E-Commerce and the Rise of the Online Business: The Identification and Valuation of Cyber Assets

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I. INTRODUCTION

A. The Problem of Valuation

Finding the true value of a thing is a problem that has always plagued accountants, assessors, and philosophers, let alone jurists.[1] Judges and lawyers are, however, faced with the difficult task of ascertaining the fair value of the assets of a company when it fails and is subjected to insolvency proceedings. Being able to assign a value to a distressed company which is as fair and as accurate as possible is important as it will reveal to the debtor the options available to him under the bankruptcy laws. A fair and accurate valuation of the company will also help the creditors determine whether or not the

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1. MARTIN FRIDSON & FERNANDO ALVAREZ, FINANCIAL STATEMENT ANALYSIS: A PRACTITIONER'S GUIDE 30 (2005).

company will be able to repay its debts; and if not, determine an estimate of the amount it may possibly recover if the assets are liquidated. However, the traditional process of valuation as related to bankruptcy is based on the assumption that the business is based on physical things.[2] When one thinks of a retail business, for example, one imagines a store where they sell their goods and a warehouse stocked with inventory. The rise of e-commerce has challenged the traditional notions of what a business looks like.

B. The Rise of E-commerce

The Organization for Economic Co-operation and Development defines an e-commerce transaction as

> the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private [organizations]. To be included are orders made over the web, extranet[,] or electronic data interchange. The type is defined by the method of placing the order. To be excluded are orders made by telephone calls, facsimile[,] or manually typed e-mail.[3]

E-commerce provides for a novel alternative to doing business. Through the use of the Internet as a medium, business transactions are made cheaper and more convenient.[4] The relative ease with which a person can start doing business online has attracted a lot of people into trying their luck in e-commerce. In fact, "more and more people and businesses are using the Internet these days as an alternative platform for doing trade."[5] As Francis G. Conrad points out,

> [i]nexpensive electronic networks have been utilized to slash the time between entry of the lowly purchase order and its receipt by the supplier or vendor, thereby reducing inventories. Although huge marketing and

2. *See* Knowledge@Wharton, Valuing the Invisible: How to Manage Bankruptcies of Knowledge-based Companies, *available at* http://knowledge.wharton.upenn.edu/article.cfm?articleid=513 (last accessed Feb. 28, 2013).

3. Organization for Economic Co-operation and Development (OECD), OECD Science, Technology and Industry Scoreboard 2011, *available at* http://www.oecd-ilibrary.org/sites/sti_scoreboard-2011-en/06/10/index.html;jsessionid=v04de9q27yt1.delta?contentType=&itemId=/content/chapter/sti_scoreboard-2011-64-en&containerItemId=/content/serial/20725345&accessItemIds=/content/book/sti_scoreboard-2011-en&mimeType=text/html (last accessed Feb. 28, 2013).

4. *Editor's Note*, DEV. RESEARCH NEWS, Nov.-Dec. 2006, at 1.

5. *Id.*

> technical costs seem to be barriers to entry, an initial investment of two million dollars will set up a web site that can handle two hundred thousand transactions a month. Therefore, today's economic reality clearly reveals that barriers to entry to operate on the Internet are low and may become even lower.[6]

A significant factor in the growth of the medium is the on-going proliferation of Internet users around the world. The Internet continues to establish itself as one of the main modes of communication in the world. From 2000 to 2010, the number of internet users grew from 250 million to over two billion.[7] Of the over 6.8 billion people in the world, "nearly one person in three surfs online."[8] In the Philippines, 29 of every 100 persons surf the Internet.[9] With more and more people connecting online, it is easy to see why the Internet is growing as a meadium of conducting business. Goldman Sachs predicts that "[w]orldwide retail web sales will reach nearly $1 trillion by 2013."[10] According to the bank, "[e]-commerce is growing at [a rate of] 19.4%."[11] E-commerce continues to grow and online retailing has become a big business.

C. Bankrutpcy and Valuation in E-commerce

The shift of business to the Internet platform provides its own set of challenges. Online businesses differ in a lot of ways from the traditional concept of a business. Unlike traditional brick and mortar businesses, online businesses typically get their value from the intangible assets that they hold.[12] In fact, online businesses may have little to no hard assets.[13] It is not uncommon for online retailers to have no retail outlets and sell exclusively

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6. Francis G. Conrad, *Dot.coms In Bankruptcy Valuations Under Title 11 or www.snipehuntinthedark.noreorg/noassets.com*, 9 AM. BANKR. INST. L. REV. 417, 418 (2001).

