Bankruptcy law and large complex financial organizations: A primer

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Introduction and summary

The avoidance of financial distress has been the subject of voluminous research and protracted debate. This article considers the economic and legal issues surrounding the treatment of firms in financial distress, with a particular focus on the challenges posed by large complex financial organizations (LCFOs).

The successive proposals of the Basel Committee on Banking Supervision (Basel Committee, 2001) to revise bank capital standards, which have preoccupied regulators' and bankers' attentions for several years now, are aimed at ensuring the safety and soundness of banks and indirectly influencing banks' risk taking incentives. Financial institutions have themselves been at the forefront in the quantification and management of risk and have developed a multitude of financial instruments for this purpose, both for their own uses and for the benefit of other sectors of the economy—credit and energy derivatives[1] to name two notable recent innovations. However, while these processes have improved, at least potentially, the management of risk, they do not eliminate the chance of financial distress. From time to time, even in the best of all possible economic worlds, financial firms will fail through unforeseeable economic shocks, mismanagement, or fraud. It is therefore somewhat surprising that this inevitable, though hopefully rare, eventuality has been so little analyzed by economists. For what happens when a firm fails determines at least in part the arrangements entered into when the firm is solvent and constrains the actions of various interested parties when the firm becomes distressed.

This article provides an overview of the legal treatment of bankruptcy in the U.S. and elsewhere and considers whether the structure and complexity of LCFOs have evolved beyond simplistic corporate structures and contract types historically anticipated in our insolvency legislation and common law traditions. An important part of that evolution has been the development of markets for nontraditional financial instruments used to hedge risk. The involvement of large systemically important institutions in these markets makes it important to consider how these contracts are treated under insolvency and whether this affects the ability of legal and regulatory authorities to resolve these institutions in an orderly and efficient manner.

The failure of an LCFO, of all firms, raises the greatest concern of potential systemic consequences. This is because financial institutions provide capital and other financial services to all sectors of the economy and they form the backbone of the financial markets, markets that rely to a great extent on trust. Thus, the failure of a financial intermediary calls into question a multitude of business relations. In contrast, the failure of a nonfinancial corporation of comparable size is more easily localized: Witness the recent string of bankruptcies of technology firms that have raised no fears of systemic risk in the usual sense of a freezing up of financial markets, in spite of the unprecedented size of the firms involved.

Developed financial markets are generally robust, and the failures of small financial firms, while painful for the creditors, rarely endanger significant numbers of counterparties. This being widely understood, the failure of a small financial institution raises few systemic concerns.[2] However, the failure of a large institution raises concerns that it will directly trigger other failures; for example, by failing to pay its creditors,

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the insolvent LCFO may cause these other firms to become insolvent.[3] Furthermore, uncertainty in the markets as to who is directly affected by the failure and to what extent may lead participants in the payments system and the short-term capital markets to take defensive measures, thus causing a general contraction of liquidity. This in turn may lead to financial crisis in vulnerable firms that may not even have direct exposure to the firm whose failure triggered the crisis.

Because LCFOs operate across different legal jurisdictions, the insolvency process itself creates a coordination problem across the very agents (usually courts) charged with solving the coordination problem amongst creditors. Furthermore, for certain types of contracts, the ability of the courts to suspend their execution (termed "stays") has been effectively eliminated.

As a result, LCFOs present a number of challenges that affect the resolution process. These are broadly issues of *coordination*, relating to reconciling the objectives of different regulators, legal jurisdictions, and creditors; *opacity*, relating to the inability of traditional accounting methods to provide sufficient information about contingent liabilities in off-balance-sheet activities and portfolios of nontraditional financial instruments; and *time*, relating to the difficulty of managing an orderly resolution of firms that have large portfolios of nontraditional financial instruments, some of which are exempted from the "time out" imposed on other counterparties in bankruptcy proceedings. I refer to these exempted financial instruments as "special financial instruments."[4] I explore all of the issues in detail in the following sections. While none of these issues are unique to LCFOs, they are apt to come together with particular severity if an LCFO becomes distressed.

A plethora of bankruptcy procedures

Early Roman personal bankruptcy procedures purportedly involved dividing up the debtor and distributing the parts to the creditors if he could not pay within a stipulated time period.[5] Placing the debtor into slavery was an alternative and widely practiced resolution procedure that preserved the productive capacity of the debtor but transferred the benefits to the creditor.[6] Similar thinking underlies modern corporate bankruptcy processes, and these ancient solutions find their modern equivalents in the two major outcomes to corporate bankruptcy: liquidation and reorganization.

