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REPORT TO THE AMERICAN BANKRUPTCY INSTITUTE: PREVALENCE OF SUBSTANTIVE CONSOLIDATION IN LARGE PUBLIC COMPANY BANKRUPTCIES FROM 2000 TO 2005

WILLIAM H. WIDEN*

INTRODUCTION: MOTIVATION FOR THE STUDY

This report highlights the importance of substantive consolidation doctrine to large public company bankruptcies.¹ In substantive consolidation, the intercompany liabilities of the subject companies are eliminated, the assets of these subject companies are pooled and the third party liabilities of the subject companies are satisfied from this single pool of assets. This pooling of assets changes the percentage recovery, for better or worse, that individual creditors of particular debtors would receive in the absence of a substantive consolidation.² The doctrine's significance is difficult to gauge merely by examination of published court opinions.³ Indeed, in the two cases that provide the most widely accepted statements

¹ This report expands on my previously published results. See William H. Widen, Prevalence of Substantive Consolidation in Large Bankruptcies From 2000 to 2004: Preliminary Results, 14 AM. BANKR. INST. L. REV. 47 (2006) [hereinafter Preliminary Study].

^{*} Professor, University of Miami School of Law. Research on this project was funded, in part, by a grant from the ABI Endowment Fund. I am grateful to Professor Lynn M. LoPucki for making his Bankruptcy Research Database ("BRD") available and for his ongoing support of my research. A publically available version of the BRD—the WebBRD—may be found online at: http://lopucki.law.ucla.edu/index.htm (last visited Feb. 25, 2008). I post basic research materials for my ongoing research into substantive consolidation at: http://uccstuff.com. This report benefitted from presentations at Harvard Law School, Ohio State University, the University of Texas and the University of Virginia.

I am most grateful for student research assistance from Sarah Alexander and William Hildbold. The University of Miami School of Law library staff provided essential support for this project (particularly Helen Wohl, Assistant Library Director for Collection Development, Barbara Brandon, Faculty Services Librarian, Mark Plotkin, Internal Instructional Services Librarian, and David Hollander, now Law and Legal Studies Librarian at Princeton University).

² For a detailed discussion of the substantive consolidation technique and a statement of how substantive consolidation doctrine should be formulated, see William H. Widen, *Corporate Form and Substantive Consolidation*, 75 GEO. WASH. L. REV. 237 (2007) [hereinafter *Corporate Form*]. For an exhaustive descriptive examination of the case law development of this doctrine, see Mary Elisabeth Kors, *Altered Egos: Deciphering Substantive Consolidation*, 59 U. PITT. L. REV. 381 (1998). Substantive consolidation differs from procedural consolidation in which multiple bankruptcy cases are subject to joint administration by a single judge. *See id.* at 381 n.1.

³ Courts often suggest that use of substantive consolidation should be rare. See, e.g., In re Gandy, 299 F.3d 489, 499 (5th Cir. 2002) (stating substantive consolidation is "an extreme and unusual remedy"); Eastgroup Props. v. S. Motel Ass'n, Ltd., 935 F.2d 245, 248 (11th Cir. 1991) (noting substantive consolidation should be used "sparingly"); see also Brief for Respondent at 9, McMonagle v. Credit Suisse First Boston, 126 S.Ct. 1910 (2006) (Nos. 05-827, 05-941) (arguing in favor of Third Circuit's principle that "because substantive consolidation is extreme and imprecise, this 'rough justice' remedy should be rare and one of last resort after considering and rejecting more precise remedies conferred by the Bankruptcy Code"). But see Petition for Writ of Certiorari, Owens Corning v. Credit Suisse First Boston, 126 S.Ct. 1910 (No. 05-941) (stating substantive consolidation involved in "seven of the ten largest Chapter 11 bankruptcy cases since 2000" and "more than 100 reported bankruptcy decisions").

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of the conditions for application of the rule, the courts do not approve the substantive consolidation procedure.⁴ This report measures the extent to which large public company bankruptcy reorganizations use the substantive consolidation procedure and the degree to which reorganization negotiations take place in the shadow of the doctrine of substantive consolidation.⁵

Two data—WebBRD⁶ sources for business bankruptcy and BankrupcyData.com⁷-do not maintain separate data specifically tracking substantive consolidation.⁸ I am not aware of other data sources that track this information.⁹ BankruptcyData.com often reports on substantive consolidation as part of its summary of reorganization plans; however, this resource offers no assurance that substantive consolidation is always reported upon when present or that its review, particularly of older cases, is comprehensive. Prior research confirmed that BankrutpcyData.com does not identify all cases that constitute substantive consolidation bankruptcies as defined in this report.¹⁰ This report supplements a gap in existing data sources by continuing and expanding a study of the phenomenon of substantive consolidation in large public company bankruptcy cases that I began with publication of the Preliminary Study.¹¹ The data in this report support my prior claims that the circumstances for use of the substantive consolidation remedy are not rare.¹²

⁵ The "bargaining in the shadow" theme that motivates this study is not new. Various studies have considered bargaining in the shadow of different laws. See, e.g., Robert Cooter & Stephen Marks with Robert Mnookin, Bargaining in the Shadow of the Law: A Testable Model of Strategic Behavior, 11 J. LEGAL STUD. 225 (1982); Robert H. Mnookin & Lewis Kornhauser, Bargaining in the Shadow of the Law: The Case of Divorce, 88 YALE L.J. 950 (1979) (positing primary function of divorce law is to provide structure within which divorcing couples can determine their own post-dissolution rights); Guhan Subramanian, Bargaining in the Shadow of Takeover Defenses, 113 YALE L.J. 621 (2003) (examining whether those takeover defenses endorsed by Delaware courts truly increase bargaining power of takeover targets).

⁶ See supra introductory note.

⁷ BankruptcyData.com, a division of New Generation Research, Inc., is a commercial service. See BankruptcyData.com, http://www.bankruptcydata.com/default.asp (last visited Mar. 25, 2006).

⁸ The scope of coverage for WebBRD was confirmed by email correspondence between the author and Professor LoPucki. The scope of coverage for BankrupctyData.com was confirmed by telephone conversations between the library staff at University of Miami School of Law and representatives of New Generation Research, Inc.

⁹ Studies exist that attempt to measure the significance of the doctrine of "piercing the corporate veil"—a doctrine related to substantive consolidation. *See* Robert B. Thompson, *Piercing the Corporate Veil: An Empirical Study*, 76 CORNELL L. REV. 1036 (1991).

¹⁰ See Preliminary Study, supra note 1, at 48.

¹¹ See id.

¹² For purposes of this study, "large public company bankruptcy" follows the WebBRD protocols. *See* WebBRD, Contents, http://lopucki.law.ucla.edu/contents_of_the_webbrd.htm (last visited Feb. 25, 2008).

⁴ See Union Sav. Bank v. Augie/Restivo Baking Co. (In re Augie/Restivo Baking Co.), 860 F.2d 515, 518–21 (2d Cir. 1988); Drabkin v. Midland-Ross Corp. (In re Auto-Train Corp.), 810 F.2d 270, 276 (D.C. Cir. 1987). The Third Circuit acknowledged these two cases as forming the two strands of substantive consolidation doctrine. See In re Owens Corning, 419 F.3d 195, 207 (3d Cir. 2005) (identifying Augie/Restivo as supporting alter-ego analysis of substantive consolidation and In re Auto-Train as supporting balancing of the equities approach).

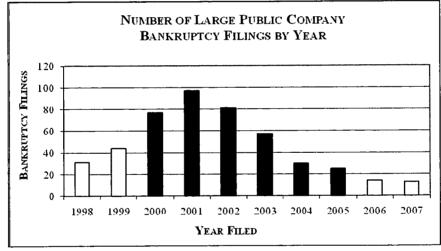
Regardless of the relationship between substantive consolidation doctrine as invoked in contested case law decisions and its consensual use in bankruptcy reorganizations, this report reveals that the substantive consolidation "technique" is a dominant technique used to reorganize and liquidate companies in large public bankruptcies.

3

I. SCOPE OF STUDY

This study provides information about the extent to which the doctrine of substantive consolidation played a role in large public company bankruptcies for bankruptcy filings made in the six year period from 2000 to 2005. Chart 1 below reflects the bankruptcy filing activity of large public companies during the six year period of the study, as well as the filing activity in the two year periods before and after the study. From 2000 to 2005, there were 367 total large public company bankruptcy filings reported by the BRD.





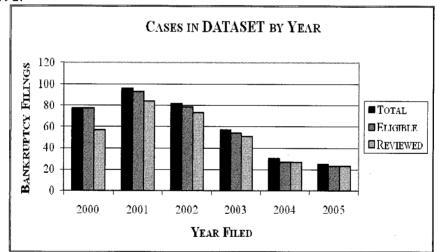
A case is "large" if debtor reported assets or more than \$100 million (measured in 1980 dollars) on the last form 10-K that the debtor filed with the Securities Exchange Commission before filing the bankruptcy case.

A company is "public" if the company filed a form 10-K with the Securities Exchange Commission in the three years prior to bankruptcy and the company did not afterward file a form 15 (going private) more than one year prior to bankruptcy.

A "case" includes all cases filed by or against members of the 10-K filing company's corporate group provided that those cases are consolidated by the bankruptcy court for the purpose of administration. Thus, a single "case" for the purpose of the WebBRD may be reported by the Administrative Office of the U.S. Courts as dozens or hundreds of cases.

Of the 367 total cases filed in the years of study, the BRD reports 5 cases as dismissed and, at March 1, 2008, 10 cases as pending. This report classifies the remaining 352 cases as eligible for review. Unlike the Preliminary Study which relied on secondary source material to assess the prevalence of substantive consolidation across the larger spectrum of large public company bankruptcies, this report requires review of original source material (such as confirmation orders, disclosure statements and reorganization plans) to make an assessment of the status of a case with respect to substantive consolidation. To date, the research team has obtained original source material from PACER¹³ (supplemented by some material obtained from private law firms and SEC filings) for 315 of the 352 cases considered eligible for review. These 315 cases comprise the DATASET discussed in this report. Chart 2 below reflects the composition of the DATASET by filing year. When PACER does not contain original source documents for cases eligible for review, the gaps in original source materials occur primarily in the earlier filing years contained in the study. These gaps appear in Chart 2 as the difference between the "Eligible" cases and the "Reviewed" cases.



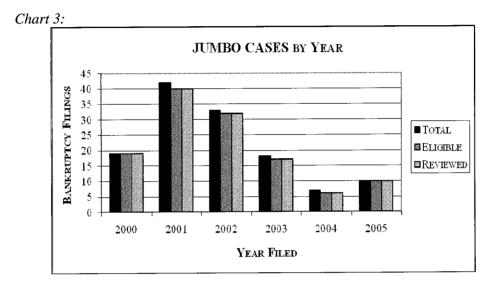


This report also examines in greater detail those bankruptcy cases in the DATASET for companies that reported \$1 billion or more in total assets¹⁴ on their

¹³ PACER stands for Public Access to Court Electronic Records. It is an electronic public access service that allows users to obtain case and docket information from federal appellate, district and bankruptcy courts for a fee.

¹⁴ The *Preliminary Study* reported its ranking of the 21 largest public company bankruptcies based on the present value of reported assets as reflected in the BRD. *See Preliminary Study, supra* note 1, at 53. For ease of reference, the research team has switched to actual historical total assets reported. This change facilitates comparative ordering uniformity within years for future work. Use of the present value of total assets changes over time, moving cases upward into groupings based on asset size.

audited financial statements for the most recent annual accounting period completed prior to filing their bankruptcy petitions. These 124 cases are referred to as the JUMBO CASES. As reflected in **Chart 3** below, the study reports on all eligible cases that qualify as JUMBO CASES.



The research team believes it has obtained all information relevant to this report on the eligible companies that is available from PACER. The research team hopes to collect additional information on eligible companies from other sources (such as private law firms and SEC filings) to construct a more complete dataset. The research team believes, however, that the DATASET used in this report is sufficiently complete to draw meaningful conclusions about the prevalence of substantive consolidation in large public company bankruptcies and related matters.

II. SUMMARY OF FINDINGS

Tables of descriptive statistics summarizing selected findings discussed in this report appear as ANNEX A.

Summaries of results from selected binomial logit regressions discussed in this report appear as ANNEX B.

Methodological remarks appear in this report as ANNEX C.

A. Prevalence of Substantive Consolidation

This report classifies 178 out of the 315 cases in the DATASET (approximately 56.5%) as substantive consolidation cases. This report classifies 77 out of 124 JUMBO CASES (approximately 62%) as substantive consolidation cases. Courts

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failed to approve substantive consolidation in only 2 of the JUMBO CASES studied.