7. AFP, *Number of Internet users worldwide reaches two billion: UN*, THE INDEPENDENT, Jan. 26, 2011, *available at* http://www.independent.co.uk/life-style/gadgets-and-tech/number-of-internet-users-worldwide-reaches-two-billion-un-2195157.html (last accessed Feb. 28, 2013).

8. *Id.*

9. The World Bank, Internet users (per 100 people), *available at* http://data.worldbank.org/indicator/IT.NET.USER.P2 (last accessed Feb. 28, 2013).

10. Internet Retailer, Global E-commerce Sales 2010-2013, *available at* http://www.internetretailer.com/trends/sales/ (last accessed Feb. 28, 2013).

11. *Id.*

12. Robert Brady, et al., *Determining and Preserving the Assets of Dot-Coms*, 28 DEL. J. CORP. L. 185, 186 (2003).

13. *Id.*

over the Internet.[14] At the same time, as with all types of business, the risk of financial failure remains. The dot-com crash of the early 2000s shows how fickle the success of these online businesses can be:

> In March 2000, the stock markets' confidence in dot[-]com companies began to weaken, eventually causing the destabilization of the dot[-]com market. The promise of future profits was not enough to sustain high market valuations. Many high profile dot.coms began to experience deceleration in sale's growth rates and some actually saw declines. 'Cash burn rate' came to be the 'buzz word' as investors grudgingly counted the days to the closing of many dot.coms and the inevitable loss of their investments. The belief in the power of intellectual property rights to create runaway wealth seemed to die overnight. Sums of money spent to acquire customers no longer seemed to make economic sense. Web site differentiation was becoming more and more difficult with the proliferation of dot[-]coms. The reasons for failure could go on and on.[15]

It is not a surprise that doing business over the Internet does not make one immune from failure. It can even be argued that the particular business model of e-commerce is part of the reason why financial difficulty hits online businesses so hard. After all, whole enterprises are standing on what are basically ideas. At the same time, it is difficult to accurately evaluate the financial standing of online businesses by the same measure. The real value of the intangible assets owned by a company "can easily exceed by two or three times the stated book value of the [company's] tangible assets."[16] Intangible assets can pose a difficult question of valuation even to professional assessors. The changes in the economic landscape mean that lawyers and judges are faced with this difficult question more and more. How then are creditors to be protected in case of insolvency, given the unique situation of online businesses?

Bankruptcy proceedings are supposed to maximize the value of the firm under distress. This Essay will discuss the basic problem of finding the fair value of these businesses and the optimal solution to preserving such value under the Financial Rehabilitation and Insolvency Act (FRIA) of 2010.[17] Through careful identification of the intangible assets of the online business and an understanding of the different valuation methods used to give value to these assets, firms under duress can maximize their asset value whatever the goal of insolvency proceeding might be.

14. Conrad, *supra* note 6, at 418.

15. *Id.* at 419.

16. Weston Anson, *Valuing Trademarks, Patents and Other Intangibles in a Bankruptcy Environment*, 15 AM. BANKR. INST. J. 29, 29 (1996).

17. An Act Providing for the Rehabilitation or Liquidation of Financially Distressed Enterprises and Individuals [Financial Rehabilitation and Insolvency Act (FRIA) of 2010], Republic Act No. 10142 (2009).

II. Determination and Identification of Cyber Assets

A. E-commerce and its Intangible Nature

Bankruptcy laws have always imagined that the most valuable assets of a business are the traditional "brick and mortar" assets.[18] Brick and mortar assets are hard and tangible. A business that is primarily composed of tangible assets will likely give "debt holders a comfortable process of asset conversion."[19] This is only logical considering that the market for these types of assets are mature and well-developed. These types of assets have been traded for a long time and the market has more or less figured out its true value. It is also likely that assessors are well-experienced and well-versed in valuing brick and mortar assets.