While the evolution of legal processes to deal with bankruptcy dates back to the beginnings of written history, the analysis of these processes in an economic framework is comparatively recent. Jackson (1982) argues that bankruptcy procedures function to provide a collective debt collection mechanism designed to maximize the returns to creditors.[7] If creditors are allowed individually to enforce their claims, an uncoordinated bankruptcy proceeding involving multiple creditors is likely to lead to the dismemberment of an insolvent corporation and to a loss of value. Many insolvent firms have greater value as going concerns than can be extracted by liquidating their physical and financial assets. Furthermore, creditors who are successful in seizing assets have little or no incentive to maximize the liquidation value of those assets once their own claim is satisfied, because any excess sums must invariably be turned over to the remaining creditors. The result is the classic "prisoners' dilemma."[8] Without a credible means of ensuring cooperation among creditors, each creditor has every incentive to try to act in their own interest and seize what assets they can, even though they are aware that in doing so, they diminish the value that will be recovered by the creditors as a group.

Corporate bankruptcy processes solve this problem by coordinating the resolution of claims. A court (or administrator), interposed between the insolvent firm and its creditors, imposes a "time out" to prevent the untimely and inefficient liquidation of assets. Having taken control of the situation, the court then determines the best method of realizing the value of the firm (orderly liquidation of assets and/or reorganization), ascertains the value of all creditors' claims, and then determines how those claims will be discharged. Of these several steps, the power of the court (or administrator) to stay the execution of creditors' claims on the firm's cash flows and assets is absolutely crucial.

The prisoners' dilemma perspective views bankruptcy law as a means of protecting creditors from each other. An alternative perspective is that the function of bankruptcy is to provide a means of protecting the debtor from the creditors. In the U.S., firms that file for protection under Chapter 11 of the bankruptcy code enjoy considerable powers to manage the renegotiation of their creditors' claims. The purpose of Chapter 11 is to preserve the insolvent firm as a viable economic entity.[9] Usually the managers responsible for the insolvency are left in place, at least initially, to supervise the reorganization, subject to the oversight of the courts. This provides managers and stockholders with considerable leverage in negotiations: witness the continuity of managers in their jobs, the frequent violation of seniority rights in the final settlements, and the reduced recovery rates for creditors.[10] Critical to the success of this procedure is the ability of courts to compel counterparties to stay claims (for payment of debts) and to keep contracts (for instance, for services) in force.

This neat picture of the problem of insolvency and its solutions becomes less reassuring when we consider LCFOs. The first issue to come to grips with is the philosophy underlying the treatment of creditors—whether and how contracts and contractual provisions will be honored by the courts in different jurisdictions. The insolvency of an LCFO necessarily raises questions of competing jurisdictions, with potentially conflicting objectives. As we will see later, the treatment of special financial instruments, and the enforceability and effect of their termination and netting provisions, to some extent undermines the procedural niceties assumed in the bankruptcy procedures.

Bankruptcy laws vary across countries in their details, as one would expect, but more importantly they vary in their underlying philosophies. This makes reconciliation of bankruptcy codes something of a challenge. Attempts at international harmonization of bankruptcy laws have met with only limited success, in part because of conflicting philosophies and legal traditions. In 1997, the United Nations Commission on International Trade Law adopted a Model Law on Cross-Border Insolvencies, which sought to address a limited range of issues peculiar to cross-border insolvencies without harmonizing bankruptcy codes in their entirety. As a model law rather than a treaty, it relies on individual countries to change their own codes to conform to the model.[11] In contrast, the recently enacted European Insolvency Regulation has the advantage of being binding on European Union (EU) members. EU countries must recognize each other's bankruptcy laws and insolvency administrators and their agents. For cross-border insolvencies, the courts of the country in which the company's "centre of main interest" is located will take the lead, and proceedings in other jurisdictions will play a secondary and supportive role.[12]

Pro-creditor versus pro-debtor systems

Broadly speaking, legal approaches to bankruptcy resolution may be classified as either pro-creditor or pro-debtor. Most of the countries that derive their laws from the English common law tradition, including the UK, most Commonwealth countries, and UK-affiliated off-shore financial centers, have pro-creditor laws, which I term "English" approaches or frameworks. Germany, Italy, China, and Japan have similar approaches, though they do not share the same legal heritage. Countries whose legal frameworks have their origins in the Napoleonic Code are generally pro-debtor in their approach to bankruptcy, called the "Franco-Latin" approach. These countries include Spain, most of Latin America, as well as much of the Middle East and Africa. The U.S., Canada, and France have evolved hybrid systems of laws that are broadly pro-debtor with significant pro-creditor exceptions.

