

Considerations Related to Solvency Determination

Solvency Analysis

Need for Valuation Service in U.S. Bankruptcy Matters.

Generally most actions taken to recover assets in a bankruptcy case involve the need to determine the solvency of the debtor at a particular point in time (often at the time of a transfer of a debtor's property or the incurrance of a debt by the debtor). In order to establish if the debtor is solvent or insolvent, there must be a proper solvency analysis of selected assets or the subject business. In the following sections, we first define insolvency under the Bankruptcy Code. We then discuss the three traditional tests used in solvency determination, including the evolution and limitations of these tests. We then conclude with a discussion of how and why business valuation techniques provide a better methodology for solvency determination.⁶⁸

Definition of Insolvency (U.S.)

Section 101(32)(A) of the Bankruptcy Code defines insolvent as:

...with reference to an entity other than a partnership and a municipality, financial condition such that the sum of such entity's debts is greater than all of such entity's property, at a fair valuation, exclusive of –

- (i) property transferred, concealed, or removed with intent to hinder, delay, or defraud such entity's creditors; and
- (ii) property that may be exempted from property of the estate under section 522 of this title;

Value of Liabilities (U.S.).

In determining the solvency of the debtor for purposes of sections 547 and 548 (see discussion under "Traditional Approaches to Solvency - The Three Tests"), debt is not necessarily measured at its face value. In situations where the debt was originally issued at a discount, it would appear that the debt should be valued at the initially issued price plus the amortization of the discount based on the effective interest method. For publicly traded debt, the Third Circuit held in *In re Trans World*

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⁶⁸ Hart, James F., "Solvency Determination," *AIRA Journal*, Volume 21, Number 2, June/July 2007.

Airlines, Inc., 134 F. 3d. 188 (3d Cir. 1998), that the debt should be measured at its face value and not its market value.⁶⁹

Premise of Value

Before a solvency analysis can be conducted, the appropriate premise of value must first be determined. The premise of value concept is often critical in solvency-related valuations because going concern values generally exceed liquidation values and courts often require going concern values, unless clear and convincing evidence exists to the contrary. [Please note that the Premise topic is the subject of a companion article “Premise of Value in Bankruptcy/Insolvency Situations” by James F. Hart, © 2007.]

Solvency Determination

Accountants and financial advisors are often hired by one or both parties to assert or rebut a solvency or insolvency conclusion. Typically, these conclusions are sought and used in bankruptcy avoidance actions filed against creditors on behalf of a bankrupt estate by either a debtor-in-possession or a court-authorized bankruptcy trustee. The following section discusses the three tests that have traditionally been used in this process. The discussion then considers the use and benefits of using business valuation techniques in solvency determination.

Traditional Approaches to Solvency - The Three Tests

Solvency in the bankruptcy environment typically involves potential preferential transfers under Bankruptcy Code section 547 or fraudulent transfers under Code sections 548 and 544 (as opposed to the filing of an involuntary petition, wherein the provisions of Code section 303(h) would apply⁷⁰). In this context, section 548 solvency has historically been viewed within the framework of three tests: the “balance sheet,” “cash flow” and “thin capital” tests, while section 547 solvency dealt with the “balance sheet test”. These tests, which evolved from the Bankruptcy Code and case law, are intended to address key issues associated with the financial state of the debtor⁷¹ at a particular point in time.⁷²

⁶⁹ Exceptions to this approach may exist in certain circumstances. For example, some practitioners have argued that non-recourse debt of subsidiaries within a substantively consolidated group of companies should be limited to the value of the associated collateral when assessing the solvency of the substantively consolidated group.

⁷⁰ For purposes of filing an involuntary bankruptcy petition, insolvency is not a requirement. Nor is it necessary for a voluntary Chapter 11 or a Chapter 13 petition to be filed; however, petitions filed by a debtor where the equity or balance sheet test of insolvency does not exist may be dismissed. The court generally permits an involuntary Chapter 7 or Chapter 11 filing to proceed if the debtor fails the equity test. However, the important part of the test is that the debtor must not be paying its debts as they become due, and not whether or not the debtor has the current resources to pay, but has chosen not to do so.

⁷¹ For convenience, “debtor” is used here in reference to the subject company being tested for solvency. This reference is not intended to imply that solvency analyses are only applied to companies in bankruptcy.