Businesses primarily doing e-commerce, however, are unlikely to possess a lot of these hard assets. Since an e-commerce business primarily operates through a website, it may not necessarily have a physical location or have a large stock of inventory. Even the office space and equipment used by the business are most likely leased. Consequently, the bulk of these "companies' asset value exists in intangible assets, including: intellectual property ... ; proprietary software or technology; Internet addresses or domain names; licensing agreements; brand name(s); customer lists and data; and key employees."[20] These intangible assets can be considered the cyber assets of the business since they are primarily realized online.

Intangible assets are "non-monetary assets that [cannot] be seen, touched or physically measured, which are created through time and/or efforts and are identifiable as separate assets."[21] While they do not have physical attributes they nevertheless possess an economic reality.[22] They represent "future economic benefits [the value of which] are difficult to determine."[23]

Intangible assets continue to make up a growing proportion of the asset value of businesses, and yet "people believe that current accounting models really [do not] capture their worth."[24] Unlike tangible assets, intangibles are, by their very nature, difficult to value. To begin with, the "company's

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18. Knowledge@Wharton, *supra* note 2.

19. Brady, et al., *supra* note 12, at 186.

20. *Id.*

21. Kothari Monika, et al., *Intangible Assets: A Study of Valuation Models*, RES. J. MANAGEMENT SCI., February 2013, at 9.

22. *Id.*

23. *Id.* at 13.

24. Knowledge@Wharton, *supra* note 2.

balance sheet does not show many of these assets, and special care must be taken not only to identify all the assets of a [ ] company[,] but also to preserve their value in bankruptcy."[25] To illustrate, a company may have intellectual property that holds significant value which has never been catalogued nor identified.[26]

Even if the intangible assets are included in the balance sheet, the value recorded is extremely "dependent on the people within the business and the continued operation of the bankrupt business."[27] This means that the value of the intangible asset is linked to the people who have acquired the knowledge to put the asset to efficient use. In other words, an asset which may be valued very highly by the business owner may not be as valuable to third parties who are not in a position to adequately put the property to use. Moreover, the rapid pace of technological advances often means that these types of assets tend to depreciate very quickly.[28]

While difficult, the process of valuing intangible or cyber assets is not impossible. Those tasked with the problem of finding the value of these assets in insolvency must always keep in mind the unique nature of cyber assets in the world of commerce in order to discharge their functions properly.

B. Identification of the Intangible Assets of an Online Business

Often, the first difficulty that arises when a business holding primarily intangible or cyber assets goes into bankruptcy is the determination of what assets the business actually has. Traditional assets are often indicated in the accounting records of the business and are relatively easier to identify. On the other hand, intangible and cyber assets are often easy to overlook. The distressed firm itself may think that certain assets are of little value, even though these same assets are valued highly by third parties.[29] Issues of ownership can also arise when identifying these assets. An Internet company "may discover that under bankruptcy law[,] it does not have any intellectual capital or other intangible assets to sell because it does not own these assets as a matter of law even if they are used to operate its business."[30] Thus, in order to give an accurate value to the assets of the firm, it is important to not only identify what the assets of the business actually are, but also to determine the legal right of the company as to such properties.

25. Katherine J. Clayton, *Liquidating a Technology Company in Bankruptcy*, 4 N.C. J. L. & TECH. 169, 170 (2002).

26. Knowledge@Wharton, *supra* note 2.

27. Clayton, *supra* note 25, at 170-71.

28. Brady, et al., *supra* note 12, at 187.

29. Knowledge@Wharton, *supra* note 2.

30. *Id.*

It follows then, that in determining the assets of the online business, two steps are involved. First, the tangible and intangible assets of the company must be identified and separated.[31] As previously stated, the bulk of the assets of the online business are most likely to be intangible.

The second step involves the determination of the bundle of legal rights subject to appraisal.[32] The bundle of rights theory provides that

> complete intangible asset ownership, or title in fee, consists of a group of distinct legal rights. Each of these legal rights can be separated from the bundle and conveyed by the fee owner to other parties either in perpetuity or for a limited time period. When a right is separated from the bundle and transferred, a partial or fractional property interest results. It is possible to examine property interests in [individual] intangible assets from several points of view ... because the ownership, legal, economic[,] and financial aspects of intangible assets overlap. ... Different economic values [will] attach to the different ownership interests.[33]

When dealing with and identifying the value of intangibles, the bundle of rights theory must always be kept in mind. To put it simply, the right of the owner over the intangible asset is not a single right. There are, instead, several distinct legal rights over the intangible and separating one of these rights results in a partial right over the intangible asset.

