

**Testimony before the ABI Chapter 11 Reform Commission**

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My name is Edward Altman and I am the Max L. Heine Professor of Finance at the NYU Stern School of Business, where I have been on the Finance Faculty for 47 years. During these almost five decades, I have been a student and researcher of the U.S. Corporate Bankruptcy process and also the associated financial markets, including the High-Yield Bond and the Distressed Debt Markets in the United States and abroad. I have had the privilege of testifying before the Congressional Bankruptcy Commissions for the 1978 and 2005<sup>1</sup> revisions to the Bankruptcy Code (Vitae attached). It is an honor for me to testify before this distinguished ABI Commission today.

In addition to the Bankruptcy Commission testimonies, I also was called to testify before the U.S. House of Representatives Financial Services Committee's Hearings on the "Review of Industry Plans to Stabilize the Financial Condition of the American Automotive Industry." on December 5, 2008. At that hearing, I testified as to the importance and desirability of G.M. and Chrysler filing for protection under Chapter 11 of the Bankruptcy Code. I am pleased to observe that the recommendation was eventually realized, albeit with a delay of approximately six months. I know that the Commissioners before me are well aware of the events surrounding that historic occasion.

Today, I am pleased to discuss with you the evaluation, scope and importance of the development and contributions of the Distressed and Defaulted Debt markets, particularly in the United States, and also to summarize a number of scholarly research publications that I, and others, have contributed to the better understanding of how these markets have performed and the important role they have played in our financial-economic system. The background for my research and continued study of these markets was motivated by my

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<sup>1</sup> E. Altman, 1996, "Comments on Revisions of the U.S. Bankruptcy Code," Special Congressional Commission on Bankruptcy Reform, Washington, D.C.

good fortune to have been commissioned by “The Foothill Group” to prepare a series of “White Papers” on the Distressed Debt Markets in 1990 and 1992.<sup>2</sup> These studies provided the original analysis to the development of the Altman Defaulted Bond and Bank Loan Indexes, now called the **Altman-Kuehne NYU Salomon Center Defaulted Bond and Defaulted Loan Indexes**, one of the most well known and respected benchmarks of these securities. Tables showing the size of these indexes over time are shown in Figures 1-2 of this testimony. Our indexes go back to 1987 (Bonds) and 1995 (Loans) and we continue to maintain them. Indeed, we expect to launch an ETF on Distressed and Defaulted Bonds in the near future, whereby institutions and individuals can participate in markets which heretofore have mainly involved Hedge Funds (HFs) and the distressed debt groups of Private Equity (PE) firms, as well as the original investors (e.g., banks, pension funds, mutual funds, and individual investors). I estimate that there are, today, more than 200 financial institutions investing between \$350-400 billion in the distressed debt market in the U.S. and a substantial number and amount operating in Europe and in other markets. Interestingly, the corporate bond market becomes more liquid and volume increases as a firm becomes distressed and especially at the time that it defaults, see R. Jankowitsch, F. Nagler and M. Subrahmanyam (2012), “The Determinants of Recovery Rates in the US Corporate Bond Market,” Working Papers, Vienna University and NYU Stern School, September. I believe that Professor Hotchkiss’ new work also substantiates this assertion.

It is interesting to note that we expanded our analysis to distressed bank loans in 1995 as loans became more liquid and trading increased. Loans became subject to intense scrutiny by investors, providing the incentive to apply more sophisticated valuation analytics to those heretofore essentially “buy and hold assets.” Also, the rating agencies began rating large commercial loans in the mid to late 1990s coincident with the tremendous growth in the syndicated loan market coincident with these developments. Distressed investors have played an important role in the depth and liquidity of the loan market, as well as the bond market.