Pro-creditor bankruptcy laws recognize the right of creditors to protect themselves against default through ex ante contractual agreements that permit the solvent counterparty to close out contracts and set off obligations.[13] The Franco-Latin approach, on the other hand, seeks to maximize the value of the bankrupt firm by affirming claims due to the bankrupt firm and disavowing claims made on the firm, known as "cherry picking"; this approach often ignores ex ante contractual arrangements that would favor one creditor over another.

The English (pro-creditor) and Franco-Latin (pro-debtor) approaches have at their roots two fundamentally irreconcilable concepts of fairness. The English perspective is that it is unfair for a bankruptcy administrator to claim monies due from a solvent counterparty under one contract, while simultaneously refusing to make payments to the same counterparty under another contract. Under English law the right to "set off" or net multiple contracts between a solvent and an insolvent counterparty is a matter of common law, which does not require prior agreement. Thus, cherry picking is anathema to the English bankruptcy tradition. Furthermore, the English tradition recognizes the right of freely contracting parties to protect themselves against the possibility of default by various mutually agreed contractual arrangements, such as netting agreements and collateral.

In contrast, the Franco-Latin approach sees ex ante private contracting of creditor protection agreements as creating a privileged class of claimants to the detriment of the remaining creditors. Such protections permit one creditor to receive greater than pro rata value by virtue of being able to net amounts owed from the bankrupt firm against amounts due to the bankrupt firm, while another creditor with no offsetting position may suffer more substantial losses. The Franco-Latin approach views set-off agreements as creating an "unpublicized security"; this means that certain assets of a firm may not be available to satisfy the general creditors' claims because another creditor has an undisclosed superior claim.[14] Set-off arrangements that derive from reciprocal contracts cannot reasonably be made known to other creditors. Therefore, the Franco-Latin tradition views such hidden preferences as fundamentally unfair. To avoid this perceived inequity, the bankruptcy administrator in pro-debtor jurisdictions is given powers designed to maximize the value of assets available for pro rata distribution to all creditors.[15] These include the ability to separate multiple contracts between the bankrupt firm and individual

solvent counterparties. The administrator may also require solvent counterparties to pay amounts due to the bankrupt firm and then stand in line for *pari passu* distribution of any amounts due to them as creditors.

While these two legal philosophies are fundamentally irreconcilable, pro-creditor and pro-debtor laws frequently co-exist, though perhaps not naturally. This happens when a fundamentally pro-debtor jurisdiction, such as the U.S., enacts laws granting pro-creditor protection to specific types of contracts. These laws are termed "carve outs" and provide exceptions to the general bankruptcy code. Internationally, carve-outs have been enacted in most relevant jurisdictions for payments systems transactions and some nontraditional financial instruments. In the U.S. and some other jurisdictions, banks and some other types of financial institutions are also subject to carve outs from the bankruptcy code that is applicable to most firms.

U.S. bankruptcy laws

Bankruptcy law in the U.S. is unusually, perhaps uniquely, complex. The Federal Bankruptcy Code (generally referred to as simply "the Code") governing most corporations allows for both liquidation and reorganization. Cases involving firms subject to the Code are heard in special federal bankruptcy courts. The bankruptcy code is generally pro-debtor, with some exceptions. There is no general right of set-offs, or netting, of obligations. Various laws have carved out exemptions to the Code. Depository institutions (banks), insurance companies, government-sponsored entities (GSEs, for example, Fannie Mae), and broker/dealers are each governed by special laws and distinct resolution procedures, and certain types of financial contracts receive special treatment under the Code.

Insolvent insured depository institutions are resolved under the Federal Deposit Insurance Act (FDIA), as amended by the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA), and subsequent acts.[16] Closure authority for banks lies with the appropriate regulator, depending on the bank's charter. Creditors cannot force a bank into bankruptcy since banks are specifically exempted from the Code. The appointment of the Federal Deposit Insurance Corporation (FDIC) to administer the insolvency is mandated for federally chartered, federally insured institutions and is usual for state chartered, federally insured intuitions. The FDIC either acts as receiver to liquidate the bank or as conservator to arrange a workout (merger, sale, or refinancing).