Thus, the following discussion not only introduces the most common of the cyber assets of an e-commerce business, but also sheds some light on the key issues involved in the rights of the business over the asset.

1. Intellectual Property

The most definable of the intangible assets of an online business are its intellectual property.[34] Intellectual property "refers to creations of the mind: inventions[;] literary and artistic works[;] and symbols, names, images, and designs used in commerce."[35] Under the Intellectual Property Code of the Philippines,[36] intellectual property rights consist of:

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31. Brady, et al., *supra* note 12, at 189.

32. *Id.*

33. Robert F. Reilly, *Valuation of Dot-Com and Intellectual Property-Intensive Companies*, 19 AM. BANKR. INST. J. 30, 36 (2000).

34. Clayton, *supra* note 25, at 180.

35. World Intellectual Property Organization, What is Intellectual Property?, *available at* http://www.wipo.int/about-ip/en/ (last accessed Feb. 28, 2013).

36. An Act Prescribing the Intellectual Property Code and Establishing the Intellectual Property Office, Providing For Its Powers and Functions, and for Other Purposes [INTELLECTUAL PROPERTY CODE], Republic Act No. 8293 (1997).

(a) Copyright and Related Rights;

(b) Trademarks and Service Marks;

(c) Geographic Indications;

(d) Industrial Designs;

(e) Patents;

(f) Layout-Designs (Topographies) of Integrated Circuits; and

(g) Protection of Undisclosed Information (n, TRIPS).[37]

E-commerce and other online businesses may have a trademark on its business or product name, a copyright over the content it publishes, or a patent over the particular business process it exercises.

The right of the business over intellectual property that it uses depends on whether it owns it outright or is merely a licensee. As the owner of the intellectual property, the business may allow others to use it or sell off its rights completely.[38] If the business is merely a licensee of the intellectual property, then its ability to assign the license depends on its agreement with the owner. It is worth noting that a license to use intellectual property is generally treated as an executory contract under bankruptcy laws.[39] The ability to assign a license, however, is not governed simply by the terms of the contract. It is important to remember that when dealing with intellectual property, the provisions of the Intellectual Property Code must also be considered.[40]

2. Domain Name and Website

For e-commerce and other online businesses, the domain name is their primary business address.[41] The domain name is simply the specific web address that a person uses in order to access a website. The right to use a specific domain name comes from registration with an Internet registry. It is different from the website itself or the content that a person sees when he directs the browser to the specific web address.

Domain names are similar to trademarks, and may be considered part of the intellectual property of the business.[42] Like a trademark, the value of a domain name rests primarily upon the goodwill of the business that uses it.[43]

37. *Id.* § 4.

38. Brady, et al., *supra* note 12, at 208.

39. *Id.*

40. Clayton, *supra* note 25, at 181.

41. Brady, et al., *supra* note 12, at 193.

42. *Id.* at 193-94.

43. Clayton, *supra* note 25, at 182.

Any sale of the domain name necessarily includes "some of the goodwill of the company with which it is associated."[44] Domain names, however, deserve a separate discussion from intellectual property. This is because the issue of whether the domain name right-holder may transfer his right is not entirely clear.

In attempting to answer this question, it must be noted that an attempt to sell the domain name will be intertwined with the sale of the website.[45] In fact, Conrad proposes that the domain name is merely part of the bundle of property rights contained within a website.[46] These property interests include: "domain name, data, software, formula[e], in-house technology, content (video, audio, etc.)[,] logos, slogans[,] patents, trademarks, trade secrets, licenses[,] and contract rights, to name a few."[47]

This thesis seems to have found judicial support in the United States (U.S.). In *Kremen v. Cohen*,[48] the Federal District Court of California stated that domain names exist "separate and apart from [the] various services that make the domain names operational Internet addresses. These services are mere conditions subsequent [to the right to use domain names]."[49] Thus, at least in the U.S., domain names are recognized as a separate property right which can be sold or transferred.