Substantive consolidation cases appear as the majority of cases across various asset size groupings. The definition of "substantive consolidation" used to classify cases appears below in Part III of this report.

B. Deemed Consolidation

Almost every substantive consolidation case is either expressly or in operative effect a "deemed" substantive consolidation (i.e. use of the procedure does not purport to combine actual legal entities) even though voting and/or distributions are made "as if" legal entities had been combined. Using a very generous standard for what constitutes an "actual" combination of legal entities, this report classifies only 2 out of 62 substantive consolidation JUMBO CASES as potentially resulting in the actual combination of business entities.¹⁵

The finding that the "deemed" substantive consolidation is the dominant form of substantive consolidation supports the empirical claim sometimes made by transaction participants to the effect that most substantive consolidations are, in fact, deemed consolidations.¹⁶

C. Frequency of Substantive Consolidation Across Judicial Districts

During the period of study, courts in the District of Delaware and the Southern District of New York approved use of substantive consolidation at approximately the same rates as courts in other judicial districts in both the DATASET (DE: 60%; SDNY: 55%; Other 54%) and across the JUMBO CASES (DE: 58%; SDNY 64%; Other: 64%).

D. Case Complexity as Reflected in Asset Size, SEC Reported Subsidiaries and Bankrupt Entities

In simple binomial logit regression models¹⁷ of the substantive consolidation phenomenon (i.e treating SUBCON as a binary dependent variable): (A) substantive consolidation cases *are not correlated* in a statistically significant relationship with

¹⁵ We have identified Touch America Holdings, Inc. and RSL Communications, Ltd. as substantive consolidations involving actual combinations of legal entities. Even in these cases, the courts use "deemed" language to describe various procedures. However, these are the only two JUMBO CASES in which we believe a plausible case might be made that the courts viewed themselves as actually ordering the combination of legal entities. Both involved liquidating plans in which assets were transferred to a trust.

¹⁶ This claim is prominently featured in a number of filings made by experienced debtor's counsel. *See*, *e.g.*, Debtors' Disclosure Statement Pursuant to Section 1125 of the Bankruptcy Code at 38–39, Worldcom, Inc., No. 02-13533 (Bankr. S.D.N.Y. May 23, 2003); Disclosure Statement for Debtors' Fourth Amended Joint Plan of Reorganization Under Chapter 11 of the Bankruptcy Code at 70, Loral Space & Comme'ns, Ltd., No. 03-41710 (Bankr. S.D.N.Y. June 3, 2005).

¹⁷ A summary of results from these regressions appears in ANNEX B to this report. See infra ANNEX B.

either (i) the total assets reported by the debtor in its audited financial statements prior to bankruptcy (i.e. with the ASSETS independent variable) or (ii) the number of significant subsidiaries reported by the debtor to the SEC (i.e. with the TOTALSUBS independent variable); (B) substantive consolidation cases *are correlated* in a statistically significant relationship (at the .000 level) with the number of bankrupt entities that appear in a procedurally consolidated case (i.e. with the BANKENTS independent variable).¹⁸

Low pseudo R-squared test results suggest that models including variables that this report identifies as significant will have limited explanatory power despite the significance of the variables.

E. Case Duration

Substantive consolidation cases in the DATASET and among the JUMBO CASES take longer to complete than non-substantive consolidation cases. However, in simple binomial logit regression models, substantive consolidation cases **are not correlated** in a statistically significant relationship with the length of the bankruptcy proceeding (i.e. with the DURATION independent variable).

F. Emergence from Bankruptcy

In the DATASET, only 49% of substantive consolidation cases result in a company emerging from bankruptcy whereas 63.5% of the non-substantive consolidation cases result in a company emerging from bankruptcy. Among the JUMBO CASES, 52% of the substantive consolidation cases result in a company emerging from bankruptcy whereas 70% of the non-substantive consolidation JUMBO CASES result in a company emerging from bankruptcy.

In a simple binomial logit regression model, substantive consolidation cases are correlated in a statistically significant relationship (at the .00 level) with a failure of a company to emerge from bankruptcy (i.e. with the EMERGE independent variable).

G. Bargaining in the Shadow of the Law

In 68% of the 75 JUMBO CASES in which substantive consolidation was approved, original source documents (such as confirmation orders, disclosure statements and reorganization plans) expressly refer to judicial decisions in contested cases or to factors developed in judicial decisions in contested cases to justify use of substantive consolidation in the context of a negotiated reorganization plan. In 36% of these JUMBO CASES, original source documents refer to

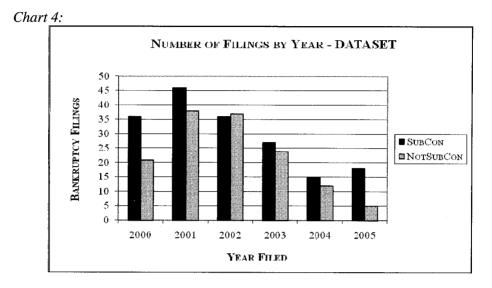
¹⁸ A test for variance inflation factors did not find collinearity between the TOTALSUBS and the BANKENTS variables.

compromise and settlement of disputed claims (referring either expressly or by context to potential substantive consolidation litigation).

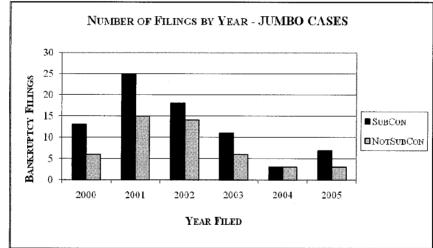
III. PREVALENCE OF SUBSTANTIVE CONSOLIDATION

The Preliminary Study examined original source documents for the 21 largest public company bankruptcies filed in the five year period 2000 to 2004 (as measured by present value of reported asset size on the WebBRD). The Preliminary Study identified 11 of these 21 cases (just over 50%) as substantive consolidation bankruptcies (as defined). The Preliminary Study then examined secondary source material for all large public bankruptcies in that period and found a frequency of substantive consolidation cases of approximately 11.6%). The Preliminary Study also noted that the secondary source material appeared to undercount substantive consolidation bankruptcies. The signature question for future research posed by the Preliminary Study was whether anything near a 50% frequency of substantive consolidation cases would be found to occur in the larger group of cases following examination of original source materials. The simple answer is that a majority of large public bankruptcy cases are substantive consolidation cases.

Of the 315 cases in the DATASET, the study classifies 178 cases as substantive consolidation cases (approximately 56.5%). **Chart 4** and **Chart 5** below reflect the frequency of substantive consolidation by year for the DATASET and the JUMBO CASES.

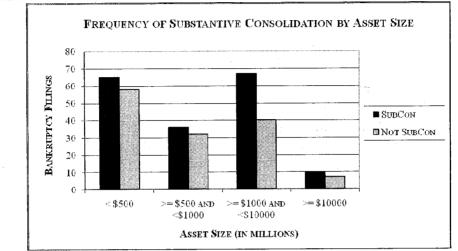






As reflected in **Chart 4 and Chart 5** above, substantive consolidation cases comprised the majority of cases both in the DATASET and among the JUMBO CASES in five out of the six years in this study.

As reflected in **Chart 6** below, substantive consolidation cases comprise the majority of cases in each of four groupings of cases by reported total asset size: (i) cases for companies reporting less than \$500 million in total assets; (ii) cases for companies reporting between \$500 million and less than \$1 billion in total assets; (iii) cases for companies reporting between \$1 billion and less than \$10 billion in



total assets; and, (iv) cases for companies reporting \$10 billion or more in total assets.¹⁹



The above data show that substantive consolidation cases comprise the majority of cases across the spectrum of large public company bankruptcy cases considered by total asset size. The *Preliminary Study* set a floor on the frequency of substantive consolidation based on use of secondary source materials but correctly refrained from making final judgments on the frequency of substantive consolidation until examination of original source materials. However, the magnitude of the undercount of substantive consolidation cases reflected in the secondary source materials came as a surprise.

For purposes of this study, a "substantive consolidation" or "SUBCON" case is a large public company federal bankruptcy case in which either (a) settlement of substantive consolidation litigation preceded approval of a reorganization plan or liquidation or (b) a plan of reorganization or liquidation proposed substantive consolidation of two or more entities involved in related bankruptcy proceedings. For purposes of this classification, substantive consolidation is considered part of a bankruptcy plan or liquidation if the plan or liquidation provides (i) for the actual combination of two or more legal entities, (ii) for voting on the plan as if two or more entities were a single entity (whether or not the plan combines the entities) or (iii) for distributions as if two or more entities were combined (whether or not the plan combines the entities). If a debtor proposed that two or more entities be consolidated prior to implementation of a plan, substantive consolidation is

¹⁹ This four category grouping is based on asset size groupings used by the WebBRD (though WebBRD reports on these categories using the present value of asset size). *See* WebBRD, http://lopucki.law.ucla.edu/contents_of_the_webbrd.htm (last visited Feb. 25, 2008).

considered part of a subsequent plan. A plan proposing substantive consolidation does not need to have been approved for the case to count as a substantive consolidation bankruptcy case, though courts approve substantive consolidation in the overwhelming majority of cases in which the doctrine is invoked.

The scope of the definition includes a so-called "deemed" substantive consolidation as a Substantive Consolidation Bankruptcy. In a "deemed" substantive consolidation distinct legal entities are not combined. Instead, either votes on a plan, plan distributions, or both, are computed "as if" the legal entities had been combined. The earliest reported decision of which I am aware that considers and approves a deemed consolidation is In re Standard Brands Paint $Co.^{20}$ Since that case, use of substantive consolidation doctrine to justify consolidated distributions and voting without actual combination of legal entities has become known as a "deemed" consolidation.²¹ Courts disagree over whether deemed consolidations should be considered substantive consolidations at all.²² In my view, this disagreement amounts to an uninteresting dispute over labels that is relevant only if one wants to restrict the ability of bankruptcy courts to use equitable principles. I find no support in the Bankruptcy Code to limit a bankruptcy court's ability to craft resolutions custom tailored to particular facts. This custom tailoring occurs when a court orders something less than a full substantive consolidation to reach a fair and equitable result.²³

My study of the prevalence of substantive consolidation in large public bankruptcies includes a "deemed" substantive consolidation as a "substantive consolidation" bankruptcy case for several reasons. First, the study attempts to measure the extent to which reorganization negotiations take place in the shadow of substantive consolidation doctrine as articulated by various courts. Factors that justify full substantive consolidation appear in cases that opt to use deemed consolidation as part of a plan or to settle substantive consolidation litigation. Second, both courts and transaction participants have expressly referred to

 $^{^{20}}$ 154 B.R. 563, 566–67 (Bankr. C.D. Cal. 1993) (indicating plan which made distributions as if entities were combined without actually combining legal entities was "unusual, maybe unique"). As far as the parties and the court could determine, the plan proposed in *In re Standard Brands Paint Co.* was the first deemed consolidation, though the procedure was not then referred to as a "deemed" consolidation. *Id.* at 573.

²¹ See Genesis Health Ventures, Inc. v. Stapleton (*In re* Genesis Health Ventures, Inc.), 402 F.3d 416 (3d Cir. 2005) (containing description of deemed consolidation by author of Third Circuit's *Owens Corning* decision); see also In re Winn-Dixie Stores, Inc., 356 B.R. 239, 251 (Bankr. M.D. Fla. 2006) (explaining concept of deemed consolidation).

 $^{^{22}}$ See In re Genesis Health Ventures, 402 F.3d at 423 (distinguishing substantive consolidation from deemed consolidation).

 $^{^{23}}$ As an equitable doctrine, some courts have expressly recognized that they may modify or adjust the effects of substantive consolidation to fit the circumstances of the case. *See In re Standard Brands*, 154 B.R. at 570; *In re* Parkway Calabasas, 89 B.R. 832, 837 (Bankr. C.D. Cal. 1988) (indicating bankruptcy court's equitable powers permit it to order less than complete substantive consolidation); *see also* 11 U.S.C. § 105(a) (2006) (providing "[t]he court may issue any order, process, or judgment that is necessary or appropriate to carry out the provisions of this title"). Under the flexible approach, a court need not actually combine entities in order to take advantage of the benefits that asset pooling or voting combinations might offer in a particular case.

substantive consolidation doctrine, as developed by case law, in supporting their decisions to approve or recommend a settlement or a plan that uses the deemed consolidation technique. Third, the same cost savings and equitable motivations that justify full substantive consolidation motivate use of deemed consolidation. Indeed, a deemed consolidation may save costs compared to a full consolidation, including eliminating the need to re-title property and obtain new business qualifications, leaving more value for creditors in a reorganized company.²⁴ Fourth, aggrieved creditors arguing for full substantive consolidation may well accept distributions on a deemed consolidated basis to settle their grievances; their central concern remains the final distribution and not the corporate structure of the reorganized company going forward. In liquidating plans under chapter 11, and in chapter 7 liquidations, there may be little or no need to worry about the corporate structure going forward in any event.

