The economic impact of Chapter 11 reorganization versus Chapter 7 liquidation

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ABSTRACT

This paper uses a regional economic impact model to examine the net economic impact when businesses successfully emerge from Chapter 11 of the U.S. bankruptcy code rather than Chapter 7 liquidation. The findings indicate that there is a measurable and significant impact on G.D.P and employment for the average firm that successfully emerge from Chapter 11. The findings also suggest the possibility of further impact if bankruptcy policy guided more firms toward Chapter 11 reorganization rather than liquidation.

Keywords: Chapter 11, Reorganization, Economic Impact, Going Concern, Liquidation

INTRODUCTION

For the past one hundred and fifty years or so, bankruptcy laws have generally attempted to achieve two separate and conflicting ends. The first is to protect creditors and encourage lending by creating greater certainty about debt repayment in the event of a business failure. The second is to encourage entrepreneurship and business development with the possibility of providing second chances in the event of business failure. The U.S. Bankruptcy Code has attempted to strike a balance between these competing interests with the goal of promoting the greatest overall potential for economic development.[1]

Little attention has been paid to actually quantifying the effects of a bankruptcy code which provides for liquidation and restructuring or determining the optimal balance between those two possibilities as it relates to the public good. Public policies and laws appear to have arisen more through qualitative reasoning than from the use of analytical methods. This is understandable; it is not easy to construct counterfactuals as to what might have happened for any particular company if bankruptcy laws struck a different balance. That said, progress toward quantifying the effects of bankruptcy law could enhance our understanding of how to optimally balance the demands of creditors and debtors with that of society.[2]

One area of bankruptcy policy worth examining as to the merits underlying these assumptions is the liquidation verses the reorganization of financially troubled businesses. Specifically, is there sufficient empirical evidence to examine whether society is better off trying to rehabilitate troubled businesses or simply liquidating them? The Code allows for both possibilities; with Chapter 7 of the Code providing for liquidation and Chapter 11, reorganization.

This question has become more relevant with several legal scholars decrying Chapter 11 as a viable mechanism due to its lack of usefulness and economic efficiency[3]; along with others who think Chapter 11 is due for imminent replacement or repeal.[4] Most of these critics base their analysis on the current problems with the functional and procedural aspects of the Code. They also point to the changes in the capital markets and globalization as primary mechanisms for the decreasing need for Chapter 11 as a useful tool in dealing with business insolvency.

Alternatively, there have been several other scholars whose studies have attempted to quantify the financial value of a Chapter 11 over that of Chapter 7. One such study, conducted by Professors Bris, Welch, and Zhu states, "the average Chapter 11 case retains (financial) value seventy-eight percent better than the average Chapter 7 case."[5] The authors also find that there was a 32% to 51% full recovery rate for secured creditors of Chapter 7 cases while in contrast, 72% of Chapter 11 secured creditors were fully satisfied.[6] They go on to find that "unsecured creditors receive nothing in 95% of our chapter 7 cases" and that the "unsecured (Chapter 11)

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[1] 11 U.S.C. Chapters 7 and 11 (2013)
[2] Edward R. Morrison (2007). Bankruptcy Decision Making: An Empirical Study of Continuation Bias in Small-Business Bankruptcies. Journal of Law and Economics, *50*, 381, 411. While the study only considered the value of small business bankruptcies, the author concluded that a "careful examination of the benefits of Chapter 11 is also needed".
[3] Barry E. Adler (1992), Bankruptcy and Risk Allocation, Cornell Law Review, *77*, 439, 463-464. The author discusses the issues associated with bankruptcy reallocation verses its costs.
[4] Douglas G. Baird and Robert K. Rasmussen (2002). The End of Bankruptcy. Stanford Law Review, *55*, 751, 752.
[5] Arturo Bris, Ivo Welch and Ning Zhu (2006). The Costs of Bankruptcy: Chapter 7 Liquidation versus Chapter 11 Reorganization. Journal of Finance, *61*, 1253, 1269.
[6] Id. at 1287

creditors are more fortunate" with a "mean (median) recovery rate of 52%". [7] While good for those directly involved in a Chapter 11, this does not answer the question whether Chapter 11 provides greater ongoing economic value to society as a whole over that of Chapter 7.

While certainly there are some firms for which Chapter 7 liquidation and dissolution is the correct outcome, it may be in the public good to promote the reorganization of some financially struggling businesses when the underlying business model is not permanently or substantially flawed. In these cases, where financial difficulties are caused by a one-time misstep or temporary difficulty, it is worth considering how much society might have to gain by availing itself to greater use of Chapter 11 over that of Chapter 7.