To address the question of the impact and role that institutional investors (e.g., Hedge Funds) have had on the bankruptcy process, I would like to cite the impressive growth, scope and specific actions that these

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<sup>2</sup> E. Altman, 1990, “Investing in Distressed Securities: The Anatomy of Defaulted Debt and Equities,” Foothill Group, Inc., Los Angeles, CA, April and “The Market for Distressed Securities and Bank Loans,” Altman-Foothill Report II, Foothill, Los Angeles, 2002. The former was the basis for E. Altman (1991), *Distressed Securities*, Probus Press, reprinted by Beard Books, 1999.

investors, and others, have played in the evolution of the Chapter 11 reorganization and post-reorganization process over the last 20 plus years. Figure 3 shows our calculations of the annual amounts of bankruptcy liabilities for Chapter 11 filings with liabilities greater than \$100 million from 1989-2012 (3Q). These filings total a staggering \$2.9 trillion (\$2.3 trillion without Lehman) requiring substantial efforts on the part of debtors and creditors, and their advisors, to be restructured so that debtors can attempt to emerge from the process as a going-concern. In my opinion, the combined efforts of the Bankruptcy Law Profession and Restructuring Specialists, both investment bankers and turnaround consultants, along with the coincident growth of institutional investors (buy-side) and broker-dealers (sell-side), have enabled this enormous amount of bankruptcy and defaulted debts to be restructured reasonably effectively.

The original creditors of the debtor, the new investors in the distressed debt and the Bankruptcy Bench must share the burden of reaching an agreement on the plan of reorganization (POR). All parties involved can now continuously and clearly observe the market's assessment of the debtor's liabilities so as to determine whether to sell or retain their interests and those prices provide important benchmarks for negotiating. This enhanced price discovery, compared to pre-1990 experience, helped to provide a more liquid market for the debt as the debtor works its way through the restructuring. Price discovery is not only important for the major stakeholders in the bankruptcy process, it also makes markets more efficient and provides important benchmarks for the future value of those securities and the debtor. Indeed, we [E. Altman, A. Gande and A. Saunders, "Bank Debt Versus Bond Debt: Evidence from Secondary Market Prices," *Journal of Money, Credit and Banking*, 42 (4), pp. 755-767, (2012), found that bank loan prices provide an even earlier warning that a firm is likely to default than corporate bonds, enabling creditors to monetize their holdings before values decrease even further and to motivate restructuring efforts and turnaround strategies earlier than would be the case if those markets were less developed. Studies have also found that the prices of debt securities at the time of default are efficient predictors of future levels of recoveries and reorganization values. See E. Altman and A. Eberhart, (1994), "Do Seniority Provisions Protect Bondholders' Investments?" *Journal of Portfolio Management*, Summer.

In addition, the debtor-in-possession (D.I.P.) financing provided by banks, original investors and, in many cases, by institutional investors, as well as the critical component of exit-financing (both debt and equity), are unique aspects of the U.S. Chapter 11 process, helping to ensure that the debtor can carry on its business both during and after bankruptcy. In most cases, all of the players, even if they are adversaries in the assessed valuation of the debtor, are interested in the long-term viability of the bankrupt entity.<sup>3</sup>

Figure 4 shows my estimate of the size of the Defaulted and Distressed Debt Market from 1990-2012 (2Q), some years missing in the time series. “Defaulted Debts” are publicly registered and traded liabilities, mostly bonds, and “Distressed Debts” are bonds selling at yields at least 1,000 basis points (bps) over comparable duration U.S. Treasuries. Data in Figure 4 include public and private debt, both their face and market values. As far as I know, we are the only analysts providing these statistics. As can be seen, these amounts have totaled close to \$1 trillion (face value) each year since 2000 and more than that figure since 2008. Market values have totaled from \$500 billion to close to \$1 trillion each year for the last dozen years. Together with our estimate of the amount of distressed debt under management, discussed above, these statistics form the demand and supply dynamics so critical for any viable financial market. These dynamics have provided the incentive for a special breed of investors, experienced in distressed investing, to attract capital and, as mentioned earlier, provide a potential outlet for original investors to monetize their troubled assets over a period that can stretch from a year or more before the bankruptcy filing, or some other “default” event, and lasting throughout the duration of the bankruptcy process. This liquidity is crucial to those other investors who do not have the resources or expertise to hold their claims through the resolution of the reorganization.