3. Customer's Lists

Online businesses may compile databases that "contain not only customer names, addresses, credit card information[,] and phone numbers, but often shopping histories and Web-surfing habits."[50] This information is "often more sensitive and more valuable than the old economy information."[51] These databases are extremely valued and highly sought after, with Andrew J. Frackman & Rebecca C. Martin noting that

> never before has the accumulation of personal information been so important to businesses as it now is to many internet businesses. Indeed, the ease of accumulation and transfer of personal information is one of the greatest marketing claims of Internet companies. In many respects, in

44. *Id.*

45. Conrad, *supra* note 6, at 430.

46. *Id.*

47. *Id.*

48. Kremen v. Cohen, 99 F. Supp. 2d 1168 (N.D. Cal. 2000) (U.S.).

49. *Id.* at 1173 (citing Network Solutions, Inc. v. Umbro International, Inc., 529 S.E. 2d 80, 89 (Va. 2000) (U.S.)).

50. Brady, et al., *supra* note 12, at 190 (citing Paul Davidson, *Hot Commodity: Dot Com Lists: Creditors' Asset of Choice*, NAT'L POST, Mar. 5, 2001, at E-2).

51. Conrad, *supra* note 6, at 428.

> markets where the barriers to entry are low, as they are in many Internet businesses, the ability to collect personal information, and the advantage of being the competitor with the most or best information, is one of the attributes that drives many of the high market valuations of Internet companies.[52]

Whether or not customer information can be sold as part of the assets of the company certainly brings up data privacy concerns. The customers may not necessarily want their information being sold to another person. Concerns over the privacy of information shared online have led the Philippine Congress to enact the Data Privacy Act of 2012.[53] Under the Data Privacy Act of 2012, the transfer of personal information is not prohibited *per se*. This law imposes, however, as a condition that the transferor be responsible for the transferee's compliance with the Act, thus:

> SEC. 21. *Principle of Accountability.* — Each personal information controller is responsible for personal information under its control or custody, including information that have been transferred to a third party for processing, whether domestically or internationally, subject to cross-border arrangement and cooperation.
>
> (a) The personal information controller is accountable for complying with the requirements of this Act and shall use contractual or other reasonable means to provide a comparable level of protection while the information are being processed by a third party.
>
> (b) The personal information controller shall designate an individual or individuals who are accountable for the organization's compliance with this Act. The identity of the individual(s) so designated shall be made known to any data subject upon request.[54]

III. VALUATION OF CYBER ASSETS

It is admitted that "[v]aluation is a financial rather than a legal analysis."[55] Yet in conditions such as going-concern, bankruptcy, reorganization, liquidation, or orderly disposal, a company needs to evaluate and value its

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52. Brady, et al., *supra* note 12, at 190 (citing Andrew J. Frackman & Rebecca C. Martin, *Surfing the Wave of On-Line Privacy Litigation*, N.Y. L.J., Mar. 14, 2000, at 1).

53. An Act Protecting Individual Personal Information in Information and Communications Systems in the Government and the Private Sector, Creating for this Purpose a National Privacy Commission, and for Other Purposes [Data Privacy Act of 2012], Republic Act No. 10173 (2012).

54. *Id.* § 21.

55. Conrad, *supra* note 6, at 420.

intellectual and intangible assets.[56] Lawyers and judges have often found the need to use financial tools and analyses.

> Although sophisticated financial modeling and risk analysis developed outside the lawyers' discipline, lawyers have found it increasingly necessary to incorporate some of these financial concepts and models into their work as litigators and client counselors. Problems of valuation, whether for assessing damages or structuring complex transactions, cannot be dealt with meaningfully without an understanding of financial modeling. Similarly, judges must deal with various 'expert opinions' producing conflicting valuations, and must necessarily feel overwhelmed by the complexity and apparent inconsistency of these evaluations.[57]

Within the context of bankruptcy, the use of valuations is "as varied as the assets or companies being valued or the purposes for which the assets or companies are being valued."[58] More specifically, and as has already been alluded to, the valuation of online businesses "is more of an exercise in intangible asset-valuation."[59] Thus, the methods and processes presented are specifically geared towards the valuation of the intellectual and other intangible assets of a company.