This paper examines the economic impact when firms successfully emerge from Chapter 11. The overall objective is to examine whether policy encouraging greater survival rates might increase overall economic activity. Regional Economic Models, Inc. (REMI)'s Policy Insight model is used to estimate the economic impact of a selection of successfully emergent Chapter 11 firms. [8]

It is worth mentioning what this research does not consider. It does not consider the more general and indirect consequences of when businesses liquidate. While poignant and interesting since most of us have some anecdotal experience on how devastating such business failures are to the local community and everyone involved, this current inquiry is limited to those firms that successfully emerge through Chapter 11. This study does not enter the debate of whether the greater use of a single sale of the business as a going concern might supplant the more complex need for the collective forum and possibly Chapter 11 altogether.[9] Nor, does it consider if the success rates of firms emerging from reorganization prove the current efficacy of Chapter 11, a topic addressed by Warren and Westbrook.[10]

Chapter 7 verses Chapter 11

As previously mentioned, the law provides for several alternatives for businesses that are experiencing financial hardship. The most common method for a business coping with insurmountable financial hardship is to simply wind up its corporate affairs and dissolve without entering bankruptcy.

Another alternative is Chapter 7 of the Bankruptcy Code, which is designed to liquidate a business in an orderly manner while preserving the greatest amount of assets, first for the creditors and then for the owners. The business that enters Chapter 7 is generally electing to end its existence as a going concern. The owner(s) usually lose all of their equity in the business and potentially more, if there are personal guarantees involved. Creditors are repaid based upon whether they are secured or unsecured and by a priority system as established by bankruptcy law. Rarely do unsecured creditors receive any assets from a Chapter 7 bankruptcy, amounting to a total loss for them as well. Unsecured creditors are usually comprised of trade creditors such as suppliers. Secured creditors are usually institutional financiers such as banks.

However, if the owners of the financially troubled business believe the business can be rehabilitated and ultimately saved as a going concern, they can elect to file under Chapter 11 of

[7] Id. at 1289
[8] Details about REMI are available on their website: www.remi.com
[9] Baird and Rasmussen, Supra note 4, 777
[10] Elizabeth Warren and Jay Lawrence Westbrook (2009). The Success of Chapter 11: A Challenge to the Critics. Michigan Law Review, *107*, 603, 642.

the Bankruptcy Code. Chapter 11 provides temporary protection from the company's creditors to allow sufficient time for the business to propose a reorganization plan to the Court. An acceptable plan must preserve a significant amount of capital lent to both secured and unsecured creditors, while providing the debtor the opportunity to restructure in such a way as to put the business back on sound financial footing. The court must ultimately approve the plan before it can go forward. At various times during the process, Chapter 11 status can and often is converted to a Chapter 7. This can be done either voluntarily or involuntarily, by either the business or the Court, if it becomes apparent that there is little or no hope for the plan to work and as such for the business to be salvaged as a going concern.

The Economic impact of a Chapter 7 compared to that of Chapter 11

Since all businesses which avail themselves to bankruptcy protection do so with the specter of ending in liquidation, it is Chapter 7 that should then be considered as the baseline from which to compare all other situations. As previously stated, if a business opts for a Chapter 7, they are effectively electing to go out of business since in almost all situations the tangible assets are liquidated to satisfy the claims of the creditors. Simply stated, all economic activity previously associated with that business ceases and it is as if it was never in business for the purpose of measuring economic activity and impact.

Conversely, when a business elects to enter Chapter 11 there is a potential for jobs to be retained, continued positive economic activity, equity maintenance and even wealth creation. Effectively, this is no different than if a new business had come into being for the first time. While there is very little data or research in this area, there is at least one study which empirically demonstrates that a rehabilitated business is as strong or possibly even stronger and creates greater economic impact for society than a similar firm that never enters bankruptcy protection under Chapter 11.[11] This seems somewhat intuitive since the human resources and owners of the rehabilitated business do not start from scratch, but rather have experience and a better idea of what to do and maybe more importantly, what not to do, to avoid repeating the same mistakes. Miller and Waisman also point this out by stating, "assets already in use have more value than assets not yet put into use. Starting a business from scratch is expensive and time-consuming and entails a large degree of entrepreneurial risk. Additionally, companies maintain going concern value as a result of centralized management, overlapping systems and other benefits of economies of scale."[12]

It is worth noting that many bankruptcies arise from temporary circumstances, such as economic downturns, which can cause businesses to fail. But downturns and market changes may reverse over time, which may in turn allow the business to once again prosper. Overall, Chapter 11 seems much better suited to address the cyclical nature of our market-based economy than Chapter 7.