The deemed consolidation is best viewed as a technique to manage voting and distributions in complex groups of procedurally consolidated cases. In retrospect, it is hardly surprising that courts and transaction participants use the deemed consolidation technique because the Code does not provide any clear statutory procedure to combine legal entities. Such actual business combinations of legal entities are achieved under state corporation laws and similar statutes. The Code is clear that state law business combinations may be used as part of a reorganization. Typically, however, a plan will use substantive consolidation without invoking these state law procedures—often going out of its way to state clearly that the substantive consolidation effected by the plan does not affect the ongoing status of legal entities.

IV. PREVALENCE OF SUBSTANTIVE CONSOLIDATION BY JURISDICTION

Bankruptcy courts in the District of Delaware and the Southern District of New York administer a significant percentage of large public company bankruptcies. **Chart 7** and **Chart 8** below reflect the allocation of cases in the DATASET and in the JUMBO CASES among the District of Delaware, the Southern District of New York and the other judicial districts.

²⁴ In *In re Standard Brands*, for example, tax considerations strongly favored a deemed consolidation without the actual combination of legal entities. 154 B.R. at 565. An actual combination would have triggered cancellation of indebtedness income for state tax purposes. *See id.*

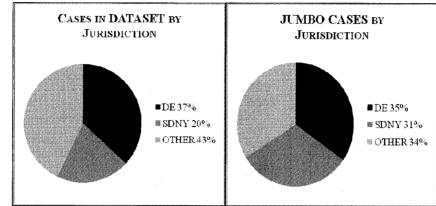
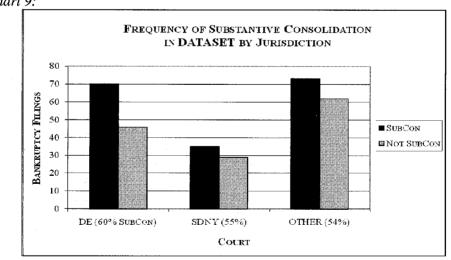


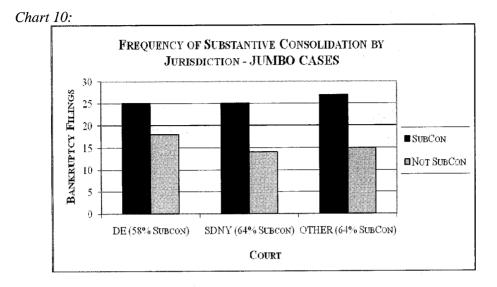
Chart 7 and Chart 8:

Chart 9 and **Chart 10** below reflect the frequency of substantive consolidation bankruptcy cases by judicial district. These descriptive statistics suggest that transaction participants do not use substantive consolidation more frequently in the District of Delaware and the Southern District of New York than in other judicial districts.





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To the extent that bankruptcy reorganization proceedings fail more often in cases administered in the District of Delaware and the Southern District of New York, the above data suggest that this phenomenon is not related to the use of the substantive consolidation technique to reorganize companies.²⁵

V. CASE COMPLEXITY AS REFLECTED IN ASSET SIZE, SEC REPORTED SUBSIDIARIES AND BANKRUPT ENTITIES

My empirical study of substantive consolidation began with the theory that one might explain use of substantive consolidation as a technique to manage reorganizations for particularly complex corporate groups and in complex bankruptcy cases. On this theory, one would expect to find greater frequency of use of substantive consolidation in more complex consolidated groups and in more complex bankruptcy cases. To test this idea, the research team collected data on three variables for each large public company debtor: (i) the total asset size reported by the debtor in audited financial statements for the most recent accounting period completed prior to bankruptcy filing (the ASSETS independent variable), (ii) the number of significant subsidiaries reported by the debtor to the SEC prior to the bankruptcy filing (the TOTALSUBS independent variable) and (iii) the number of bankrupt variable). These variables were considered proxies for various kinds of corporate group and case complexity.

²⁵ See LYNN M. LOPUCKI, COURTING FAILURE: HOW COMPETITION FOR BIG CASES IS CORRUPTING THE BANKRUPTCY COURTS (The University of Michigan Press 2005) (2005) (suggesting reorganization proceedings fail more often in District of Delaware and Southern District of New York).

Research found that the substantive consolidation cases tended, on average, to have larger reported total assets, more significant subsidiaries reported to the SEC and more bankrupt entities in the procedurally consolidated cases. The differences, however, are modest. Only the BANKENTS variable is statistically significant (at the .000 level) between substantive consolidation and non-substantive consolidation cases.²⁶ This finding suggests to me that courts and transaction participants use substantive consolidated case increases. The lack of a statistically significant relationship between substantive consolidation and the ASSETS and TOTALSUBS variables also suggests to me that use of the substantive consolidation technique may not be related to consolidated group complexity in the abstract. Future research will focus on alternate methods of measuring consolidated group complexity to further test this hypothesis.

Research found that no single debtor JUMBO CASES used substantive consolidation, even though these single debtor cases all involved an entity in a consolidated group that had reported multiple significant subsidiaries to the SEC. I believe that, in many of these single debtor cases, the decision not to use substantive consolidation as a strategy may have been made prior to filing the bankruptcy petition. These findings suggest that, although management of consolidated group complexity may be part of the substantive consolidation story, transaction participants do not turn to the doctrine simply out of a necessity arising from complexity in organizational structure—at least complexity reflected in asset size or the presence of multiple legal entities within a consolidated group. Rather, substantive consolidation appears more frequently when the circumstances of the case have required that multiple legal entities file for bankruptcy making the bankruptcy proceeding more complex.

The subsections below contain **Chart 11** through **Chart 14** showing the relationships of substantive consolidation cases to total assets, significant subsidiaries and entities in procedurally consolidated bankruptcy cases.

A. The Relationship of Substantive Consolidation Cases to Total Asset Size

Chart 11 and Chart 12 below show the relationship of substantive consolidation cases to reported total asset size prior to commencement of a bankruptcy proceeding.

²⁶ A summary of the binomial logit regression analysis appears in ANNEX B to this report. See infra ANNEX B.

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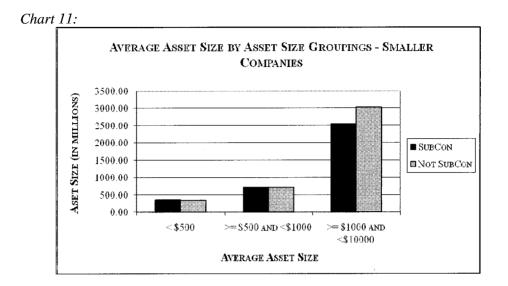
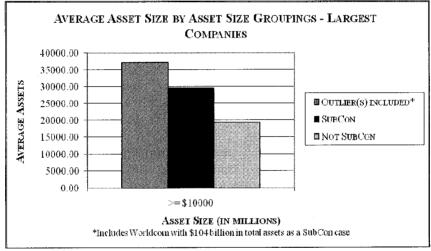
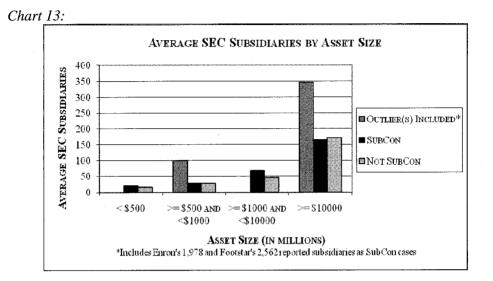


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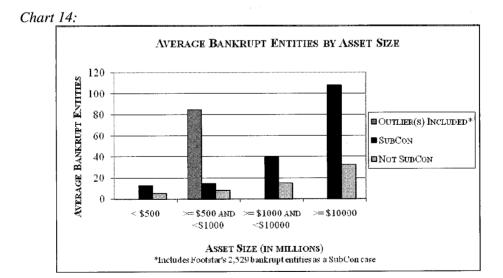


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B. The Relationship of Substantive Consolidation Cases to Number of Significant Subsidiaries Reported to the SEC



C. The Relationship of Substantive Consolidation Cases to Number of Bankrupt Entities in a Procedurally Consolidated Case



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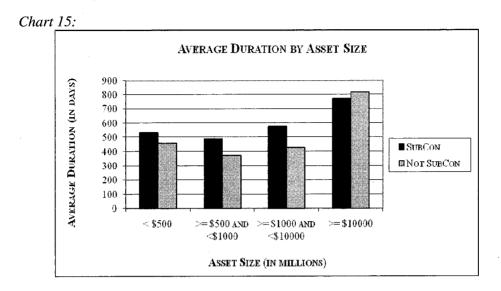
VI. THE RELATIONSHIP OF SUBSTANTIVE CONSOLIDATION CASES TO DURATION OF THE BANKRUPTCY PROCEEDING

Among JUMBO CASES, substantive consolidation cases took longer to complete than non-substantive consolidation cases (an average of 603 days versus 487 days). Interestingly, JUMBO CASES involving a single debtor took an average of only 324 days to complete, suggesting that substantive consolidation does not follow from a simple and swift decision to treat multiple entities as a single entity. Among JUMBO CASES, substantive consolidation cases (i.e. cases that treat multiple entities as a single entity) take almost twice as long to complete as a true single entity case.

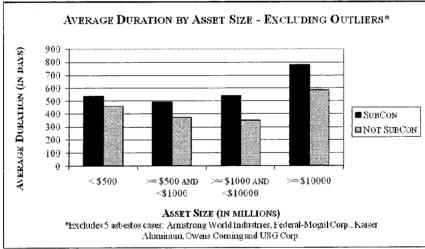
Analysis of original source documents in JUMBO CASES suggest that courts often approve substantive consolidation as part of a compromise and settlement of actual or threatened litigation. One factor leading to longer proceedings in substantive consolidation cases may be the time needed to negotiate these settlements. Thus, use of substantive consolidation doctrine may be a time saving device (when compared with litigation) even though the substantive consolidation cases take longer to complete than true single debtor cases.

In the larger DATASET, the difference between duration in substantive consolidation cases and non-substantive consolidation cases is only 9 days less than in the JUMBO CASES (107 day difference versus a 116 day difference), though the duration of single debtor cases increases significantly (by 126 days), suggesting that in a larger sample the duration of single debtor cases does not differ dramatically from the duration of multiple debtor cases in which substantive consolidation is not used (449 days versus 448 days).

As more bankruptcy cases filed to manage asbestos related liabilities were completed since the *Preliminary Study* (and thus added to the DATASET) it became apparent that these asbestos cases were, as a group, unusually long lived cases (whether or not classified as substantive consolidation cases). Because the duration of those cases may be influenced by the *sui generis* nature of asbestos liability issues and not by use of the substantive consolidation technique, **Chart 15** and **Chart 16** below present case duration data first including and then excluding the asbestos cases.

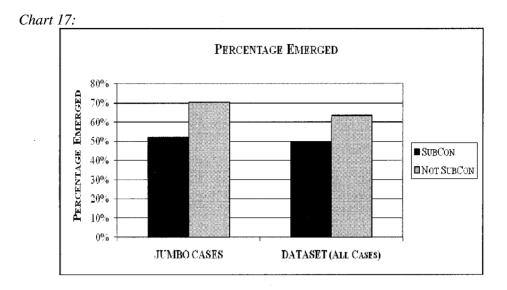




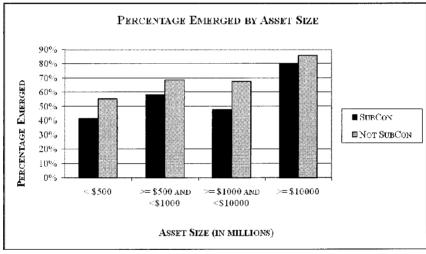


VII. THE RELATIONSHIP BETWEEN SUBSTANTIVE CONSOLIDATION CASES AND A COMPANY EMERGING FROM BANKRUPTCY

As shown in **Chart 17** below, companies emerge from bankruptcy less frequently in substantive consolidation cases than in non-substantive consolidation cases. **Chart 18** below shows that this result holds across various case groupings by asset size.