Distressed Debt investing, and in some cases, additional investments into the equity of distressed companies, generally can be categorized as (1) Passive, (2) Active and (3) Active-Control. Passive investing generally involves the trading of distressed securities without any direct influence on the bankruptcy process. Active-non-control investing can involve activities whereby the investor, usually with a significant amount of

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<sup>3</sup> I am well aware that some of these major “players” are adversaries in the process and that too often, in my opinion, the firm has to undergo a second or third distressed restructuring. This recidivism issue is perhaps best left to discuss in another hearing.

the claims, can attempt to influence the outcome of the bankruptcy process by directly or indirectly acting as a member of the creditors committee or by any means that impacts the valuation of the debtor and its securities, both before and after emerging from the bankruptcy process. The latter oftentimes involves investing new capital in the company. The Active-Control strategy involves a direct impact on the management of the debtor, usually by owning a significant amount of the post-restructured equity of the emerged entity, sometimes resulting in the distressed investor becoming the CEO or Chairman, or simply by owning a significant enough stake in the company to gain control of the emerged firm.

I would like at this point to introduce briefly the academic literature on the role and effectiveness of the Active-Control, Distressed Investors. These works further support the role of distressed investors in the governance of the firm and the reorganization process. In 1997, Edith Hotchkiss (Boston College) and Robert Mooradian (Northwestern University) published an important article called “Vulture investors and the market for control of distressed firms,” in the *Journal of Financial Economics*, one of the most respected scholarly journals in Finance (43, 1997, 401-443). Professor Hotchkiss was a Ph.D. student at the Stern School of Business and is one of my most successful Ph.D. students. She has written many articles and books on bankruptcy and capital markets and is my co-author on “Corporate Financial Distress and Bankruptcy,” 3<sup>rd</sup> edition, John Wiley & Sons, 2006. Professor Hotchkiss will be following as an additional witness to these hearings.

Hotchkiss and Mooradian investigated the role of vulture investors in the governance and reorganization of a sample of 288 firms that defaulted on their public debt over the period 1980-1993. They found evidence of vulture investing in 172 firms (60% of the sample), much of the time whereby the investors hold more than one-third of the amount of the debt outstanding and/or pumped new equity into the restructured firms, positions giving them influence over the terms of the restructuring. They concluded that the improvement in post-restructuring operations performance relative to pre-default levels is greater when the vulture investors become CEO or Chairman or gain control of the target firm compared to when these Active-Control investors were not involved. I will leave the details of this study for Professor Hotchkiss’ testimony. My own observations and experience tend to support their findings.

A more recent study of the presence of hedge funds in the Chapter 11 process and their impact on bankruptcy outcomes were provided by Wei Jing (Columbia), Kai Li (University of British Columbia) and Wei Wang (Queens University, Canada) and published in the *Journal of Finance* (another elite scholarly journal in finance), 2012, (“Hedge Funds and Chapter 11,” *Journal of Finance*, vol. LXVII, No. 2, April 2012, 513-559). Their study analyzed hedge funds involved in a comprehensive sample of 474 Chapter 11 cases from 1996-2007 and concluded that in close to 90% of the cases, there was clear evidence of publicly observable involvement by HFs, confirming the general conclusion that HFs have become the most active investors in the distressed debt market. The authors update earlier studies on bankruptcy and additional insights on HFs as an emerging force in the Chapter 11 process. I believe that Professor Hotchkiss will provide more detail on this study, as well.

As noted earlier, one of the unique aspects of the Bankruptcy process in the U.S. is the post-Chapter 11 performance of the debtor and its owners. Usually, the new owners of the equity are the “old” creditors, based on either the conversion of debt to equity or the injection of new equity financing, the latter providing the critical new liquidity for the debtor to compete. Together with two co-authors, I conducted the first study on the performance of the new equity in the post-reorganization period, A. Eberhart, E. Altman and R. Aggarwal, (1999), “The Equity Performance of Firms Emerging from Bankruptcy,” *Journal of Finance*, October, pp. 1855-1868.

