, industry, or economy for an intermediate timeframe.

2009 Issue: Capital adequacy is all about risk management—the greater the risk, the greater the safety margin to avoid being “thinly capitalized.” Financial instruments, including derivatives, are reported on the solvency balance sheet at the fair market value of the position. However, the “in the money” position is only part of the story for solvency analysis. A derivative can change from an asset to a liability in a heartbeat and vice

⁶ Many analysts combine the cash flow and capital adequacy tests. We separate the analysis into two tests because we find it easier to explain and the analysis can be broken down into simpler component parts. The cash flow test is also called the “ability to pay debt test” by some analysts.

⁷ Southwest Airlines Form 10-K, December 31, 2008, Note 1, p. 48.

versa. How much it changes is dependent on many factors especially the nominal amount, leverage, and volatility.

Southwest Airlines historically enjoyed a very favorable fuel hedging program to reduce its fuel costs. In November and December 2008, fuel prices tumbled causing tremendous losses due to Southwest's long fuel position. Southwest reported that net income was \$178 million in 2008, down from \$685 million in 2007. Southwest had a fuel hedge asset position of \$2.4 billion in 2007 but swung to a \$992 million liability in 2008. As a result, Southwest swung from \$2.8 billion in positive cash flow in 2007 to consuming \$1.5 billion in 2008. Southwest tapped its borrowing availability by \$1.6 billion in financing activity. All of this happened in a two month period and Southwest changed its entire fuel program.⁸

Similarly, operational risk can influence the amount of capital required. For example, a firm could hedge its energy costs by entering into a long-term option contract. This would reduce operating risk by minimizing future fluctuations in energy costs. As part of our solvency evaluation teams, we bring risk management specialists to assess operational and financial risk.

2009 Issue: In the past solvency analysis primarily considered debt covenant compliance as part of the cash flow test. In addition to debt compliance, we think that a solvency analysis should also consider credit rating sensitivity, regulatory capital requirements, impact of assumptions on investments and financial instruments, potential collateral calls and ISDA swap and long-term contract provisions, among other factors.

2009 Issue: In recent years, many firms undertook acquisitions that were largely funded by debt. In many cases, the acquirers were anticipating refinancing that may not be feasible in the current markets. These highly leveraged firms may not be able to access the equity capital market. Looking at the goodwill recorded in many of these acquisitions, the underlying tangible and intangible assets may not appear to be sufficient to cover the obligations incurred. This does not automatically mean, however, that the transaction rendered the entity insolvent. The test needs to consider the transaction at the time it occurred and whether the estimates, judgments, and projections were reasonable at the date of the transaction.

Conclusion

The traditional balance sheet, cash flow, and capital adequacy tests for solvency are as relevant as ever. Changes in accounting standards, vastly more complex financial instruments, roiling capital markets, unstable economy, and increased risk mean that solvency assessment is much more challenging than in prior years. Our expertise in accounting, economics, financial markets, industry, risk management, and other disciplines is what is needed to address these complex issues effectively. We form multidisciplinary teams to bring the right breadth and balance of skills to help our clients address solvency and other complex business challenges appropriately in this new environment.

⁸ Southwest Airlines Form 10-K, December 31, 2008, p. 21 Results of Operations 2008 Compared to 2007, p. 21; Management's Discussion and Analysis, p. 35; Consolidated Statement of Cash Flows, p. 47; Note 7 to Consolidated Financial Statements, p. 54.

Credit Crisis Task Force

The full magnitude and impact of the current economic crisis are not yet known. But undoubtedly, the effects on both financial institutions and global business will be profound and lasting. To provide insight into the complex issues raised by the current crisis, CRA has formed a multi-disciplinary Credit Crisis Task Force. We have the expertise to help you both understand the issues and advise you on how best to address them.

CRA International

CRA International is a leading global consulting firm that offers economic, financial, and business management expertise to major law firms, industries, accounting firms, and governments around the world.

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Founded in 1965, CRA has headquarters in Boston and offices across North America, Europe, Asia Pacific, and the Middle East.

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