One explanation for this phenomenon might be that courts and transaction participants use substantive consolidation when legal entity form within consolidated group structure does not matter because no company will emerge for whom that structure might make a difference. Certainly this rationale cannot be dismissed in light of the statistically significant relationship (at the .00 level) between substantive consolidation cases and the EMERGE variable. It strikes me as relevant, however, that a significant percentage of substantive consolidation cases nevertheless use the substantive consolidation technique. This suggests that corporate form is not ignored only (or primarily) in situations where one might argue that continued attention to corporate formalities does not matter to the transaction participants. Continued vitality of the various corporate forms within a consolidated group might well matter in EMERGE cases and yet, in approximately half the EMERGE cases, these same corporate forms were ignored in structuring voting and distributions to creditors. The high percentage of substantive consolidation cases in which a company emerged from bankruptcy suggests that preservation of existing legal entity forms often matters to transaction participants but not for the purpose of matching assets with liabilities. The results in the larger DATASET (a company emerges from bankruptcy in approximately 52% of substantive consolidation cases) is generally reflected among the JUMBO CASES (in which a company emerges from a substantive consolidation case approximately 49% of the time).

One benefit of the dominance of the "deemed" substantive consolidation technique is that transaction participants need not worry that use of substantive consolidation will destroy legal entity structure that they value for another purpose (i.e. other than asset partitioning) should a company emerge from bankruptcy precisely because the "deemed" technique does not affect legal entity structure.

VIII. BARGAINING IN THE SHADOW OF LAW

A. General

Ample evidence supports the view that substantive consolidation doctrine developed in case law matters to transaction participants who are negotiating reorganization plans. In many cases (approximately 68% of the time), transaction documents (principally disclosure statements) refer to substantive consolidation cases or factors developed in contested cases as justifying use of substantive consolidation as part of a negotiated reorganization plan. Transaction documents mention cases by name approximately 37% of the time. We believe that recognition of the importance of case law in the context of negotiated plans of reorganization relates to the fact that courts often approve use of substantive consolidation as part of the compromise and settlement of claims. To justify approval of a settlement, a court must consider the case law as applied to the facts of the case in sufficient detail to decide whether the settlement is within a range of reasonableness under the circumstances. This posture requires consideration of case law even if all parties in the negotiation agree on use of substantive consolidation. It is for this reason that the parameters of substantive consolidation doctrine matters in the context of consensual reorganizations.

In prior work,²⁷ I have suggested that reorganization plan negotiations take place in the shadow of substantive consolidation doctrine. I meant this in the strong

²⁷ See Preliminary Results, supra note 1, at 51-52; Corporate Form, supra note 2, at 245 ("Bargaining over the structure of corporate reorganization plans takes place in the shadow of the doctrine of substantive consolidation just as bargaining takes place in other circumstances against the backdrop of laws relevant to those contexts.").

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sense that courts and reorganization participants act as if the criteria developed in contested case law should be used to justify use of the doctrine in the context of negotiated plans. To support my prior claim and provide a partial explanation for this phenomenon, I examined primary source documents for the JUMBO CASES to identify substantive consolidation cases in which the documentation either (i) expressly refers to compromise and settlement of substantive consolidation claims or (ii) substantive consolidation case law or factors are described in the reorganization documentation to justify use of the technique.

Out of the 75 JUMBO CASES identified as substantive consolidation cases for which a court approved use of the technique, 27 cases (or 36%) expressly stated that the plan involved a compromise and settlement of substantive consolidation claims (with 15 instances (or 20%) expressly referring to Bankruptcy Rule 9019). Substantive consolidation factors were most commonly referenced in plan disclosure statements, though they also were referenced in confirmation orders and other documents.

These observations highlight why plans using implicit substantive consolidations (i.e. the "Stealth Consolidations" discussed below) may be at particular risk²⁸—without explicit mention of substantive consolidation the court is unable expressly to engage in the inquiry required to approve compromise and settlement of claims based upon substantive consolidation.²⁹

B. Bargaining in the Shadow of Confusion

The language used to justify substantive consolidation (generally, but not exclusively, found in disclosure statements) varies widely. We also find a diverse range of views expressed concerning the authority pursuant to which substantive consolidation doctrine is invoked. At one end of the spectrum, transaction participants simply invoke section 105³⁰ (and sometimes section 1123).³¹ We have identified one case in which the disclosure statement expressly refers to section 105, while suggesting that case law, and not section 105, actually authorizes substantive consolidation (this created the impression in the reader that the participants apparently were willing to follow precedent which they believed did not actually have a statutory basis).³² At the other end of the spectrum one case used documents

²⁸ See infra notes 41–42 and accompanying text.

²⁹ See *Corporate Form*, supra note 2, for a discussion of the standards applicable to compromise and settlement of claims.

³⁰ See, e.g., Order Confirming the First Amended Joint Liquidating Plan of Reorganization of US Office Prods. Company and its Subsidiary Debtors at 12, *In re* US Office Prods. Co., Case No. 01-646 (Bankr. Del., Nov. 5, 2001).

³¹ See, e.g., Order Confirming Debtors' Fourth Amended Joint Plan of Reorganization Under Chapter 11 of the Bankruptcy Code, as Modified at 14, *In re* Loral Space & Commc'ns Ltd., Case No. 03-41710 (Bankr. S.D.N.Y., Aug. 1, 2005).

³² Disclosure Statement with Respect to Second Amended Joint Plan of Reorganization of ICG Commc'ns, Inc. & Its Affiliated Debtors and Debtors in Possession at 34–35, *In re* ICG Commc'ns, Inc., No. 00-4238 (Bankr. D. Del., Apr. 3, 2002).

that refused to use the term substantive consolidation at all and instead referred only to "pooling" interests.³³ The authority to "pool" was vaguely supported by a general reference to the bankruptcy court's inherent equity powers without attempting to locate the sources of those powers in a specific statutory section.³⁴

In addition to confusion over the source of authority to use substantive consolidation, our enhanced review of documentation for the JUMBO CASES suggests a deep metaphysical ambiguity over the proper conceptual framework within which substantive consolidation doctrine is applied—we locate the source of this ambiguity primarily within the choice to be made between a deemed consolidation and an actual consolidation of state law created legal entities. In one case, the confirmation order amended the plan documentation to convert references from "substantive consolidation" to "deemed substantive consolidation" reflecting a conscious decision to change conceptual course late in the reorganization process.³⁵

Though use of the deemed consolidation technique is widespread, we found differing approaches to its use in the various transaction documents examined. These differing approaches mirror underlying confusion over substantive consolidation doctrine, in general, and over the status of deemed consolidations, in particular. The documentation strategies used to manage doctrinal confusion take several forms. Transaction participants struggle with two basic questions. (1) What actually is combined in a substantive consolidation if legal entities are not combined? (2) Should a deemed consolidation be recognized as a separate class of substantive consolidation? In addition to attempts to fudge the distinction between actual and deemed business combinations, we find the transaction participants struggling with the felt conceptual need to combine something, even in a deemed consolidation.

First, the language of reorganization documents reflects differing approaches to the characterization of what "things" actually are combined in a substantive consolidation. Despite the overwhelming use of deemed substantive consolidations, some documentation speaks in places as if legal entities or chapter 11 cases are combined in the consolidation (notwithstanding the use of deemed consolidation language).³⁶ Other documentation speaks as if the bankruptcy estates are combined

³³ Order Confirming Second Amended and Restated Plan of Reorganization, as Modified, of Unicapital Corp. and Debtor Subsidiaries Under Chapter 11 of the Bankruptcy Code at 18, *In re* Jacom Computer Servs., Inc., Case No. 00-42719 (CB) (Bankr. S.D. N.Y., Jan. 9, 2002).

 $^{^{34}}$ Id. at 27. "The aggregation and pooling of the Debtors' assets and liabilities is based on the Bankruptcy Court's general equitable powers." Id.

³⁵ Order Confirming Debtors' Joint Plan of Liquidation as Amended Pursuant to Chapter 11 of the United States Bankruptcy Code at 5, Inacom Corp., Case No. 00-02426 (Bankr. Del. May 23, 2003).

³⁶ See, e.g., Brief for Respondent at 9, McMonagle v. Credit Suisse First Boston, 126 S.Ct. 1910 (2006) (Nos. 05-827, 05-941) (combining legal entities); Disclosure Statement with Respect to the First Amended Joint Liquidating Plan of Reorganization of U.S. Office Products Company and its Subsidiary Debtors at 42–44, *In re* U.S. Office Prods. Co., Case No. 01-646 (Bankr. Del., Nov. 5, 2001) (combining chapter 11 cases).

in the consolidation even though legal entities are not combined.³⁷ An alternate form of documentation speaks of combining assets and liabilities rather than entities.³⁸ Some documentation reads in the alternative, suggesting that entities either will be deemed combined or actually combined (a type of case we call a "<u>Hybrid Case</u>").³⁹ Hybrid Cases have an affinity with the "springing" consolidations identified in prior research.⁴⁰ Though we did not classify springing consolidations as substantive consolidations, we are left wondering whether the springing consolidation technique after the scrutiny of the approval process has receded.

We also find courts struggling with whether and to what extent federal law may be used to, in substance, achieve the same result that would typically be achieved outside bankruptcy by using state corporation law procedures. Examples include use of plan terms to appoint and replace directors and officers, in some cases with liquidating trustees, or by appointing one person to act in various corporate law capacities for a family of subsidiaries (when under corporate law multiple persons would perform these functions). The reality is that, though section 1123 expressly contemplates mergers and consolidations, this reference likely refers to conventional state law procedures that sometimes are followed as part of a reorganization plan. However, when a reorganization does not contemplate use of these state law procedures to combine entities, plan participants resort to creative "work arounds" to achieve a similar functional result by the power of federal fiat.

Second, we find three approaches to identification of the deemed consolidation technique. We designate the first approach an "Operative Deemed Consolidation." In an Operative Deemed Consolidation, the transaction documents: (i) refer to use of substantive consolidation and (ii) employ operative language in the reorganization plans such as "the claims shall be *deemed* to be filed against a single entity" or "the assets shall be distributed as if the debtors where a single legal entity" or "the assets of the debtors *shall be pooled* and liabilities paid from a common fund" in order to effect the substantive consolidation. Though the transaction documents may use operative language which includes the word "deemed," in a simple Operative Deemed Consolidation, the parties do not take the additional step of expressly identifying the procedure as a separate type of substantive consolidation that merits its own distinctive label.

³⁷ See, e.g., Disclosure Statement with Respect to Second Amended Joint Plan of Reorganization of ICG Commc'ns, Inc. and Its Affiliated Debtors and Debtors in Possession at 30–31, *In re* ICG Commc'ns, Inc., Case No. 00-4238 (Bankr. Del., Apr. 3, 2002).

³⁸ See, e.g., Second Amended Disclosure Statement for Debtors' Joint Consolidated Plan of Liquidation, as Modified at 45, *In re* Genuity Inc., Case No. 02-43558 (Bankr. S.D.N.Y., Oct. 1, 2003).

³⁹ See, e.g., First Amended Joint Plan of Reorganization of Comdisco, Inc. and its Affiliated Debtors and Debtors in Possession, Comdisco, Inc., Case No. 01-24795 (Bankr. N.D. III., Oct. 8, 2003); Debtors' Disclosure Statement Pursuant to Section 1125 of the Bankruptcy Code at 38–39, DVI, Inc., Case No. 03-12656 (Bankr. N.D. III., Oct. 8, 2004).

⁴⁰ See, e.g., Disclosure Statement Pursuant to Section 1125 of the Bankruptcy Code for the First Amended Joint Plan of Reorganization of NationsRent, Inc. and its Debtor Subsidiaries at 11, NationsRent, Inc., No. 01-11628 (Bankr. Del., Feb. 7, 2003); see Preliminary Results, supra note 1, at 54.

We designate the second approach an "Express Deemed Consolidation." In an Express Deemed Consolidation, the transaction documents: (i) refer to substantive consolidation, (ii) use operative language in the reorganization documents and (iii) expressly identify the type of consolidation used as either "deemed" or "limited." Use of the actual label "deemed consolidation" or its cognates expressly to identify a discrete substantive consolidation technique is spotty. We noted 16 JUMBO CASES in which courts approved use of substantive consolidation" and 3 JUMBO CASES in which the parties used the term "limited consolidation" (1 case used both the term "deemed" and the term "limited" to label the technique). If a case used either the label "deemed" or the label "limited" (or both) we considered the case as an example of an "Express Deemed Consolidation." Eighteen out of 77 JUMBO CASES (or 23.38 %) qualify as Express Deemed Consolidations.

We label the third approach the "<u>Stealth Consolidation</u>." In a small number of cases, we find reorganizations that constitute deemed substantive consolidations because they use operative consolidation language even though the transaction documents do not refer to the doctrine of substantive consolidation.⁴¹ In effect, these cases reflect implicit rather than explicit substantive consolidations.⁴² In some cases, it appeared that the parties made a deliberate attempt to downplay references to substantive consolidation or to eliminate references to "substantive consolidation." These references to substantive consolidation. These references to substantive consolidation. These references to substantive consolidation were minimized or deleted in the final versions of the plans even though the approved plans preserved the operative language to effect the substantive consolidation.