⁷² As discussed below, the latter part of section 548 includes three tests, the first of which mentions solvency, while the other two do not. It is the author’s view that these three tests are interrelated and when the appropriate methodologies are properly applied in a *forward-looking manner* (as discussed later in this article), those portions of section 548 not specifically mentioning solvency (i.e., inability to pay and thin capital) are addressed. Further, attempting to address the latter two points (i.e., inability to pay and thin capital) separately from overall

The Bankruptcy Code and the Three Tests

Sections 548 and 101 (32)(A) of the Bankruptcy Code identify key questions that associated with these tests. Section 101 (32)(A) provides the definition of insolvency and was included earlier in this section. Section 548 sets forth two separate bases for the finding of a fraudulent transfer. Since the first basis under section 548 (a)(1) deals with whether or not a debtor intended to hinder, delay, or defraud a creditor, a debtor's solvency (or insolvency) isn't relevant. The remainder of section 548, however, is relevant to the discussion of solvency. In particular, the subsections under 548 (a)(2), deal with whether or not the debtor received *reasonably equivalent value* in exchange for having conveyed an asset to a creditor or for having incurred an obligation to a creditor, and whether at the time the debtor⁷³:

- Was insolvent on the date of the transfer or the date the obligation was incurred, or became insolvent as a result of the transfer or obligation;
- Was engaged in business or a transaction, or was about to engage in business or a transaction, for which the amount of remaining capital was unreasonably small; or
- Intended to incur debts that would be beyond its ability to pay them as they matured.

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From these Code sections, it is easy to see how these three tests came into being. For example, unreasonably small capital became the "thin capital test," while inability to pay debts as they became due is often equated with the "cash flow test." The "balance sheet test" stems from the definition of insolvency under section 101(32)(A): "financial condition such that the sum of [the] entity's debts is greater than all of [the] entity's property at a *fair valuation*..."

Fair Market Value

The Code sections partially summarized above also make it clear that *value* drives solvency determination. In this regard, case law generally interprets fair valuation as fair market value (FMV),⁷⁴ whether it is expressed as *reasonably equivalent value*⁷⁵,

solvency determination represents an inconsistent use of the methodologies. Quite simply, when viewed in a *forward-looking manner*, if a company can't pay its bills; it is insolvent. If it can pay its bills, it is not. When viewed in a *forward-looking manner*, if a company has inadequate capital, it is insolvent; if it has adequate capital, it is not.

⁷³ While the second and third bullet points here do not specifically mention solvency, the methodologies discussed below (particularly the discounted cash flow method) provide useful information regarding these issues (i.e., ability to pay and thin capital) as well as solvency. Therefore, when utilized properly, the analyst has sufficient information to address these issues individually as well as in an overall solvency context.

⁷⁴ Newton, Grant W., *Corporate Bankruptcy: Tools, Strategies, and Alternatives*, Hoboken, NJ: John Wiley & Sons, Inc., 2003. See also *In re Roblin Industries, Inc.*, 78 F. 3d. 30 (2d Cir. 1996); *In re DAK Industries, Inc.*, 170 F.3d 1197 (9th Cir. 1999); and *In re Trans World Airlines, Inc.*, 134 F. 3d. 188 (3d Cir. 1998).

fair valuation, or in other terms.⁷⁶ Moreover, contemporary fraudulent conveyance case law has, in effect, adopted FMV. *Since FMV is the most widely used standard of value in business valuation, it logically follows that the best way to determine the FMV of a business, an interest in a business, or certain business assets (including intellectual property and other intangible assets), is by performing a business valuation.*

Limitations of the Three Tests

Over time, many bankruptcy practitioners have come to view these tests more as “methodologies” in their own right than as critical questions to be addressed through the application of a proper solvency analysis. Since these tests aren’t true methodologies, they suffer from a variety of conceptual and practical limitations that have created confusion among practitioners and the courts. Some of the limitations and confusion associated with these tests include, but are not limited to, the following:

- (a) **Lack of a Comprehensive Framework.** Since the three tests largely evolved from the specific facts of the divergent cases at hand, they did not lend themselves to the establishment of an overall conceptual framework. Further complicating matters, solvency cases have sometimes been decided in conflicting jurisdictions. Because no commonly accepted framework has been established to guide practitioners (and the courts) as to the appropriate steps to perform, solvency analyses (and court decisions) vary widely.
- (b) **Reliance on Outdated Financial Techniques.** Because these tests largely evolved before widespread use of common finance and business valuation techniques, analyses under the three tests often do not include contemporary financial techniques and information from the capital markets (e.g., market yields, tax shields, capitalization and discount rates, guideline transactions and companies, discounted cash flow analysis, and options valuation techniques). Perhaps most importantly, these tests, as they have historically been employed by many practitioners, provide little guidance with respect to an asset class of growing importance - intellectual property and other intangible assets.