Broker dealers are also exempt from the Code and subject to their own bankruptcy laws and procedures. Insolvencies of insurance companies are subject to state laws and handled by state courts.

Conflicting jurisdictions

The resolution of an LCFO will necessarily involve multiple legal jurisdictions, which leads to two problems. The first is whether the insolvent firm should be resolved as a single entity regardless of the location of creditors and assets, or whether each of the several jurisdictions in which the creditors and/or assets are located should be treated separately. There are two basic approaches to this fundamental question: the unitary or single-entity approach, which treats the firm as a whole, and the "ring-fence" or separate-entity approach, which seeks to carve up the firm and resolve claims in each jurisdiction separately. The second problem, which is not unrelated to the first, is whether to conduct multiple proceedings in each relevant jurisdiction or have one jurisdiction take the lead and other jurisdictions defer to it. Ring fencing has the practical advantage of placing assets at the disposal of the court most likely to have control of them and minimizing the dependence on cross-jurisdictional information sharing. It also provides an admittedly crude solution to conflicts in laws and legal objectives. In the case of insured depository institutions, ring fencing serves the interests of the deposit insurers by ensuring that the insolvency of a holding company does not strip assets out of a bank subsidiary. Potentially however, ring fencing can make coordinated cross-border (and cross-jurisdiction) resolutions more difficult because it leads to differential payoffs for creditors—(domestic) creditors in jurisdictions where the ratio of assets to claims is higher will enjoy higher recoveries. Ring fencing also leads to potentially adversarial competition among jurisdictions each seeking to maximize the value of assets available to their own creditors—the very problem that bankruptcy procedures are supposed to solve.

British bankruptcy law takes a single-entity approach to resolving international firms, regardless of the location of assets or the nationality of the creditors. The UK court makes every effort to obtain control of all the firm's assets, which it then divides equally among the creditors (in a liquidation). The court makes no distinction between domestic and foreign creditors, even in the distribution of domestically controlled assets directly under its control. Importantly, however, UK bankruptcy law recognizes that it may be more appropriate in some cases for another, perhaps home country's court to take the lead in the resolution of an international firm. In such cases, the UK provides local support for agents of the foreign courts, for instance in obtaining control of assets located in the UK, so long as the creditors are not made worse off than they would be under a UK resolution.

The U.S. approach to these issues is complex and fragmented. Where a branch or agency of a foreign bank becomes insolvent, a U.S. administrator can attach (seize) all of the foreign parent's assets in the U.S. even if they are part of a different nonbank subsidiary. The U.S. court or administrator would ring fence those assets and use them to satisfy domestic claims, paying any surplus to satisfy creditors in any foreign proceedings. This necessarily means that domestic creditors are given precedence over foreign ones. On the other hand, in resolving a U.S. bank, the FDIC takes a single-entity approach and seeks to obtain control of offshore assets. Resolution of LCFOs is further complicated because in the U.S. specialized laws and procedures apply to banks, broker-dealers, and insurance companies. Thus, where these activities are co-located in a single holding company, the ring fencing can apply to parts of the same domestic entity. Bank subsidiaries are ring fenced vis-à-vis nonbank subsidiaries of the same holding company. The FDIC may seize the assets of affiliated banks (subsidiaries of the same holding company), while federal bankruptcy courts would take control of the assets of an insolvent parent bank holding company. Then, the FDIC may be able to recover assets from the holding company and nonbank affiliates under the "source of strength" provisions of applicable law.

As I discussed in the introduction, a particular area of concern in the resolution of LCFOs is the treatment of special financial instruments, specifically the ability to terminate and net contracts. In the following section, I provide an overview of the issues involved and their potential impact.

Termination and netting of contracts[17]

The distinctions between pro-creditor and pro-debtor philosophies are particularly important in the cases of payments systems and derivatives markets. In most business relations, netting and set-off are not significant issues. Generally, firms either buy from or sell to other firms, but rarely do both simultaneously. So, in the event of bankruptcy, few if any contracts could be netted or set-off. However, financial markets can generate huge numbers of bi-directional transactions between counterparties. Interbank payments systems involve banks sending each other funds to clear thousands of transactions throughout the day, and the direction and amount of individual transfers are unpredictable. The gross amounts of such transactions are huge, but at the end of the day the net transfers are relatively modest. Similarly, many large commercial and investment banks make markets in special financial instruments and hedge their positions with each other. Again the gross positions are huge, but the net positions are modest.[18]