At the level of softer data, our extended reading of original source materials in the JUMBO CASES suggests to us that courts and transaction participants have struggled to document reorganization transactions against a backdrop of serious underlying confusion over the current state of substantive consolidation doctrine.⁴³ We do not mean to suggest that either courts or transaction parties are confused. Rather, we believe that courts and transaction participants have adopted different document drafting techniques that allow them to function against the backdrop of underlying doctrinal confusion that (at least in most cases) they well understand. Rather, from a former transaction lawyer's perspective, I consider most, if not all, of the instances of ambiguity and drafting "work arounds" to be attributable to conscious attempts by lawyers and courts to use drafting techniques to address ambiguities inherent both in Bankrupcy Code statute sections and in substantive consolidation case law with which both judges and transaction participants are well versed. My strong belief is that judges and transaction participants are consciously

⁴¹See, e.g., In re Adelphia Commc'ns Corp., 361 B.R. 337, 359 (S.D.N.Y. 2007); In re Mirant Corp., 334 B.R. 800 (Bankr. N.D. Tex. 2005); In re Unicapital Corp. Sec. Litig., 149 F.Supp.2d 1353, 1359–60 (S.D. Fla. 2001).

⁴² This phenomenon has particular relevance in light of the recent appeal in the Adelphia bankruptcy. *See Adelphia*, 361 B.R. 337.

³ This underlying confusion is explored in *Corporate Form*, supra note 2.

papering over problems that exist in both statute and case law. In effect, the transaction participants are working with judges to fix broken statutes and doctrine because the show must go on.

C. Law in the Shadow of Bargaining⁴⁴

Though academics often think of bargaining as occurring in the shadow of law, development of some law evolves in the shadow of bargaining. The signature commercial law example of this phenomenon involves the approach taken to drafting the Uniform Commercial Code. Karl Llewellyn and other drafters examined contracting practices in order to formulate the default rules to be included in the new commercial statutes. Commercial practices influenced the form of the law rather than the law influencing commercial practices in this process. I believe that exposure of the substantive consolidation phenomenon in the context of negotiation of reorganization plans may lead to similar developments in the evolution of case law. A recent case hints that this development may be underway, as the court's rhetoric does not focus on rarity of use of substantive consolidation but instead on the context of its use.⁴⁵ I expect future developments in substantive consolidation case law doctrine to be influenced by negotiation practices.⁴⁶

IX. RELATIONSHIP OF THIS REPORT TO ACADEMIC THEORIES AND JUDICIAL WISDOM

Uncertainty surrounds use of substantive consolidation doctrine in bankruptcy proceedings. This report replaces some of this uncertainty with data. Conventional academic theory and judicial wisdom hold that, within consolidated groups, an important function (if not the primary function) of separate legal entities is their use

⁴⁴ I borrow this heading from a work in progress by my colleague, Professor Ben Depoorter, see *Law in the Shadow of Bargaining: Settlements as Precedent* (2007) (describing influence of pre-trial settlements on legal change), on file with author, in which Professor Depoorter discusses the extent to which settlement of litigation influences the structure of doctrine. When use of substantive consolidation doctrine in negotiated plans is seen as occurring under the umbrella of the compromise and settlement of claims, we might expect that these negotiation and settlement practices will influence the course of future development of doctrine.

⁴⁵ See In re James River Coal Co., 360 B.R. 139, 148 n.1 (Bankr. E.D. Va. 2007) ("In large corporate reorganizations, it is not unusual for bankruptcy courts to confirm plans of reorganization that call for the 'substantive consolidation' of the different corporate entities comprising the corporate group." (citing Douglas G. Baird, *Substantive Consolidation Today*, 47 B.C. L. REV. 5 (2005))).

⁴⁶ Supporters of the asset partitioning theories of corporate form find this development disturbing. See WILLIAM T. ALLEN, REINIER H. KRAAKMAN, & GUHAN SUBRAMANIAN, COMMENTARIES AND CASES ON THE LAW OF BUSINESS ORGANIZATION 168–69 (2d ed. 2007) (citing to an early version of *Preliminary Study* in which the broad use of substantive consolidation was less frequent than reported in this study). The development and spread of substantive consolidation as a reorganization technique remains influenced by case law developments. *Compare* David B. Stratton et al., *A Measured Response to Critics of Delaware Venue: Part 1*, 26 AM. BANKR. INST. J. 26, 26, 67 (Apr. 2007) ("Recently, certain observers have asserted that in the Third Circuit substantive consolidation may not be used consensually to achieve a negotiated result in a chapter 11 case."), with In re Winn-Dixie Stores, Inc., 356 B.R. 239, 252 n.16 (Bankr. M.D. Fla. 2006) (distinguishing *Owens-Corning* and suggesting court would allow consolidation).

to match specific assets with specific liabilities—this function is sometimes referred to as "asset partitioning."⁴⁷ The data presented in this report suggest to me that the asset partitioning function plays a dramatically reduced role in explaining the structure of consolidated groups. In a majority of the large public bankruptcies examined, transaction participants use substantive consolidation to restructure companies—this restructuring technique destroys any matching of assets with liabilities by ignoring the separate legal entities that exist within the consolidated group. Though this fact does not prove that the asset partitioning function of corporate form is unimportant, it does suggest that asset partitioning should play a reduced role in any explanation about the internal structure of consolidated groups.⁴⁸

To my mind, the very high percentage use of substantive consolidation is unlikely to be adequately explained simply by a decision in particular cases to save transaction costs while ignoring deliberately created asset partitions that have been properly maintained. Either the asset partitions formed inside many corporate groups were not deliberately created to match discrete assets with discrete liabilities or they were created and then ignored. At this point in the research program, my view is based more on intuition than on proof. Certainly some substantive consolidations may be effected for cost saving reasons even with well maintained asset partitions. The magnitude of the substantive consolidation phenomenon suggests to me that other factors must be at work.

I believe that judicial respect for the corporate form within consolidated groups derives primarily from the perception that the general ability of the corporate form to create asset partitions plays an essential role in the success of capital raising activities. Decisions that weaken a cornerstone of successful capital markets are unwelcome events. Within a consolidated group, corporate forms (and, more broadly, other legal entity forms) do allow managers the potential to match specific creditors to specific asset pools. The alignment of creditors with assets via

⁴⁷ See Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387, 391 (2000) (hypothesizing that "a characteristic of all legal entities . . . is the partitioning off of a separate set of assets in which creditors of the firm itself have a prior security interest"). Asset partitioning has two facets: providing a barrier between claims of corporate creditors and investors and preventing liquidation of assets committed to a business by individual shareholders. Recently Professors Hansmann and Kraakman further developed the theory of asset partitioning and noted the importance of the "unsettled" doctrine of substantive consolidation as a possible cost saving measure in reorganizations. See Henry Hansmann, Reinier Kraakman & Richard Squire, Law and the Rise of the Firm, 119 HARV. L. REV. 1333, 1401–02 (2006).

⁴⁸ One theory to explain the structure of consolidated groups suggests that legal entities may be used to create capital markets within a single firm. *See* George G. Triantis, *Organizations as Internal Capital Markets: The Legal Boundaries of Firms, Collateral, and Trusts in Commercial and Charitable Enterprises,* 117 HARV. L. REV. 1102, 1138 (2004) (noting "[s]ecurity interests divide internal capital markets within firms" and "fall under the category of legal organizations"). In its pure form, an internal capital market would exist within a single legal entity. While the data suggest that, in a majority of cases, consolidated groups do not use legal entities to match assets with third party creditors, the data do not speak directly to the use of legal entities to create internal capital markets as a management tool. Ignoring legal entities for asset distributions to third party creditors is consistent with management having used legal entities for the purpose of internal allocation of resources. This is not a practice that I personally observed in practice.

corporate form may prove cost effective because it is achieved without resort to traditional security devices, such as mortgages and pledge agreements (which also match creditors with assets but require additional transaction costs to implement). Substantive consolidation destroys a pre-arranged match between a creditor and an asset because it ignores corporate forms used to create the match by treating multiple legal entities as a single entity. In this view of the world, if courts routinely ignored these pairings, then the utility of a device vitally important to our capital markets would be destroyed.⁴⁹ I believe such reasoning underlies various judicial admonishments that substantive consolidation should be used rarely.

The data presented in this report suggest, however, that within consolidated groups separate legal entities are not used primarily to match assets with liabilities because the majority of large public company bankruptcies use substantive consolidation to accomplish reorganizations. This finding undercuts judicial statements that substantive consolidation should be used sparingly, calling into question the rationale behind limited use. This finding also casts doubt on the centrality of various academic theories of corporate form that are based on asset partitioning to understanding the structure of consolidated groups because, in light of the data, these theories no longer appear to explain the allocation of assets to liabilities in a majority of consolidated groups under the stress of insolvency.⁵⁰ To the extent asset partitioning is a factor in explaining the internal structure of consolidered.

CONCLUSION

The most basic practical lesson from this report is that creditors who rely simply on legal entities to match assets with liabilities are deluding themselves. The prevalence of substantive consolidation in large public bankruptcies reveals that the simple asset partition created by a legal entity is a particularly unreliable method of matching assets with liabilities. This much is clear. The judicial rhetoric that substantive consolidation should be used sparingly provides cold comfort in light of its widespread use in large public bankruptcies.

⁴⁹ I suspect judicial concern centers on traditionally understood external capital markets, such as stock exchanges, and not the internal capital markets considered by Professor Triantis. If judges were to accept Professor Triantis's theory about the importance of internal capital markets, at a surface level that acceptance might provide an additional reason to use substantive consolidation sparingly. However, such reference would be misplaced, in my view, because use of corporate form to create internal capital markets is primarily a management tool. As the bankruptcy proceeding looks forward to new management and not backwards, the destruction of any internal capital markets created by legal entity form should not have adverse consequences for either the consolidated group or the functioning of external capital markets.

⁵⁰ To be clear, I focus on the utility of asset partitioning's explanatory power within consolidated groups. I believe that the asset partitioning theory has far greater appeal in explaining the role of firms under central management and the relationship of these firms to individual investors. It is generally understood that more theoretical attention has been focused on firms rather than on the internal structure of firms. *See* David A. Skeel, Jr., *Corporate Anatomy Lessons*, 113 YALE L.J. 1519, 1522 (2004) (reviewing REINIER KRAAKMAN ET. AL, THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH (2004)).

To be sure, a reliable asset partition may employ a legal entity as part of a matching strategy. However, to insure the integrity of the asset partition under the stress of insolvency (i.e. the only circumstance that really matters to a creditor), a creditor must supplement the asset partition with additional steps, such as strict covenant packages and security interests. Securitization transactions provide the classic example of enhancement of the asset partition created by a legal entity. External regulatory regimes, such as those applicable to banks, insurance companies and public utilities, similarly may provide another type of supplement to the legal entity form that helps preserve the integrity of an asset partition created by a legal entity.

Beyond the practical conclusion, I want to make the stronger theoretical point that, in light of the evidence, asset partitioning can provide only a partial explanation for the internal structure of consolidated groups. Certainly. management of a consolidated group and its creditors may use legal entities as part of a strategy to match assets and liabilities. This matching may well have taken place in many of the single debtor cases studied that involved debtors that were members of multi-entity consolidated groups. However, the data suggests that, in the majority of cases, the internal structure of legal entities within a consolidated group are not being used to partition assets. From this it would be wrong to conclude, however, that management of consolidated groups and creditors are indifferent to internal structure. The extensive use of the "deemed" substantive consolidation technique suggests that the management of consolidated groups elect to preserve internal group structure (while simultaneously ignoring the asset partitioning function available by use of multiple legal entities) for a variety of reasons.

At one extreme, legal entities may be preserved simply to save the costs associated with effecting business combinations under state law. In many cases, management interests and creditor interests will be aligned by pursuit of these cost savings.⁵¹ In other cases, preservation of internal consolidated group structure may facilitate goals other than asset partitioning. Three non-exhaustive examples illustrate other possible goals furthered by use of a legal entity: separate legal entities are used (i) for tax planning,⁵² (ii) to facilitate creation of security interests for creditor groups⁵³ and (iii) to provide incentives for management personnel of

⁵¹ The different economic circumstances in which cost savings might be realized are discussed in *Corporate Form*, supra note 2, at 239–40.

 $^{5^{2}}$ An example of legal entity use for tax planning is the intellectual property holding company designed to avoid state taxes at issue in the *Owens Corning* cases. *See id.* at 250 n.37.