⁷⁵ In *In re VFB LLC v. Campbell Soup Co.*, No. 05-4879, 2007, WL 942360 (3d Cir. March 30, 2007), the U.C. Court of Appeals for the Third Circuit held that “market capitalization” is a proper means for determining “reasonably equivalent value.” Since market value is usually established by the capital markets, (i.e., quoted and traded price per share) market capitalization is included within FMV.

⁷⁶ According to the American Society of Appraisers, fair market value is defined as “the amount at which property would change hands between a willing seller and a willing buyer when neither is acting under compulsion and when both have reasonable knowledge of the relevant facts.”

- (c) **Confusion.** These tests have created confusion among practitioners. For example, rather than responding to a common goal - solvency determination - there is a predisposition among some to view the three tests as measuring different things (e.g., ability to pay bills, or inadequate capital or an excess of liabilities over assets). There is also confusion involving whether or not to include certain assets and liabilities, such as intangible assets, goodwill and contingent liabilities. Terminology has also contributed to the confusion, for example, whether to use “liquidation-based solvency tests” or “going concern solvency tests.”

Three Tests and Business Valuation

Discrete Methodologies

When solvency is viewed as a business valuation matter instead of trying to apply the three solvency tests as discrete methodologies (sometimes bent on reaching independent conclusions), valuation analysts can employ one or more of the three approaches to value (asset, market and income) and the various methodologies underlying each, and reach a reconciled answer to the solvency question. This methodology offers practitioners more avenues to address the overall solvency question, which can be especially helpful when information is limited. Also, because business valuation approaches and methods have been peer-reviewed and authoritative literature and training exists, there is a greater chance for consistency by using these techniques versus the wide variation commonly found in analyses associated with the three traditional tests.

Shareholders' Equity

In addition, as explained below, the use of business valuation methodologies in solvency determination clarifies and quantifies the goal of the three tests in a solvency analysis – the measurement of shareholders' equity (in the case of a solvent entity where assets exceed liabilities) or shareholders' deficit (in the case of an insolvent entity where liabilities exceed assets). Further, assuming sufficient information exists, the business valuation framework also allows for the measurement and quantification of cash flows and capital. As such, it is capable of addressing the three key questions inherent in the three tests. Therefore, much of the current confusion surrounding the three tests can be clarified by obtaining a deeper understanding of fundamental business valuation principles in a bankruptcy/distressed company setting, particularly with regard to the valuation of shareholder equity.⁷⁷

⁷⁷ The Association of Insolvency & Restructuring Advisors (AIRA) provides in-depth training in bankruptcy/insolvency issues and the valuation of bankrupt and distressed companies (www.airacira.org).

Business Valuation Framework

The business valuation framework also allows users to incorporate the appropriate premise and standard of value and thereby match the valuation methods to the purpose for which the valuation is being performed. Simply put, this allows the practitioner to properly address such important questions as: “value to whom?” and “under what set of transactional circumstances?”⁷⁸ While the significance of these questions is understood by valuation practitioners, it is not in common usage by general practitioners and can contribute to confusion and erroneous indications of value, especially in a bankruptcy context wherein it may be necessary to determine the value of the same business entity at various points in time and under different premises of value.⁷⁹

Industry Conditions

Business valuation methodologies can also help practitioners think through relevant issues, such as changes in the debtor, its industry, and general economic conditions, so that the resulting solvency analysis isn't inconsistent with changes or trends in the debtor's operating environment. These considerations are often absent in a typical traditional solvency analysis. The remainder of this section discusses the three tests and how business valuation techniques can and should be used to address each.

Balance Sheet Test

Overview

The term “balance sheet test” means different things to different people. To most bankruptcy practitioners, the goal of this test is to determine the amount left over after subtracting the market value of a debtor's liabilities from the market value of its assets as of a particular date. In preparing this analysis, some practitioners focus on the line items appearing on the debtor's balance sheet dated closest to the desired as-of date for the analysis, leaving off altogether any assets and liabilities that do not appear on the most handy balance sheet. Because this test is most like the net asset or asset accumulation methods of the asset approach, it is usually the first one considered by practitioners seeking expanded guidance concerning the balance sheet test. Since the goal of this test is to measure assets less liabilities (at market), and all relevant assets and liabilities should be included, these asset methods can be utilized to measure the level of shareholders' equity or deficit. However, it should be noted that the asset approach isn't the only useful methodology capable of measuring shareholder equity. As noted below, depending on the facts and

⁷⁸ Pratt, Shannon P., Reilly, Robert F., and Schweih, Robert P., *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, New York, NY: McGraw-Hill, 2000.