A. Evaluating the Value of Intangibles

There are "three types of evaluations that particularly seem to dominate the field of intellectual property valuations: the Cost Approach ... ; the Market Approach ... ; and the Income Approach."[60]

Under the Cost Approach, the value of an asset is derived from the sale price of similar assets sold within the surrounding market.[61] This method is based on the replacement cost theory[62] or the economic principle of substitution.[63] The replacement cost theory postulates that "an investor will pay no more for an asset than the cost to obtain — by either purchasing or constructing — an asset of equal utility."[64] There are some drawbacks to the Cost Approach. There are often no reasonable substitutes for the online

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56. Anson, *supra* note 16, at 29.

57. Dorit Samuel, *Intellectual Property Valuation: A Finance Perspective*, 70 ALB. L. REV. 1207, 1209-10 (2007).

58. Conrad, *supra* note 6, at 420-21.

59. Reilly, *supra* note 33, at 30.

60. Samuel, *supra* note 57, at 1213.

61. *Id.* at 1213-14.

62. *Id.* at 1213.

63. Reilly, *supra* note 33, at 36.

64. *Id.*

business' intangibles.[65] Another problem is that "it does not consider the concept of time value of money."[66]

The Market Approach concludes that "in a free and unrestricted market, supply-and-demand factors will drive the price of an asset to a point of equilibrium."[67] In order to get to that equilibrium, it is necessary that there be an active market for the asset.[68] There must be large volumes traded daily and because of this, the Market Approach is not very useful in the valuation of intangible properties.[69] This is similar to the criticism of the Cost Approach in that there are often no adequate substitutes in the market. Intellectual property, for example, is often unique to the owner. This leaves us with the third approach, the Income Approach.

The Income Approach "takes into consideration all future/past cash flows [ ] that are derived from exploiting the property, the time span [ ] in which these cash flows will occur, and the discount rate [ ] that will account for the inherent risk in the variability of the cash flows."[70] At its core, the Income Approach values the assets based on its future cash flows, taking into account the factor of time and the discount rate of the currency into present day terms.

One can take the Income Approach one step further by employing the more sophisticated Discounted Cash Flow Approach. This evaluation "involves discounting the future generating net cash flows of a project, asset, or even a company to the present using a discount rate adjusted for risk."[71] Discounting "bring[s] all the future cash flows down to today's value, discounted by a risk-adjusted rate."[72] The Net Present Value takes the Income Approach even further "by including in the analysis the total cost of the project that can occur at the onset and/or any other time interval during the life of the project."[73] By removing all the possible costs to be incurred, the Net Present Value tries to show the ultimate value added by an asset to the firm.

The processes presented above discuss the ways in which a money value may be given to a specific asset. However, finding the value of a specific asset may not always be useful information by itself. While the value of

65. *Id.*

66. Samuel, *supra* note 57, at 1214.

67. Reilly, *supra* note 33, at 36.

68. Samuel, *supra* note 57, at 1214.

69. *Id.*

70. *Id.*

71. *Id.* at 1215.

72. *Id.* at 1216.

73. *Id.*

specific assets may be important for certain proceedings in insolvency, like in liquidation, it is also important to be able to find the value of the business as a whole. After all, the value of the business enterprise as a whole is an important consideration in the determination of whether or not a business will be able to repay its debts eventually.

B. Business Enterprise Valuation

There are generally two methods used in valuing the intangible assets of online businesses: the discrete method and the collective method.

In the discrete method of valuing the intangible assets of an online business, "each of the individual intangible assets is separately identified and appraised."[74] This means that each separate intangible, whether it be a copyright, patent, domain name, customer list, etc., is valued independently of the other intangibles, i.e., "all of the [companies'] intangibles are appraised 'discretely.'"[75] The "estimated value of each of the intangible assets is added to the estimated values (usually *deminimus*) of the tangible assets and net working capital in order to estimate the [ ] business enterprise value."[76]

In the collective method, "the total intangible value of the business (from whatever economic phenomena contribute to that value) is analyzed and quantified in the aggregate,"[77] with such aggregate often called goodwill.[78] For this purpose, goodwill is defined as "the total value of the [ ] business in excess of the (usually *deminimus*) tangible assets and net working capital."[79] In the collective method, identifying the source of the intangible is not important since the one objective is to identify the total amount of intangible value. Robert F. Reilly explains, thus:

> In the discrete method, dot.com intangible assets are identified and appraised. In the collective method, dot.com intangible value is identified and appraised. The distinction between intangible assets and intangible value may seem semantic, but it is an important distinction that represents the primary conceptual and practical difference between these two analytical methods. In the discrete method, it is necessary to identify which individual intangible assets create what amount of value. In the collective method, it is sufficient to identify that intangible value exists and what that total value is. The source of, or cause of, that intangible value is not especially relevant in the collective method.[80]

74. *Id.*

75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. Reilly, *supra* note 33, at 30.

80. *Id.*

C. Process of Valuation

The various valuation methods present yet another difficult decision. Each method has its own benefits and costs. E-commerce is still a relatively new field and which has yet to find stability in the rapidly changing technological environment. The basis for determining intrinsic value has not yet gained sound basis.[81] The difficulty of valuing these assets leads to irrational market valuations of online businesses.[82] Regardless of the method chosen, the most important thing is to act quickly. Most "of the key assets of dot-com companies, from websites to proprietary software to computer equipment[,] are goods that depreciate quite rapidly."[83]

The Income or Discounted Cash Flow Approach is often used by appraisers in valuing these intangible assets.[84] On the other hand, analysts tend to use a combination of the Cost, Market, and Income Approaches.[85] This multi-dimensional approach synthesizes different value indications. The analyst compares the different valuations and uses his judgment in estimating a value that takes into account all the relevant factors.[86]

From the type of person that uses the technique, it can be concluded that choice of the valuation technique should depend on the purpose for which the value is sought. The appraiser is more concerned about the about the ability of the asset to provide additional value to the business. On the other hand, the analyst, by considering the cost or market approach, is more concerned about what the asset might return in case of an exchange. This is sound advice for the parties involved in an insolvency proceeding. This is because in an insolvency proceeding, the parties each have different agendas. At the same time, different aspects of the insolvency proceedings have different purposes. Given this diversity, it may be necessary to adopt different techniques at the same time to adequately protect the interests of the parties in a case.

IV. CONCLUSION

The proliferation of e-commerce has made entry into the marketplace cheaper and easier. Yet there exists a fundamental difference between

81. Brady, et al., *supra* note 12, at 220 (citing BENJAMIN GRAHAM, ET AL., SECURITIES ANALYSIS: PRINCIPLES AND TECHNIQUE 4 (1939 ed.)).

82. Brady, et al., *supra* note 12, at 221 (citing Reilly, *supra* note 33, at 37).

83. Brady, et al., *supra* note 12, at 220 (citing Joanna Glasner, *When Dot-Coms Are But a Vestige*, WIRED NEWS, Nov. 20, 2000, *available at* http://www.wired.com/techbiz/media/news/2000/11/40201 (last accessed Feb. 28, 2013)).

84. Brady, et al., *supra* note 12, at 221.

85. *Id.* at 222.

86. *Id.*

traditional brick and mortar establishments and those operating purely on the Internet. The asset structure of online businesses leans heavily towards intangible assets. Whereas traditional businesses mostly acquire physical properties, such as manufacturing equipment and inventory stock, online businesses often do not own any equipment, with only a minimal stock of inventory. What remains the same for both types of businesses is the inherent risk of failure.

Should any business experience financial distress, the first thing that needs to be done is to identify and give value to the assets of the firm. This will provide courts the information to determine whether a company can be rehabilitated. Even if liquidation is deemed the best option, accurate valuation of the assets will enable creditors to recover the most that they can. With online businesses, however, this procedure is not quite so easy since most of their assets are intangible. The process of assigning value to intangibles has not achieved the level of stability that would eliminate irrational market valuations.

Several methods of valuating intangible assets have been proposed and are being tested. The choice of method is primarily determined by the purpose for which the valuation is being done and the specific type of asset that is being valued. Nevertheless, when bankruptcy is being considered, analysts have often used a multi-disciplinary approach. Since each of the different methods of valuation has its own pros and cons, using one's judgment to estimate value based on all relevant factors seems to be the best way to give due regard to the concerns of the creditor and the distressed debtor.