⁵³ The use is broader than securitization transactions. An example would be the collection of intellectual property in a single legal entity, coupled with a pledge of the equity interests in the legal entity. Such a technique may be used to avoid the need to comply with Federal law governing perfection of security interests in intellectual property. Different techniques used to create security interests are discussed in William H. Widen, *Lord of the Liens: Towards Greater Efficiency in Secured Syndicated Lending*, 24 CARD. L. REV. 1577 (2004).

separate internal business operations within a consolidated group.⁵⁴ The fact that the deemed substantive consolidation technique receives extensive use in cases in which a debtor emerges from bankruptcy (and not simply in liquidation cases), strengthens the conclusion that internal group structure matters (even if it does not matter primarily for the asset partitioning function).

This study is a first step in defining the space within which emerging theories about the structure of consolidated groups must rise or fall—regardless of whether those theories rely on simple transaction cost savings, internal capital markets, blended capital structures or otherwise. At a minimum, however, this study shows that additional theories are needed to explain the structure of consolidated groups because the basic theory of asset partitioning is unable to carry the theoretical burden by itself in light of the facts.

⁵⁴ An example would be granting warrants or options to management of a subsidiary company exercisable upon a sale of the subsidiary. Additionally, internal capital markets might be structured to provide other incentives. *Cf.* Triantis, *supra* note 48, at 1108–09 (highlighting "incentive to maintain efficient organizations in order to prevent takeovers" based on "internal capital markets explanation of organizational boundaries").