[11] Varouj A. Aivazian and Simiao Zhou (2012). Is Chapter 11 Efficient? Journal of Finical Management, *41*(1), 229, 253.
[12] Harvey R. Miller and Shai Y. Waisman (2004). Does Chapter 11 Reorganization Remain a Viable Option For Distressed Businesses for the Twenty-First Century? American Bankruptcy Law Journal, *78*, 153, 192.

DATA

As previously stated, there is very little research that has been conducted in this area. This is almost as equally true for the data available. Ideally, studies would have longitudinal data on pre- and post-bankruptcy sales for all firms filing for either Chapter 11 or Chapter 7, along with information about company financials before and after bankruptcy. This preliminary study will use the data from UCLA-LoPucki Bankruptcy Research Database (BRD). [13]

The BRD consists of approximately 200 fields of data on each of the approximately one thousand large public company bankruptcies filed in the United States Bankruptcy Courts since October 1, 1979. The BRD is updated monthly. The purpose of the BRD is to promote research by providing a statistical-analysis-ready core of basic data. The drawback of using this particular database is twofold. First, it is only a sampling of "large" public companies, thereby excluding a greater number of small companies and second, it is not representative of all firms. The company data comes in 17 fields as follows:

Company related fields
- SIC code:
- Pre-filing assets in millions of current dollars:
- Pre-filing sales in millions of current dollars:
- Pre-filing number of employees:
- Cause of the bankruptcy:
- Place of incorporation:
- Court for city of headquarters:

Chapter 11 case related fields
- Court district of filing:
- Court city of filing:
- Did the firm form shop?
- Who filed case?
- Year of filing:
- Year of case disposition:
- Disposition:
- Days from filing to disposition:
- Prepack status:

After the case related fields:
- Did the firm emerge?
- Did the firm refile?

METHODOLOGOY

The analysis that follows examines every firm in the BRD who successfully emerged from Chapter 11 and for which the database had information about the sales for the year following their emergence, from 1985 to 2010. Note that this is not a random sample of all such firms who emerged from Chapter 11 during this time period; it is simply all such firms whose information appears in the BRD. It is also important to recognize that the sales of successful

[13] UCLA-LoPucki Bankruptcy Research Database (2014). http://lopucki.law.ucla.edu/index.htm .

emerging firms are not the same as the hypothetical emerging sales of a firm that actually liquidated. It's likely that the sales and impact in this analysis will be somewhat higher than the hypothetical sales and impact of one of these liquidated firms. The aim here is simply to provide an approximation of the impact an average firm saved from Chapter 7 could have on GDP and employment. Getting a sense of the impact of emergent Chapter 11 firms can provide a context for considering the benefits of policies that would enable more firms to successfully emerge. Table 1 (Appendix) shows the average annual sales, by industry and overall, of the emerging firms in this dataset.

As previously stated, this study will use Regional Economic Models, Inc. (REMI)'s Policy Insight model to generate the economic impact estimates of the average emerging firm. The REMI model combines a traditional input-output model with general equilibrium modeling to estimate the impact of economic variables. In this case, the model estimates the effect of the added sales from emerging Chapter 11 firms to the baseline levels of economic activity. The model takes into account that the presence of an additional firm in an industry is likely to compete with other firms in that industry. The impact of adding an additional firm is generally lower than the firm's share of sales, since some of those sales come at the expense of a competitor. Similarly, the sales lost from a failed firm are not completely recovered by competing firms. The REMI model adjusts for these kinds of effects and gives a more realistic estimate of impact than a simple multiplier model. REMI also accounts for the indirect effects of the firm's activity, including the secondary economic activity that is indirectly supported by the firms.

ANALYSIS

The results of the estimation are in Table 2 in the Appendix. Generally, these results can be interpreted as the average impact from an emerging Chapter 11, though some caution is advised in that interpretation. These are the impacts of the firms in the database, which are the largest firms, and therefore not representative of all firms that go through Chapter 11. The numbers of firms in some industries are quite small, and the distributions of firms across industries are not necessarily representative of all Chapter 11 cases. That said, they provide a good idea of how substantial the economic impact of emerging Chapter 11 firms can be if all such firms where considered.

Column 1 of Table 2 shows the average employment impact by industry for the average firm in this study. For the firms in this dataset, the average emerging firm supports 28.1 thousand jobs (FTE)[14]. Column 2 shows the average GDP impact by industry and the average GDP impact across all firms. The firms in this dataset average $1.75 billion in additional GDP.