⁷⁹ In general, a valuation in one bankruptcy context doesn't control in later valuations. For example, a valuation used to determine a claim wouldn't be controlling in later actions involving preferences, best interest of creditor's test and reorganization value. See Grant Newton, *Corporate Bankruptcy*, 2003.

circumstances, the remaining shareholder equity, if any, can also be measured by the income and market approaches.

Goodwill

The balance sheet test has also created confusion among bankruptcy practitioners, lawyers and some courts concerning whether or not to include certain assets, such as goodwill.⁸⁰ Since goodwill is a residual concept that typically isn't measured directly, the use of multiple business valuation approaches, in conjunction with the appropriate premise, answers most of the questions surrounding whether or not to include goodwill (or whether it even needs to be separately valued) as well as how to value it. For instance, if going concern is the proper premise, the DCF and asset accumulation methods could be used to determine whether there is any amount remaining for goodwill after the allocation of the fair market values to the debtor's other assets. Further, since this method has documented support and has been peer-reviewed, valuation analysts can easily explain why it is appropriate or inappropriate to include or exclude certain asset and liabilities. Valuation analysts also have access to accepted methodologies for valuing these other assets and liabilities when appropriate.

Goal of Test

It is also helpful to keep in mind that the goal of a solvency analysis is to determine solvency as of a particular date, and not to perform a rote (i.e., without thought) balance sheet test or other test. Accordingly, the available information and facts and circumstances concerning the debtor may favor the use of a different approach or methodology, other than the asset accumulation method, in performing the balance sheet test. If this is the case, the business valuation framework may help the practitioner avoid trying to "hammer a square peg into a round hole." Again, the business valuation framework will assist the valuator in picking the most appropriate method or methods as well as explaining the reasons why a certain method (or methods) were chosen.

Inclusions/Exclusions

It should be noted that this test explicitly excludes any assets (property) that the debtor may have transferred, concealed, or removed, with the intent to defraud, hinder, or delay its creditors. Also, assets that generally may not be listed on the balance sheet such as intangible assets, including patents, trademarks, trade names, and so on should be included. This analysis should also include any anticipated recoveries, less related expenses, from any recovery actions brought by the bankruptcy estate.

⁸⁰ For instance, see *In Re Bay Plastics, Inc.* 187 B.R. 315 (Bankr. C.D. Cal. 1995), the court held that goodwill should not be included in the determination of value.

Retrojection and Projection

Generally, a valuation of assets must be determined as of the date of the transfer at issue. Sometimes, however, such a valuation may not be available. In certain instances, courts will provide for the use of evidence of insolvency on a date different from the date in question as competent evidence of the debtor's insolvency on that date.⁸¹ Termed "retrojection" by the courts, in essence it states that if "a debtor is shown to be insolvent at a date later than the date of the questioned transfer, and it is shown that the debtor's financial condition did not change during the interim period, insolvency at the prior time may be inferred from the actual insolvency at the later date."⁸²

Retrospective Appraisal

According to the Uniform Standards of Professional Appraisal Practice (USPAP), 2006 edition, Statement on Appraisal Standards No. 3 (SMT-3), *Retrospective Value Opinions*, retrospective appraisals (effective date of the appraisal prior to the date of the report) may be required for certain matters. In its Statement, the Appraisal Standards Board concluded, "Data subsequent to the effective date may be considered in estimating a retrospective value as a confirmation of trends that would reasonably be considered by a buyer and seller as of that date."⁸³

Cash Flow Test

Overview

The essence of the "cash flow test" is to help determine whether or not a company can pay its debts as they become due. It is a forward looking concept that addresses not only whether a debtor can meet its current obligations, but also whether it can meet its future obligations as well.⁸⁴ Since this focuses on future cash flows, this test lends itself to the income approach, particularly the discounted cash flow (DCF) to equity method, because this approach takes into account all sources and uses of cash, including debt borrowings and repayments. Perhaps surprising to some, the overall result of applying the DCF method also answers the question inherent in the balance sheet test – is there any remaining shareholder equity at market values (assets minus liabilities) after paying all of the debtor's liabilities and debts? If the answer under the income approach is a positive number, the value indication is that the entity is solvent. If the answer is a negative number, the value indication is insolvency. Alternatively, looking at the negative indication from another angle, if a debtor's net cash flow can't pay its bills as they come due, it also won't have much or

⁸¹ See *In re Coated Sales, Inc.*, 144 B.R. 663, 666 (Bankr. S.D. N.Y. 1992).