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ANNEX A

Selected Descriptive Statistics

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<pre>> summary(DATASET) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :140 Min. : 1.00 Min. : 0.00 Min. : 149 YES:178 lat Qu.: 209.5 YES:175 lat Qu.: 3.00 lst Qu.: 7.00 lat Qu.: 381 Median : 432.0 Median : 8.00 Median : 20.00 Median : 701 Mean : 508.6 Mean : 2.273 Mean : 56.66 Mean : 2.230 Max. : 2229.0 Max. : 2529.00 Max. : 2562.00 Max. :103914 > SUBCONCASES - subset(DATASET, subset=SUBCON=*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 33.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:18 lst Qu.: 518.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:18 lst Qu.: 2182.0 Max. :2529.00 Max. :2562.00 Max. :103914 > SUBCONCASES - subset(DATASET, subset=SUBCON=*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 318.0 NO :90 Min. : 2.00 Min. : 2.00 Min. : 149.0 YES:18 lst Qu.: 518.0 NO :90 Min. : 2.00 Min. : 2.00 Max. :103914.0 Mean : 555.1 Mean : 44.29 Mean : 72.67 Mean : 3347.9 3rd Qu.: 2699.0 3rd Qu.: 260.0 3rd Qu.: 58.00 3rd Qu.: 1888.5 Max. : 2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON=*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Ist Qu.: 307 Median : 281.0 Median : 3.00 Median : 16.00 Median : 655 Max. : 2259.0 Max. :157.00 Max. :2562.00 Max. :103914.0 > SINGLEDEBTORCASES - subset(NOTSUBCONCASES, subset=BANKENTS=1) > summary(SINGLEDEFORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 NG Min. : 199.0 3rd Qu.: 1845.0 Median : 11.00 Min. : 199.0 3rd Qu.: 1845.0 Median : 11 Median : 144.00 Max. :48768 > SINGLEDEBTORCASES - subset(NOTSUBCONCASES, subset=BANKENTS=1) > summary(SINGLEDEFORCASES) Median : 285.0 Median : 11 Median : 144.00 Median : 437.0 Mean : 449.3 Mean : 11 Mean : 34.58 Mean : 1646.9 3rd Qu.: 1662.5 Jrd Qu.: 1 377.0 Max. :21988.0 Max. : 11445.0 Max. : :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset(NOTSUBCONCASES,</pre>							
No ::37 Min :: 31.0 NO ::40 Min. : 1.00 Min. : 0.00 Min. : 149 YES:178 lst Qu.: 209.5 YES:175 lst Qu.: 3.00 lst Qu.: 7.00 lst Qu.: 381 Median : 432.0 Median : 8.00 Median : 20.00 Median : 701 Mean : 508.6 Mean : 22.73 Mean : 56.66 Mean : 22830 3rd Qu.: 665.0 Jrd Qu.: 21.00 Jrd Qu.: 44.00 Jrd Qu.: 1898 Max. :2229.0 Max. :2552.00 Max. :2552.00 Max. :103914 > SUBCONCASES <- subset(DATASET, subset=SUBCON==*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 58.0 Median : 781.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 590.0 3rd Qu.: 526.00 3rd Qu.: 1888.5 Max. :2182.0 Max. :2552.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 10 Jr Min. : 11.0 Nin. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 58.00 3rd Qu.: 337 Median : 248.0 Median : 3.00 Median : 16.00 Mat. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 39.00 Jrd Qu.: 337 Median : 248.1 Mean : 1.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.33 Median : 16.00 Median : 656 Mean : 248.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 Jrd Qu.: 39.00 Jrd Qu.: 1915 Max. ::270.0 Max. ::487.60 Max. ::487.60 > SINGLEDEBTORCASES - subset(NOTSUBCONCASES, subset=BANKENTS==1) > summary(SINGLEDEFDORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. : 1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 4.50 lst Qu.: : 302.5 Median : 285.0 Median : 1 Median : 14.00 Median : 447.60 No :43 Min. : 38.0 NO :15 Min. : 1 Min. : 0.00 Min. : : 199.0 YES: 7 Median : 285.0 Median : 1 Mean : : 34.58 Mean : : 1646.9 Jrd Qu.: 662.5 Jrd Qu.: 1 Jrd Qu.: 37.50 Jrd Qu.: 1195.0 Max. : : 1445.0 Max. : : 1 Max. : : 371.00 Max. : : 21988.0 > MULTIDEBTORCA			EMERGE	BANKENTS	TOTALSUB	ASSETS	
<pre>YES:178 lst Qu.: 209.5 YES:175 lst Qu.: 3.00 lst Qu.: 7.00 lst Qu.: 381 Median: 432.0 Median: 8.00 Median: 20.00 Median: 701 Mean: 508.6 Mean: 28.73 Mean: 56.66 Mean: 2830 3rd Qu.: 665.0 3rd Qu.: 21.00 3rd Qu.: 44.00 3rd Qu.: 1898 Max. :2229.0 Max. :2259.00 Max. :2562.00 Max. :103914 > SUBCONCASES <- subset(DATASET, subset=SUBCON==*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 2 80.00 lst Qu.: 398.5 Median: 464.5 Median: 14.00 Median: 24.00 Median: 781.0 Mean: :555.1 Mean: 14.00 Median: 24.00 Median: 781.0 Mean: :555.1 Mean: 14.00 Median: 770 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 : 13 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 58.00 3rd Qu.: 1888.5 Median: :281.0 Mean: : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 33.70 Median: :281.0 Mean: :0.33 Mean : 35.86 Mean : 2158 3rd Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 39.00 3rd Qu.: 387 Median: :488.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: :48768 > SINCLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 :137 Min. : 31.0 NO :50 Min. : 1.00 Max. :24800 Max. :48768 > SINCLEDEBTORCASES - subset(NOTSUECONCASES, subset=BANKENTS=1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 :137 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 44.50 lst Qu.: 302.5 Median: 225.0 Median: 1 Mean : 34.488.0 Max. :48768 > SINCLEDEBTORCASES - Subset(NOTSUECONCASES, subset=BANKENTS=1) > summary(SULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 :43 Min. : 38.0 NO :16 Min. :1 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES <- subset(NOTSUECONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N6 :43 Min. : 280.0 Max.</pre>							
<pre>Median : 432.0 Median : 8.00 Median : 20.00 Median : 701 Mean : 508.6 Mean : 28.73 Mean : 56.66 Mean : 2830 3rd Qu.: 665.0 3rd Qu.: 21.00 3rd Qu.: 44.00 3rd Qu.: 1898 Max. :2229.0 Max. :2552.00 Max. :2562.00 Max. :103914 > SUBCONCASES <- subset(DATASET, subset=SUBCON==*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 1st Qu.: 318.0 YES:88 1st Qu.: 6.00 1st Qu.: 6.00 1st Qu.: 398.5 Median : 464.5 Median : 44.00 Median : 741.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 699.0 3rd Qu.: 2562.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 1.00 Ist Qu.: 6.00 1st Qu.: 337 Median : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 195 Max. :2229.0 Max. :448.00 Median : 1656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 Jard Qu.: 1915 Max. :2229.0 Max. :44760 Max. :48766 > SINGLEDEBTORCASES <- subset(NOTSUECONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. : 1 Min. : 0.00 Min. : 199.0 YES: 0 1st Qu.: 148.5 YES:27 1st Qu.: 1 1st Qu.: 4.50 1st Qu.: : 48766 > SINGLEDEBTORCASES <- subset(NOTSUECONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS Median : 285.0 Median : 1 Mean : : 44.58 Mean : : 1646.9 Jrd Qu.: 662.5 Jrd Qu.: 1 Jrd Qu.: 37.50 Jrd Qu.: : 302.5 Median : 285.0 Median : 1 Mean : : 44.58 Mean : : 1646.9 Jrd Qu.: 662.5 Jrd Qu.: 1 Jrd Qu.: 37.50 Jrd Qu.: : 195.0 Max. : : 1445.0 Max. : : 1 Max. : : 371.00 Max. : : : 21988.0 > MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS Nax : : : : : : : : : : : : : : : : : : :</pre>						1st Ou.: 381	
Mean : 508.6 Mean : 28.73 Mean : 56.66 Mean : 2830 Jrd Qu.: 685.0 Jrd Qu.: 21.00 Jrd Qu.: 44.00 Jrd Qu.: 103914 > SUBCONCASES - subset(DATASET, subset=SUBCON=="YES") - 1000 Max. :103914 > SUBCONCASES - SUBCONCASES) - 0.00 Min. : 10.01 YES:178 Ist Qu.: 316.0 N0 : 90 Min. : 0.00 Min. : 10.90 YES:178 Ist Qu.: 181.0 Mean : 42.89 Mean : 72.67 Mean : 318.0 YES:178 Jrd Qu.: 1282.0 Max. : 2259.00 Max. : 2562.00 Max. : 103914.0 > Motion: 1.00 Min. : 0.00 Min. : 0.00 Min. : 149.0 YES:178 Ist Qu.:: 180.0 YES:87 Nodian: : 1.00 Mean<: : 252.00	12012/0					Median : 701	
<pre>Max. :2229.0 Max. :2529.00 Max. :2562.00 Max. :103914 > SUBCONCASES <- subset (DATASET, subset=SUBCON==*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 8.00 lst Qu.: 398.5 Median : 464.5 Median : 14.00 Median : 24.00 Median : 761.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 699.0 3rd Qu.: 26.00 3rd Qu.: 58.00 3rd Qu.: 1888.5 Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset (DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 36.00 lst Qu.: 337 Median : 248.3 Mean : 10.33 Mean : 35.86 Mean : 2158 > SINGLEDEBTORCASES > SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 448.00 Max. :448768 > SINGLEDEBTORCASES > SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 448.00 Max. :448768 > SINGLEDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON MEATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 37.50 3rd Qu.: 191.5 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :11 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES > subset (NOTSUBECONCASES, subset=BANKENTS>1) > summary(MULTIDEDTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 NIA. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NAMEAN :1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max.</pre>				Mean : 28.73	Mean : 56.66	Mean : 2830	
<pre>Max. :2229.0 Max. :2529.00 Max. :2562.00 Max. :103914 > SUBCONCASES <- subset(DATASET, subset=SUBCON==*YES*) > summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 8.00 lst Qu.: 398.5 Median : 464.5 Median : 14.00 Median : 24.00 Median : 761.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 669.0 3rd Qu.: 26.00 3rd Qu.: 58.00 3rd Qu.: 1888.5 Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 35.66 Mean : 2158 NG :48.3 Mean : 10.33 Mean : 15.66 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 398.0 > SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 146.5 YES:27 lst Qu.: 1 lst Qu.: 448.00 Max. :48768 > SINGLEDEBTORCASES <- subset(NOTSUBCONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 146.5 YES:27 lst Qu.: 1 lst Qu.: 448.00 Max. :48768 > SINGLEDEBTORCASES <- subset(NOTSUBCONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 146.5 YES:27 lst Qu.: 1 lst Qu.: 37.50 3rd Qu.: 195.0 Max. :1445.0 Max. :11 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 1465.0 Meai :1 Meain : 14.00 Median : 437.0 Meain : 2485.0 Meain :1 Meain : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :11 Max. :371.00 Max. :21988.0 > MULTID</pre>		3rd Ou.: 685.0		3rd Ou.: 21.00	3rd Qu.: 44.00	3rd Qu.: 1898	
<pre>> summary(SUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 : 0 Min. : 35.0 N0 :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 8.00 lst Qu.: 398.5 Median : 464.5 Median : 14.00 Median : 24.00 Median : 781.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 699.0 3rd Qu. : 26.00 3rd Qu.: 58.00 3rd Qu.: 1888.5 Max. : 2182.0 Max. : 2529.00 Max. : 2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 :137 Min. : 31.0 N0 :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 6.00 lst Qu.: 337 Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 199.0 Jrd Qu.: 199.0 Max. :157.00 Max. :448.00 Max. :48768 > SINCLEDEBTORCASES SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.:1 lst Qu.: 4.50 lst Qu.: 302.5 Median : 245.0 Median :1 Mean : 14.00 Median : 437.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 596.0 3rd Qu.: 37.50 Jrd Qu.: 1392.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 459.0 Median :1 Median : 14.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 4.50 lst Qu.: 302.5 Median : 285.0 Median :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 37.50 Jrd Qu.: 1195.0 Max. : 1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset(NOTSUBCONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 DURATION EMERGE BANKENTS :1 > summary(MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS</pre>		Max. :2229.0		Max. :2529.00	Max. :2562.00	Max. :103914	
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 1st Qu.: 318.0 YES:88 1st Qu.: 6.00 1st Qu.: 398.5 Median : 464.5 Median : 14.00 Median : 24.00 Median : 781.0 Mean : 455.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 Jrd Qu.: : 699.0 Jrd Qu.: 26.00 Jrd Qu.: 1888.5 Max. : :2182.0 Max. : 2529.00 Max. : :2562.00 Max. : :103914.0 > NOTSUBCONCASES <- subset (DATASET, subset=SUBCON==*NO*)	> SUBCONC	ASES <- subset(DA	TASET, su	bset=SUBCON=="YES";)		
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 1st Qu.: 318.0 YES:88 1st Qu.: 6.00 1st Qu.: 39.0 Median : 781.0 Median : 464.5 Median : 14.00 Median : 22.67 Mean : 3347.9 Max. : 2182.0 Max. : 2529.00 Max. : 2562.00 Max. : 103914.0 > NOTSUBCONCASES <- subset (DATASET, subset=SUBCON==*NO*)							
<pre>NO : 0 Min. : 35.0 NO :90 Min. : 2.00 Min. : 0.00 Min. : 149.0 YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 8.00 lst Qu.: 398.5 Median : 464.5 Median : 14.00 Median : 24.00 Median : 781.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 2182.0 Max. :2529.00 Max. :2562.00 3rd Qu.: 1888.5 Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 6.00 lst Qu.: 337 Median : 241.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. : 2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEETORCASES SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. : 1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 at Qu.: 4.50 lst Qu.: 302.5 Median : 245.0 Mean : 1 Median : 14.00 Median : 646.9 3rd Qu.: 1445.5 YES:27 lst Qu.: 1 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 37.00 Max. :2198.0 > MULTIDEETORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS=1) > Mean : 449.3 Mean : 1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS>1) > summary (MULTIDEFTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NAX. :1445.0 Max. :1 Max. :371.00 Max. :21988.0</pre>				D. NIKEN MO	COURSE CUIP	ACCEMC	
<pre>YES:178 lst Qu.: 318.0 YES:88 lst Qu.: 6.00 lst Qu.: 8.00 lst Qu.: 398.5 Median : 464.5 Median : 14.00 Median : 24.00 Median : 781.0 Mean : 555.1 Mean : 42.89 Mean : 72.67 Mean : 3347.9 3rd Qu.: 699.0 3rd Qu.: 26.00 3rd Qu.: 58.00 3rd Qu.: 1888.5 Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 lst Qu.: 141.0 YES:87 lst Qu.: 1.00 lst Qu.: 6.00 lst Qu.: 337 Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 1915 Max. :127.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES <- subset(NOTSUECONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 A50 lst Qu.: 30.25 Median : 285.0 Median :1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 377.50 3rd Qu.: 195.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 Max. :377.00 Max. :21988.0 > MULTIDEETORCASES <- subset(NOTSUECONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUBCON DURATION MAX. :1 Max. :371.00 Max. :21988.0</pre>							
Median: 464.5 Median: 14.00 Median: 24.00 Median: 781.0 Mean: 555.1 Mean: 42.89 Mean: 72.67 Mean: 3347.9 Jrd Qu.: 699.0 Jrd Qu.: 260.00 Jrd Qu.: 58.00 Jrd Qu.: 1888.5 Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES Summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO:137 Min. : 31.0 NO:50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 10.00 Jrd Qu.: 39.00 Jrd Qu.: 1915 Median : 281.0 Median : 10.33 Mean : 150.0 Median : 2158 Jrd Qu.: 596.0 Jrd Qu.: 10.00 Jrd Qu.: 39.00 Jrd Qu.: 1915 Max. :12229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS==1)							
Mean: 55.1 Mean: 42.89 Mean: 72.67 Mean: 3347.9 3rd Qu.: 699.0 3rd Qu.: 26.00 3rd Qu.: 58.00 3rd Qu.: 1888.5 Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES Summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 199 YES: 0 1st Qu.: 1st Qu.: 16.00 Median: 6.00 1st Qu.: 337 Median: 281.0 Median: 3.00 Median: 16.00 Median: 6.00 1st Qu.: 317 Mean: : 448.3 Mean: 10.00 3rd Qu.: 390 3rd Qu.: 199 YES: 0 1st Qu.: 56.0 3rd Qu.: 10.00 3rd Qu.: 316 SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS <tr< td=""><td>YES:1/8</td><td></td><td>155:00</td><td></td><td></td><td>-</td></tr<>	YES:1/8		155:00			-	
3rd Qu.: 699.0 Max. :2182.0 3rd Qu.: 26.00 Max. :2562.00 3rd Qu.: 1888.5 Max. :2562.00 > NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*)							
Max. :2182.0 Max. :2529.00 Max. :2562.00 Max. :103914.0 > NOTSUBCONCASES <- subset (DATASET, subset=SUBCON==*NO*)							
<pre>> NOTSUBCONCASES <- subset(DATASET, subset=SUBCON==*NO*) > summary(NOTSUBCONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 1.00 1st Qu.: 6.00 1st Qu.: 337 Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. :2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS=1) > summary(SINGLEDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 1st Qu.: 148.5 YES:27 1st Qu.:1 1st Qu.: 4.50 1st Qu.: 302.5 Median : 245.0 Median :1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.:1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 MO :16 Min. :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.:1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 </pre>							
<pre>> summary(NOTSUBECONCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 1.00 1st Qu.: 6.00 1st Qu.: 337 Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. : 2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 1st Qu.: 148.5 YES:27 1st Qu.: 1 1st Qu.: 4.50 1st Qu.: 302.5 Median : 285.0 Median :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS Median : 245.0 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. : 1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEETORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS</pre>		Max2102.0		114A. 12505.00			
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO:137 Min.: 31.0 NO:50 Min.: 1.00 Min.: 0.00 Min.: 199 YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 1.00 1st Qu.: 6.00 1st Qu.: 337 Median: 281.0 Median: 3.00 Median: 16.00 Median: 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. :1229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES submary(SINGLEDEBTORCASES) Submary(SINGLEDEBTORCASES) Subcon DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 1	> NOTSUBC	ONCASES <- subset	(DATASET,	subset=SUBCON==*N	0")		
NO :137 Min. : 31.0 NO :50 Min. : 1.00 Min. : 0.00 Min. : 199 YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 1.00 1st Qu.: 6.00 1st Qu.: 337 Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. : 2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEETORCASES <- subset (NOTSUECONCASES, subset=BANKENTS==1)	> summary	(NOTSUBCONCASES)					
YES: 0 1st Qu.: 141.0 YES:87 1st Qu.: 1.00 1st Qu.: 6.00 1st Qu.: 337 Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. :2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 1st Qu.: 148.5 YES:27 1st Qu.: 1 1st Qu.: 302.5 Median : 285.0 Median :1 Median : 14.00 Median : 437.0 Mean : 1 Median :1 Median : 14.00 Median : 437.0 Median : 245.0 Median :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 1195.0 Max. :11 Max. :1 Max. :1 Max. :371.00 Max. :21988.0 > > MULTIDEBTORCASES <- subset (NOTSUBECONCASES, subset=BANKENTS>1) >	SUBCON	DURATION	EMERGE				
Median : 281.0 Median : 3.00 Median : 16.00 Median : 656 Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. : 2229.0 Max. : 157.00 Max. : 448.00 Max. : 448768 > SINGLEDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS==1)							
Mean : 448.3 Mean : 10.33 Mean : 35.86 Mean : 2158 3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. :2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS==1)	YES: 0		YES:87				
3rd Qu.: 596.0 3rd Qu.: 10.00 3rd Qu.: 39.00 3rd Qu.: 1915 Max. :2229.0 Max. :157.00 Max. :448.00 Max. :48768 > SINGLEDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS==1)							
Max.:2229.0Max.:157.00Max.:448.00Max.:48768> SINGLEDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS==1)							
<pre>> SINGLEDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS==1) > summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 1st Qu.: 148.5 YES:27 1st Qu.:1 1st Qu.: 4.50 1st Qu.: 302.5 Median : 285.0 Median :1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.:1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS</pre>							
<pre>> summary(SINGLEDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS N0 :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 4.50 lst Qu.: 302.5 Median : 285.0 Median :1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS</pre>		Max. :2229.0		Max. :157.00	Max. :448.00 M	Max. :48768	
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO:43 Min.: 38.0 NO:16 Min.: 1 Min.: 0.00 Min.: 199.0 YES:0 1st Qu.: 148.5 YES:27 1st Qu.: 1st Qu.: 302.5 Median:285.0 Median:1 Median:1 4.50 1st Qu.: 302.5 Median:245.0 Median:1 Median:1 Median:4.00 Median:437.0 Mean: :449.3 Mean :1 Mean :34.58 Mean :1646.9 3rd Qu.: :662.5 3rd Qu.:1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) > summary (MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS	> SINGLED	EBTORCASES <- sub	set (NOTSU	BCONCASES, subset=1	BANKENTS==1)		
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS NO:43 Min.: 38.0 NO:16 Min.: 1 Min.: 0.00 Min.: 199.0 YES:0 1st Qu.: 148.5 YES:27 1st Qu.: 1st Qu.: 302.5 Median:285.0 Median:1 Median:1 4.50 1st Qu.: 302.5 Median:245.0 Median:1 Median:1 440.0 Median:437.0 Mean: :449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: :662.5 3rd Qu.:1 3rd Qu.: 371.00 Max. Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) > summary (MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS	Seummary	(STNGLEDEBTORCASE	S)				
NO :43 Min. : 38.0 NO :16 Min. :1 Min. : 0.00 Min. : 199.0 YES: 0 lst Qu.: 148.5 YES:27 lst Qu.: 1 lst Qu.: 4.50 lst Qu.: 302.5 Median : 285.0 Median :1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean :1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) summary (MULTIDEBTORCASES) SUECON DURATION EMERGE BANKENTS TOTALSUB ASSETS	-			BANKENTS TO	TALSUB ASS	SETS	
YES: 0 1st Qu.: 148.5 YES:27 1st Qu.: 1 1st Qu.: 4.50 1st Qu.: 302.5 Median : 285.0 Median : 1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean : 1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 375.0 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS>1) summary (MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS					: 0.00 Min.	: 199.0	
Median : 285.0 Median : 1 Median : 14.00 Median : 437.0 Mean : 449.3 Mean : 1 Mean : 34.58 Mean : 1646.9 3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. : 1445.0 Max. : 1 Max. : 371.00 Max. : 21988.0 > MULTIDEBTORCASES <- subset (NOTSUECONCASES, subset=BANKENTS>1) summary (MULTIDEBTORCASES) SUBECON DURATION EMERGE BANKENTS TOTALSUB ASSETS					u.: 4.50 1st Qu	.: 302.5	
3rd Qu.: 662.5 3rd Qu.: 1 3rd Qu.: 37.50 3rd Qu.: 1195.0 Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS>1) > summary (MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS				Median :1 Media	n:14.00 Median	: 437.0	
Max. :1445.0 Max. :1 Max. :371.00 Max. :21988.0 > MULTIDEBTORCASES <- subset (NOTSUBCONCASES, subset=BANKENTS>1) > summary (MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS				Mean :1 Mean	: 34.58 Mean	: 1646.9	
<pre>> MULTIDEBTORCASES <- subset(NOTSUBCONCASES, subset=BANKENTS>1) > summary(MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS</pre>		3rd Qu.: 662.5		3rd Qu.:1 3rd Qu	u.: 37.50 3rd Qu	.: 1195.0	
> summary(MULTIDEBTORCASES) SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS		Max. :1445.0		Max. :1 Max.	:371.00 Max.	:21988.0	
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS	> MULTIDEBTORCASES <- subset(NOTSUBCONCASES, subset=BANKENTS>1)						
SUBCON DURATION EMERGE BANKENTS TOTALSUB ASSETS							
Sobeon Bondirion Limited - Commenter				BANKENTS	TOTALSUB	ASSETS	