There are two types of netting rules. Those that apply in the course of ordinary business—payments netting, also called settlement netting or delivery netting—and those that apply in resolutions of insolvent firms—close-out netting, also called default netting, open-contract netting, or replacement contract netting. Close-out netting agreements consist of two related rights: the right of a counterparty to unilaterally terminate contracts under certain prespecified conditions, and the right to net amounts due at termination of individual contracts in determining the resulting obligation between (now former) counterparties. Wood (1994) points out that payments netting is meaningless unless it is legally supported by close-out netting rights in the event of default by one of the counterparties. In the U.S. and some other jurisdictions, the governing contracts typically contain terms stipulating the actions to be taken in the event of default. In other jurisdictions, such as the UK, a common law netting right exists.

Both payments and close-out netting are widely seen as reducing systemic risk by limiting counterparty exposures to net rather than gross exposures. This in turn makes the operation of financial markets more efficient. Because counterparties can safely hold less capital against individual counterparties, they can expand their gross positions while limiting their net firmwide exposures, resulting in increased market liquidity (and higher revenues) for a given level of economic capital. Furthermore, they may be more willing to transact with potentially troubled counterparties so long as their net position remains favorable, thus keeping credit and risk-management channels open. Close-out netting termination rights allow for the early resolution of claims and reduce the uncertainty associated with the failure of a counterparty. This is critically important in the case of special financial instruments, because the value of these contracts can change rapidly and delays in settling claims may alter the eventual payouts. Termination also allows the solvent counterparty to replace contracts with the insolvent counterparty with new contracts with a solvent counterparty, thus ensuring the continued effectiveness of their hedging and trading strategies.

These benefits have been widely acknowledged by regulators, trade groups, and market participants.[19] The adoption of the pro-creditor approach for these types of markets is an implicit recognition that the equity arguments of the Franco-Latin framework are inconsistent with the contractual and legal certainty needs of modern financial markets. While collateral arrangements and netting may have the effect of favoring

one creditor over another in the event of insolvency, these arrangements make it possible for creditors to better measure and manage their exposures.[20] Under pro-debtor laws, all creditors may share equally in the losses, but no creditor could know beforehand what their expected losses might be.

The widespread adoption of carve-outs, providing pro-creditor protection for payments systems and derivatives securities, particularly in the form of collateral arrangements and netting agreements, represents one of the great successes in international legal harmonization. This process has been shepherded by the International Swap and Derivatives Association (ISDA), a trade group that coordinates industry documentation practices, drafts model contracts, and lobbies for legislative changes to support the enforceability of those contracts. Central to the ISDA approach to netting is the concept of a master agreement that governs transactions between counterparties. The Master Agreement constitutes the terms of the agreement between the counterparties with respect to general questions unrelated to specific economic transactions: credit support arrangements, netting, collateral, definition of default and other termination events, calculation of damages (on default), documentation, and so forth. This Master Agreement constitutes a single legal contract of indefinite term under which the counterparties conduct their mutual business. Individual transactions are handled by confirmations that are incorporated by reference into the Master Agreement. This device of placing individual transactions under a single master agreement that provides for netting of covered transactions has the effect of finessing the problem of netting under various bankruptcy codes. Having only a single contract between each pair of counterparties to a Master Agreement eliminates the problem of netting multiple contracts.[21] Netting legislation covering special financial instruments has been adopted in most countries with major financial markets (the UK being a notable exception, where netting has long been provided for in the bankruptcy code), and ISDA has obtained legal opinions supporting their Master Agreements in most relevant jurisdictions.

Payments netting

Payments netting is a method of reducing exposures in the event of default. Payments netting agreements appear in most standardized special financial instruments contracts (for instance, ISDA Master Agreements), and various forms of netting are incorporated in the settlement procedures of payments clearing houses.

Payments netting occurs when firms, primarily financial institutions, are exchanging payments on a regular basis and net the amounts due against those to be received at the same time and transfer the difference. Payments netting reduces the so-called *Herstatt Risk* that one party will make a payment and the other party default before the offsetting payment is made.[22] The importance of payments netting and payments systems in general has become widely understood since the default of Herstatt Bank in 1974 focused the attention of market participants and regulators. The benefits of payments netting are uncontroversial, though there is considerable debate about the optimal structure of payments netting arrangements.