⁸² See *In re Arrowhead Gardens, Inc.*, 32 B.R. 296, 301 (Bankr. D. Mass. 1983).

⁸³ *Uniform Standards of Professional Appraisal Practice*, Appraisal Standards Board, the Appraisal Foundation, 2006 edition, Statement on Appraisal Standards No. 3 (SMT-3).

⁸⁴ Heaton, J.B., "Solvency Tests," working paper, SSRN, September 2006.

any remaining equity.⁸⁵ In this context, it may help to recall that “the market value of an asset reflects its earning power and expected cash flows.”⁸⁶

Zone of Insolvency

An advantage of a proper application of the DCF method of the income approach is that it may help a target company’s directors address key fiduciary questions inherent in the zone of insolvency concept. In other words, when, and to what degree, should officers and directors of the company direct more emphasis toward protecting the interests of its creditors? Sub issues include important questions such as whether the debtor should continue to operate in a business as usual manner, whether it should pay dividends, and whether it should add new debt and other liabilities.⁸⁷

Economic of Financial Distress

Another benefit of the DCF method is that it can help the debtor’s planning by shedding light on whether a company’s problems are the result of “economic or operational distress” or “financial distress.” Under economic or operational distress, a firm is unable to compete in its markets because the business simply isn’t viable. Financial distress is generally caused by the company’s capital structure. In other words, while the underlying operations of the business are viable, it simply cannot generate enough cash flow to pay its existing debts.

Additional Capital

In preparing a DCF analysis, the valuator should also look at available collateral or the redeployment of existing collateral as well as the possibility of issuing additional debt, net of costs, including subordinated and unsecured debt. In addition, as discussed under the “Thin Capital Test” section below, a company’s ability to raise equity, net of related costs, should also be factored into the DCF analysis. The additional information gleaned from this analysis could be quite insightful in situations in which the asset approach (balance sheet) presented a solvency indication, but the debtor was experiencing difficulty paying its debts at the time of the analysis. Since it is a forward-looking concept, a DCF analysis can demonstrate, if appropriate under the debtor’s circumstances, how the debtor might be able to use additional debt (or equity) financing to return itself to a state of profitable operation. However, it should be noted that the ability to prospectively raise debt, even over a multi-year period,

⁸⁵ Courts can also look at the number of creditors, the proportion of its debts not being paid, the duration of debt nonpayment, and the debtor’s payment history to assist them in understanding the debtor’s inability to pay its debts. (See more at: www.katzlawoffice.com/fraud.htm.) See also *In re Hill*, 8 B.R. 779 (Bankr. D. Minn. 1981) where nonpayment of the debtor’s three largest debts constituted nonpayment even though smaller debts were being paid.

⁸⁶ Damodaran, Aswath, “The Dark Side of Valuation: Firms with no Earnings, no History and no Comparables,” March 2000: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/papers.html, p. 3.

⁸⁷ It might be worth noting that in the *North American Catholic Educational Programming, Inc. v. Gheewalla, et al.* case, the Delaware Supreme Court ruled on May 18, 2007 that there was no cause of action for “deepening insolvency” under Delaware Law. One ruling noted “Even when the corporation is insolvent, creditors have no right to assert direct claims for breach of fiduciary duty against the directors.” <http://bankruptcy.cooley.com/North%20American%20Catholic%20Del%20Supreme%20opinion.pdf>

does not, in and of itself, make an insolvent company solvent if all that is accomplished by the debtor is to fund continuing losses by adding additional debt to the balance sheet.

Is the Market Approach Best?

It should be also be noted that some bankruptcy courts have concluded that the market comparable analysis (market approach), subject to appropriate adjustments, is the appropriate approach to use in this case. In *In re Nextwave Personal Communications, Inc.*, 15 235 B.R. 277, 294 (Bankr. S.D.N.Y. 1999), the court noted that discounted cash flow analysis “is widely, if not universally, used in the business and financial world as a tool to assist management in making decisions whether to invest in or dispose of businesses or major assets. It is generally not used as a tool for determining fair market value, particularly when that determination can be made using either replacement cost or market comparables.” (Id. p. 294.) In reaching this conclusion the bankruptcy court cited *Keener v. Exxon Co.*, 32F.3d 127, 132 (4th Cir. 1994), cert. denied, 513 U.S. 1154. (1995)⁸⁸ where the court noted that “*fair market value* is, by necessity, best set by the market itself. An actual price, agreed to by a willing buyer and willing seller, is the most accurate gauge of the value the market places on a good. Until such an exchange occurs, the market value of an item is necessarily speculative.”