SUBCON	DURATION	EMERGE	BANKENTS	TOTALSUB	ASSETS
NO :94	Min. : 31.0	NO :34	Min. : 2.00	Min. : 0.00	Min. : 220.0
YES: 0	1st Qu.: 141.0	YES:60	1st Qu.: 3.00	1st Qu.: 7.00	1st Qu.: 405.2
	Median : 279.0		Median : 7.00	Median : 16.50	Median : 701.0
	Mean : 447.8		Mean : 14.60	Mean : 36.45	Mean : 2391.1
	3rd Qu.: 546.5		3rd Qu.: 12.75	3rd Qu.: 39.00	3rd Qu.: 2002.0
	Max. :2229.0		Max. :157.00	Max. :448.00	Max. :48768.0

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> JUMBOCASES <- subset(DATASET, subset=ASSETS>999)

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> summary	(JUMBOCASES)				
SUBCON	DURATION	EMERGE	BANKENTS	TOTALSUB	ASSETS
NO :47	Min. : 49.0	NO :51	Min. : 1.00	Min. : 0.00	Min. : 1004
YES:77	1st Qu.: 210.5	YES:73	1st Qu.: 5.00	1st Qu.: 14.00	1st Qu.: 1554
	Median : 447.5		Median : 19.50	Median : 38.50	Median : 2486
	Mean : 559.0		Mean : 36.99	Mean : 89.22	Mean : 6462
	3rd Qu.: 737.8		3rd Qu.: 32.25	3rd Qu.: 86.25	3rd Qu.: 4791
	Max. :2229.0		Max. :437.00	Max. :1978.00	Max. :103914

> JUMBOSUBCONCASES <- subset(JUMBOCASES, subset=SUBCON=="YES")</pre>

> summary (JUMBOSUBCONCASES)						
SUBCON	DURATION	EMERGE	BANKENTS	TOTALSUB	ASSETS	
NO : 0	Min. : 49.0	NO :37	Min. : 2.0	Min. : 0.0	Min. : 1004	
YES:77	1st Qu.: 317.0	YES:40	1st Qu.: 13.0	1st Qu.: 15.0	1st Qu.: 1441	
	Median : 474.0		Median : 25.0	Median : 36.0	Median : 2155	
	Mean : 602.9		Mean : 48.7	Mean : 103.9	Mean : 7117	
	3rd Qu.: 767.0		3rd Qu.: 44.0	3rd Qu.: 93.0	3rd Qu.: 4470	
	Max. :2182.0		Max. :437.0	Max. :1978.0	Max. :103914	

> JUMBONOTSUBCONCASES <- subset(JUMBOCASES, subset=SUBCON=="NO")</pre>

> summary(JUMBONOTSUBCONCASES)

SUBCON	DURATION	EMERGE	BANKENTS	TOTALSUB	ASSETS
NO :47	Min. : 65.0	NO :14	Min. : 1.00	Min. : 0.00	Min. : 1034
YES: 0	1st Qu.: 141.0	YES:33	1st Qu.: 2.00	1st Qu.: 13.50	1st Qu.: 1818
	Median : 245.0		Median : 5.00	Median : 40.00	Median : 3108
	Mean : 487.1		Mean : 17.81	Mean : 65.21	Mean : 5390
	3rd Qu.: 598.5		3rd Qu.: 13.00	3rd Qu.: 69.50	3rd Qu.: 5016
	Max. :2229.0		Max. :157.00	Max. :448.00	Max. :48768

> JUMBOSINGLEDEBTORCASES <- subset(JUMBONOTSUBCONCASES, subset=BANKENTS==1)</pre>

> summary	(JUMBOSINGLEDEBT	ORCASES)			
SUBCON	DURATION	EMERGE	BANKENTS	TOTALSUB	ASSETS
NO :11	Min. : 65.0	NO :2	Min. :1	Min. : 7.00	Min. : 1512
YES: 0	1st Qu.:107.0	YES:9	1st Qu.:1	1st Qu.: 21.50	1st Qu.: 2918
	Median :120.0		Median :1	Median : 44.00	Median : 3202
	Mean :323.6		Mean :1	Mean : 55.64	Mean : 5239
	3rd Qu.:584.0		3rd Qu.:1	3rd Qu.: 60.50	3rd Qu.: 4164
	Max. :990.0		Max. :1	Max. :205.00	Max. :21988

> JUMBOMULTIDEBTORCASES <- subset(JUMBONOTSUBCONCASES, subset=BANKENTS>1)

> summary	(JUMBOMULTIDEBTO	RCASES)			
SUBCON	DURATION	EMERGE	BANKENTS	TOTALSUB	ASSETS
NO :36	Min. : 68.0	NO :12	Min. : 2.00	Min. : 0.00	Min. : 1034
YES: 0	1st Qu.: 160.8	YES:24	1st Qu.: 4.00	1st Qu.: 11.75	1st Qu.: 1643
	Median : 300.5		Median : 9.00	Median : 39.00	Median : 2822
	Mean : 537.0		Mean : 22.94	Mean : 68.14	Mean : 5436
	3rd Qu.: 623.0		3rd Qu.: 26.25	3rd Qu.: 70.00	3rd Qu.: 5456
	Max. :2229.0		Max. :157.00	Max. :448.00	Max. :48768

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ANNEX B

Selected Regression Summaries

+ EMERGE + DURATION + TOTALSUB + ASSETS . > GLM.1 <- glm(SUBCON ~ BANKENTS family=binomial(logit), data=DATASET) > summary(GLM.1) Call: glm(formula = SUBCON ~ BANKENTS + EMERGE + DURATION + TOTALSUB + ASSETS, family = binomial(logit),, data = DATASET) Deviance Residuals: Min 10 Median -3.2255 -1.0563 0.6187 30 Max 0.6187 1.0359 1.4356 Coefficients: Estimate Std. Error z value Pr(>|z|) 2.905e-02 2.657e-01 0.109 0.912940 3.282e-02 8.970e-03 3.659 0.000253 *** (Intercept) BANKENTS
 DALANCENTS
 3.202-02
 6.9702-03
 3.659
 0.000233
 *

 EMERGE[T.YES]
 -6.3180-01
 2.4870-01
 -2.541
 0.011058
 *

 DURATION
 3.3470-04
 3.2190-04
 1.040
 0.298421

 TOTALSUB
 -1.9840-03
 1.5900-03
 -1.248
 0.212191

 ASSETS
 -2.4200-06
 2.2980-05
 -0.105
 0.916110
 Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 (Dispersion parameter for binomial family taken to be 1) Null deviance: 431.33 on 314 degrees of freedom Residual deviance: 394.34 on 309 degrees of freedom AIC: 406.34 Number of Fisher Scoring iterations: 7 > GLM.2 <- glm(SUBCON ~ BANKENTS + EMERGE, family=binomial(logit), data=DATASET) > summary(GLM.2) Call: glm(formula = SUBCON ~ BANKENTS + EMERGE, family = binomial(logit), data = DATASET) Deviance Residuals: Min 10 Median -2.8452 -1.0726 0.6123 3Q Max 1.0539 1.3686 Coefficients: Estimate Std. Error z value Pr(>|z|)(Intercept) 0.211272 0.199624 1.058 0.28990 BANKENTS 0.028831 0.007994 3.607 0.00031 *** EMERGE[T.YES] -0.707956 0.241476 -2.932 0.00337 ** Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 (Dispersion parameter for binomial family taken to be 1) Null deviance: 431.33 on 314 degrees of freedom Residual deviance: 396.87 on 312 degrees of freedom AIC: 402.87 Number of Fisher Scoring iterations: 7

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> GLM.3 <- glm(SUBCON ~ BANKENTS + EMERGE + DURATION + TOTALSUB + ASSETS , family=binomial(logit), data=JUMBOCASES) > summary(GLM.3) Call: glm(formula = SUBCON ~ BANKENTS + EMERGE + DURATION + TOTALSUB + ASSETS, family = binomial(logit), data = JUMBOCASES) Deviance Residuals: Min 10 Median 30 Max -2.7766 -1.0146 0.6568 0.9624 1.4046 Coefficients: . Estimate Std. Error z value Pr(>|z|) (Intercept) 3.423e-01 4.069e-01 0.841 0.4002 2.240e-02 8.995e-03 2.490 0.0128 BANKENTS 0.0128 *
 EARNEMENTS
 2.240e-02
 8.995e-03
 2.490
 0.0128

 EMERGE[T.YES]
 -1.001e+00
 4.166e-01
 -2.402
 0.0163

 DURATION
 4.606e-04
 4.480e-04
 1.028
 0.3039

 TOTALSUB
 -1.169e-03
 1.652e-03
 -0.708
 0.4790

 ASSETS
 -6.832e-07
 2.366e-05
 -0.029
 0.9770
 0.0163 * ---Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 (Dispersion parameter for binomial family taken to be 1) Null deviance: 164.57 on 123 degrees of freedom Residual deviance: 145.92 on 118 degrees of freedom AIC: 157.92 Number of Fisher Scoring iterations: 6 > GLM.4 <- glm(SUBCON ~ BANKENTS + EMERGE, family=binomial(logit), data=JUMBOCASES) > summary(GLM.4) Call glm(formula = SUBCON ~ BANKENTS + EMERGE, family = binomial(logit), data = JUMBOCASES) Deviance Residuals: Min 1Q Median 3Q Max -2.3274 -1.0370 0.6665 0.9350 1.3203 Max Coefficients: Estimate Std. Error z value Pr(>|z|) 0.561990 0.343152 1.638 0.10148 0.019535 0.007524 2.596 0.00942 ** (Intercept) BANKENTS EMERGE[T.YES] -0.989574 0.410186 -2.412 0.01584 * Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1 (Dispersion parameter for binomial family taken to be 1) Null deviance: 164.57 on 123 degrees of freedom Residual deviance: 147.50 on 121 degrees of freedom AIC: 153.50 Number of Fisher Scoring iterations: 5

ANNEX C

Methodological Remarks

This study does not attempt to measure the extent to which substantive consolidation is used *within* a single reorganization. In many cases, substantive consolidation is used to administer only a subset of the entities in a consolidated group. Some cases use substantive consolidation to create multiple pools within a consolidated group. The important point is that use of substantive consolidation appears rarely to be an all or nothing proposition. For this study, the important question was simply "How often do large public companies ignore corporate form in some fashion when crafting a reorganization proceeding?"

The main data quality control problem for this project was the count of subsidiaries in consolidated groups. The SEC requires reporting of significant subsidiaries. In my experience, some companies report all their subsidiaries to avoid making a materiality determination. Other companies report only a fraction of the subsidiaries in the consolidated group. The inconsistent standards for reporting result in some companies reporting fewer companies to the SEC than file for bankruptcy. The converse is certainly true because some companies file only a portion of their subsidiaries into bankruptcy. The problem is further compounded by the quality of reporting to the SEC itself. Preliminary data collected as a byproduct of this study suggest that over 13% of the filings SEC filings related to subsidiaries are defective in some way. Further, the quality of the data in properly made filings is uneven. Collecting accurate subsidiary data is difficult and, even when collected, may be flawed in some manner. Future research may attempt to improve subsidiary count data by examining company contracts (such as guarantee agreements).

I consider the main data contribution for this study to be the descriptive statistics and not the simple models used in the regression analyses. I am very far away from having anything like a model that would predict substantive consolidation use. In the DATASET, the best model predicts approximately 67% of the cases from a baseline of approximately 56% of the cases being classified as SUBCON cases;. To the extent one believes that pseudo R square tests shed any light on the explanatory power of the model, they are low: e.g. Cox & Snell—.104; Nagelkerke—.139.⁵⁵ The correlations produced by the regressions between SUBCON and the other variables simply support the impressions created by the descriptive data.

⁵⁵ As the pseudo R square tests do not measure mathematically the same quantity as the R square in an ordinary least squares regression, my understanding of the literature is that these measures are given little weight as a measure of predictive power in logit regressions.

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The descriptive statistics and the regressions were produced on a T43 Thinkpad computer running Debian Linux (Etch) using R 2.6.2, an open source program for statistical analysis.

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