We analyzed the stock return performance of 131 firms emerging from Chapter 11 over the period 1980-1993 for 200 days, post-emergence. Using different estimates of expected returns to control for risk, we found consistent evidence of significant abnormal (excess) returns on the 131- firm portfolio, averaging about 28% excess return, i.e., 28% in excess of the return on the overall stock market, adjusting for risk. We attributed these significant positive returns to the fact that these firms performed far better than what the market expected. Results such as these help to motivate distressed investors to provide needed financing to firms exiting Chapter 11. While these excess returns did not continue to manifest in all successive periods to our initial study period, we have continued to observe extraordinary examples of positive post-Chapter 11 performances for several years, e.g., K-mart, Lyondell, and Delphi Corporation.

In summary, in my opinion, the role of capital markets and that of distressed investors has had an important and generally positive impact on the US bankruptcy reorganization process.

Thank you for giving me the opportunity to testify before the Commission today.

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**Edward Altman**

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**Date**

**Figure 1. Size of the Altman-Kuehne Defaulted Bond Index, 1987–2011**  
(Dollars in Billions)

Year-End	Number of Issues	Number of Firms	Face Value (\$ Billions)	Market Value (\$ Billions)	Market/Face Ratio
1987	53	18	5.7	4.2	0.74
1988	91	34	5.2	2.7	0.52
1989	111	35	8.7	3.4	0.39
1990	173	68	18.7	5.1	0.27
1991	207	80	19.6	6.1	0.31
1992	231	90	21.7	11.1	0.51
1993	151	77	11.8	5.8	0.49
1994	93	35	6.3	3.3	0.52
1995	50	27	5.0	2.3	0.46
1996	39	28	5.3	2.4	0.45
1997	37	26	5.9	2.7	0.46
1998	36	30	5.5	1.4	0.25
1999	83	60	16.3	4.1	0.25
2000	129	72	27.8	4.3	0.15
2001	202	86	56.2	11.8	0.21
2002	166	113	61.6	10.4	0.17
2003	128	63	36.9	17.7	0.48
2004	104	54	32.1	16.9	0.53
2005	98	35	29.9	17.5	0.59
2006	85	36	31.2	23.3	0.75
2007	48	17	13.8	6.3	0.46
2008	77	28	29.6	4.5	0.15
2009	91	34	45.5	15.1	0.33
2010	53	16	26.4	8.3	0.31
<b>2011</b>	<b>57</b>	<b>19</b>	<b>18.0</b>	<b>6.1</b>	<b>0.34</b>

Source: E. Altman and B. Kuehne, "The Investment Performance and Market Dynamics of Defaulted Bonds and Bank Loans: 2011 Review and 2012 Outlook", *NYU Salomon Center*, February 2012.

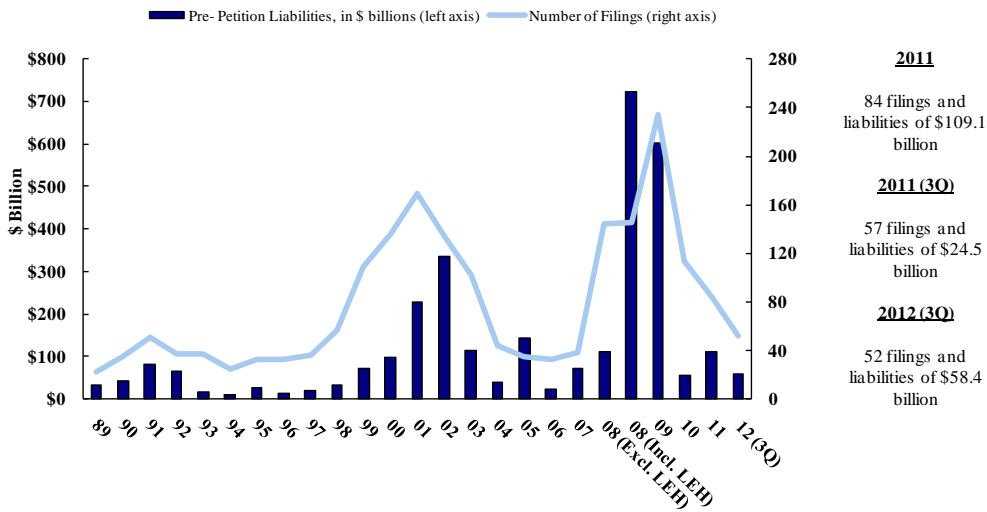
**Figure 2. Size of the Altman-Kuehne Defaulted Bank Loan Index, 1995–2011**  
(Dollars in Billions)