Thin Capital Test

Overview

The “thin capital test” addresses whether the debtor’s current or future business or a contemplated transaction would result in an amount of capital (i.e., shareholders’ equity) that is unreasonably small and thus prevent the debtor from operating in a business as usual manner. In order to answer this question, it is necessary to take into consideration current and future business, industry, and economic conditions as well as a company’s operating and financial capabilities and plans. The use of the income approach allows a valuation analyst to incorporate and understand the impact of reasonable assumptions about these factors because its conclusion, whether determined using net cash flow or a different benefit stream, quantifies the present value of the debtor’s remaining equity capital after payment of all current and future costs and expenses of operations, including capital expenditures and working capital (i.e., is there enough existing and prospective shareholder equity to continue operations in a normal manner?).

⁸⁸ See *Amerada Hess Corp. v. Commissioner of Internal Revenue*, 517 F.2d 75, 83 (3d Cir. 1975); *Ellis v. Mobil Oil*, 969 F.2d 784, 786 (9th Cir. 1992); *BFP v. Resolution Trust Corp.*, 511 U.S.531, 548 (1994); *In re Grigonis*, 208 B.R. 950, 955 (Bankr. D.Mont. 1997).

Tools

The market approach's guideline companies and transactions can be used to generate market-derived multiples that serve as value indications of the equity value in entire businesses, business units, and specific assets. It also provides benchmarks (specific industry metrics and ratios) that allow for comparability between companies operating in the same or similar industries. These tools can be used to help the debtor identify where it stands in relation to industry levels of balance sheet, income statement, and cash flow items such as debt, equity, assets, liabilities, profit margins, debt coverage, capital expenditures, and working capital. Will the debtor have sufficient equity capital (i.e., assets less liabilities at market values) to continue operation in a normal manner? Of course, these observations may also be useful in populating the assumptions under the DCF method of the income approach.

Debt and Equity Capital

Consideration of debt and equity capital raising ability is also important in assessing relative levels of capital since a debtor suffering from financial distress may be able to change its capital structure sufficiently to survive and prosper. Further, if a debtor is having trouble paying its creditors but its business plan is feasible, investors and/or lenders may be willing to provide needed capital or liquidity sufficient to enable the debtor to survive. So, it's not just a matter of the capital level of a debtor at a particular moment in time, if the debtor could reasonably be expected to change its capital in an advantageous manner.⁸⁹ Business valuation approaches provide a useful framework to think through and quantify the many relevant factors, both present and future, that impact a debtor's capital and its ability to operate under business as usual conditions.

Value Synthesis and Reconciliation

The valuation synthesis strengthens the solvency conclusion by reinforcing the notion that at the end of the day, what's being measured is shareholders' equity, however it is characterized. Since shareholders' equity can be determined by all three valuation approaches, it is important to reconcile and synthesize the results of all approaches utilized in a given analysis so that the final determination makes sense in light of all available information. For instance, if the asset approach indicates solvency but the result is largely due to the presence of illiquid long-term assets that won't allow payment of expected debts, this should be compared to the income approach to see if positive cash flows can be achieved through operations, borrowing, equity contributions, asset sales, etc. If positive cash flows can't be achieved under reasonable assumptions, insolvency may be warranted.

⁸⁹ This is not to imply that unjustified loans and investments made by loved ones or related parties, or loans or investments made under non-arm's length or special circumstances, should be included in the reasonable expectation of changing the debtor's capital structure in an advantageous manner. Further, financing continuing losses until running out of credit doesn't make an otherwise insolvent company solvent.

Conclusion

In summary, in bankruptcy recovery actions the goal of a solvency analysis is to determine the solvency or insolvency of a debtor at a particular point in time. As discrete methodologies, the three tests traditionally associated with solvency determination lack a comprehensive framework to address all three key questions. They also lack specificity as to which steps to take in the preparation of each analysis. These tests also lack the flexibility needed in addressing a variety of issues ranging from incomplete records to the inclusion of intangible assets and intellectual property. With its peer-reviewed and comprehensive framework, business valuation enables valuation analysts to determine solvency under a wide range of facts and circumstances that include emerging trends such as intellectual property.

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