There are interesting results when comparing the sales in different industries to their economic impact. In the retail sector, an emerging firm from the BRD averages nearly $2.9 billion in sales (Table 1), with a GDP impact of around $0.8 billion (Table 2), perhaps not surprising given the highly competitive nature of retail. On the other hand, the mining firm's emerging sales of $163.9 million has a GDP impact of $782.5 million. The third column in Table 2 shows the GDP impact per dollar of sales in each industry and overall. Each dollar of sales, by these emerging firms, raises state GDP by an average of $0.836.

It is worth repeating that this model is specific to one state. Other states might get different impact results in certain industries. More importantly, a multi-region or national model

[14] The average is across the 109 firms, not across the 8 industry sectors.

would likely give different and greater impacts than a one-state model. In a one-state model, there are significant leakages as firms import goods and services from other states. A national model might better capture the total economic impacts that aren't contained within one state.

Do these findings based on emerging Chapter 11 firms give some insight as to the lost impact from firms that instead end up in Chapter 7 liquidation? Since emerging firms have higher sales, this analysis suggests that emerging firms are likely to have higher impacts than that of firms ended up in liquidation. As such, it is worth considering whether some of the firms that end in Chapter 7 may be more valuable to the economy in a Chapter 11.

Also, do the emerging firms have higher sales than like startup firms? If yes, then one might also argue that a firm that successfully emerges from a Chapter 11 might actually have a larger impact than that of a similar firm just starting out.

One thing is apparent from the data, in every case regardless of industry, there was a positive economic impact if the firm successfully went through and emerged from reorganization verses the alternative of liquidation and business failure.

CONCLUSION

Our society has a somewhat strong bias towards "not throwing good money after bad". While there is some heuristic evidence that suggests this might be good advice, it may not be when it comes to choosing between liquidating the financially injured business in Chapter 7, verses rehabilitating it through the use of a Chapter 11 reorganization.

The results of this analysis are fairly clear: firms which emerge from Chapter 11 bankruptcy produce greater economic impact for both the owners of the business and society as a whole verses if those businesses had been completely liquidated under Chapter 7. This extends to the creditors of a chapter 11 as well, who will generally receive more than those creditors of a Chapter 7 bankruptcy as demonstrated by Bris, Welch and Zho.[15]

It is worth our collective effort to come as close as we can in finding the quantifiably optimal balance of the need to protect creditors with that of encouraging the entrepreneurial spirit, while at the same time trying to achieve the greatest economic impact for society.

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[15] Bris, Welch and Zhu, Supp. 1287-1289

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APPENDIX

Table 1. Summary of Firm Sales in the year following Chapter 11 Emergence. (millions of 2013 dollars)

	number of firms	average	standard deviation	minimum	maximum
Agricultural	1	$ 3,270.4	--	$ 3,270.4	$ 3,270.4
Mining	3	$ 163.9	$ 259.4	$ 11.8	$ 463.4
Construction	4	$ 641.2	$ 748.3	$ 53.6	$ 1,722.7
Manufacturing	40	$ 5,229.2	$ 22,815.1	$ 159.9	$ 145,122.0
Transportation and Communications	21	$ 1,699.1	$ 2,124.4	$ 0.0	$ 7,509.9
Retail	8	$ 2,891.3	$ 2,579.8	$ 447.3	$ 8,166.2
Finance, Insurance, and Real Estate	13	$ 784.9	$ 1,656.5	$ 2.0	$ 5,312.5
Services	19	$ 769.9	$ 669.5	$ 75.3	$ 2,202.8
Total	109	$ 2,744.4	$ 13,915.2	$ 0.0	$ 145,122.0

Source: Authors' calculations from UCLA-LoPucki Bankruptcy Research Database (BRD)

Note: Summary statistics by industry group of all firms from the BRD database with reported post-emergence annual sales.

Table 2. Economic Impact of Average Chapter 11 Emergence

	Employment (thousands)	**GDP (millions 2013 dollars)**	**GDP per dollar of sales**
Agricultural	211.9	$ 2,902.3	0.887
Mining	25.7	$ 782.5	4.774
Construction	1.7	$ 85.5	0.133
Manufacturing	36.0	$ 3,232.2	0.618
Transportation and Communications	18.8	$ 1,054.1	0.620
Retail	16.0	$ 784.9	0.271
Finance, Insurance, and Real Estate	36.4	$ 1,209.8	1.541
Services	17.5	$ 624.9	0.812
Weighted average	28.1	$ 1,751.3	0.836

Note: Employment in full-time equivalents.