Year-End	Number of Facilities	Number of Firms	Face Value (\$ Billions)	Market Value (\$ Billions)	Market/Face Ratio
1995	17	14	2.9	2.0	0.69
1996	23	22	4.2	3.3	0.79
1997	18	15	3.4	2.4	0.71
1998	15	13	3.0	1.9	0.63
1999	45	23	12.9	6.8	0.53
2000	100	39	26.9	13.6	0.51
2001	141	56	44.7	23.8	0.53
2002	64	51	37.7	17.4	0.46
2003	76	43	39.0	23.9	0.61
2004	45	26	22.9	18.2	0.80
2005	41	21	18.7	16.2	0.86
2006	27	23	11.2	10.0	0.89
2007	31	13	13.0	10.4	0.79
2008	71	31	27.5	10.7	0.39
2009	67	27	57.6	34.1	0.59
2010	20	12	11.3	5.9	0.52
<b>2011</b>	<b>28</b>	<b>15</b>	<b>9.1</b>	<b>4.7</b>	<b>0.52</b>

Source: E. Altman and B. Kuehne, "The Investment Performance and Market Dynamics of Defaulted Bonds and Bank Loans: 2011 Review and 2012 Outlook", *NYU Salomon Center*, February 2012.



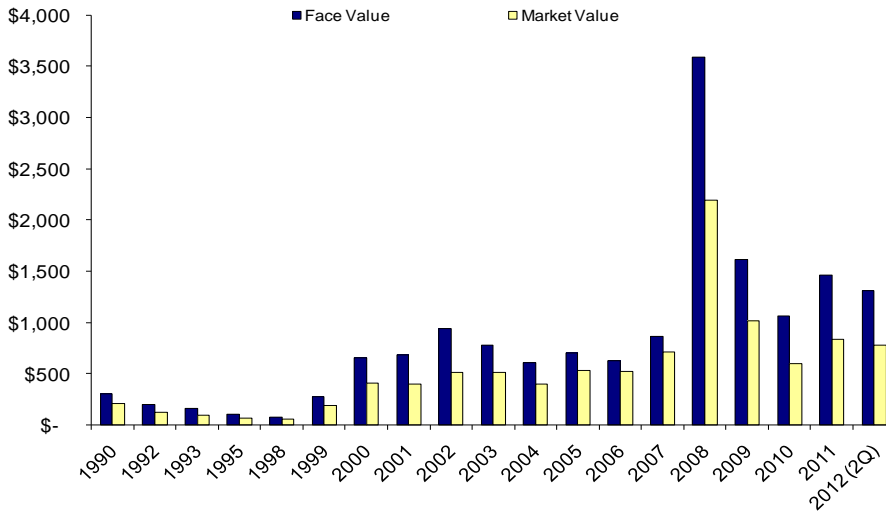
**Figure 3. Total Filings and Liabilities<sup>a</sup> of Companies Filing for Chapter 11 Bankruptcy, 1989-3Q 2012**



<sup>a</sup> Minimum \$100 million in liabilities.

Source: E. Altman & B. Kuehne, "Defaults and Returns in the High-Yield Bond Market: First-Half 2012 Review", NYU Salomon Center, July 2012.

**Figure 4. Size of the US Defaulted and Distressed Debt Market, 1990-2Q 2012 (Dollars in Billions)**



Source: E. Altman & B. Kuehne, "Defaults and Returns in the High-Yield Bond Market: First-Half 2012 Review", NYU Salomon Center, July 2012.