Close-out netting

Close-out netting involves not only the treatment of payments netting agreements for unwinding interrupted bilateral payments flows, but also the treatment of outstanding contracts between solvent and insolvent counterparties.[23] The netting of obligations in the event of default is the subject of considerable legal debate and differences in laws, as is the related issue of termination rights.

In general, close-out netting involves the termination of all contracts between the insolvent and a solvent counterparty. Broadly speaking, there are two relevant classes of contracts: Executory contracts are promises to transact in the future (but where no transaction has yet occurred), such as a forward agreement to purchase foreign currency; other contracts, such as a loan, where a payment by one party payment has already occurred, I refer to as "non-executory contracts," since no single legal description applies. These two types of contracts are treated differently under close-out netting in jurisdictions where such laws apply.

Where close-out netting is permitted, the general procedure is that upon default or contractually agreed "credit event,"[24] executory contracts are marked-to-market and any payments due from acceleration of terminated non-executory contracts are determined. These values are then netted and a single net payment is made. If the solvent counterparty is a net creditor, the solvent counterparty becomes a general creditor for the net amount. Usually, the solvent counterparty determines the values of the contracts being terminated and payments owed. These computations are subject to subsequent litigation. However, disputes over the exact valuation do not affect the ability of the solvent counterparty to terminate and replace the contracts with a different counterparty.

Non-executory contracts, such as loans, may contain clauses that permit the creditor to accelerate future payments—for instance, repayment of loan principal—in the event of default or occurrence of a

stipulated credit event. Acceleration is not netting per se but a precursor to netting and determines in part the amounts due.

The handling of non-executory contracts where payments are due to the insolvent counterparty depends on the contract terms and legal jurisdiction. The most common treatment is to accelerate all contracts between solvent and insolvent counterparties when determining net obligations. In countries where it is permitted, for instance the UK, walk-away clauses permit the solvent counterparty to simply terminate without payment any contracts where payments are due to the insolvent counterparty.

Whereas non-executory contracts may be accelerated in insolvency, executory contracts are terminated. Termination cancels the contract with appropriate compensation, usually the cost of reestablishing the contract on identical terms with another counterparty.

Acceleration and termination change the amounts immediately due to and from the solvent counterparties vis-à-vis what would have been currently due had the credit event (default, downgrade) not occurred. Terminations of contracts with the resulting demands for immediate payments may precipitate financial collapse of a firm and make it impossible to resolve the firm in an orderly manner or to arrange refinancing.[25] For this reason, many jurisdictions limit the rights of counterparties to enforce the termination clauses in their contracts. The court can impose a stay, which does not invalidate termination clauses in contracts but rather overrides them, perhaps temporarily, at the discretion of the court or an administrator. Staying contracts keeps them in force; normal payments are still due. This is unlike cherry picking, which involves disavowing unfavorable contracts and forcing the counterparties to become general creditors for the firm.

U.S. legal treatment of close-out netting

Although close-out and netting are two separate issues, they are intimately linked in the case of special financial instruments. Close-out refers to the termination of contracts, while netting refers to the setting off of multiple claims between solvent and insolvent counterparties. For most contracts these are separate issues.

In the U.S., stays of indefinite term are automatic for most contracts when a corporation files for protection under the Code.[26] Furthermore, netting of most contracts is not generally recognized under the Code, thus cherry picking is permitted. However, as noted earlier, various carve-outs or exceptions provide special netting and termination rights for certain financial contracts and certain types of counterparties. In general, for financial contracts governed by ISDA and similar master netting agreements, cherry picking is prevented and termination rights are recognized.

Under U.S. common law, when a bank depositor also has (performing) loans outstanding with the bank, the amount of uninsured deposits may be netted against the principal outstanding on the loan in the event of insolvency of either the bank or a bank borrower. Where the defaulting party is a corporation or a nationally chartered bank, federal laws apply.[27] For state-chartered banks, state law applies.[28] While the common law principle of netting of certain bank depositor obligations is widely recognized, it is still subject to legal uncertainties and is narrow in scope (may be applicable only to "deposits" and "indebtedness"), thus creating potential problems for special financial instruments market participants. This has led to the enactment of a number of specific laws governing certain types of financial contracts and certain types of financial institutions.

The Code permits netting of swap contracts and prohibits stays of swap contracts.[29] Furthermore, swap contracts may be terminated for reasons of insolvency, commencement of bankruptcy proceeding, or appointment of a trustee, though such terminations are expressly prohibited for other types of financial contracts, for instance, unexpired leases.[30] Swaps are generally considered to include most derivatives contracts entered into under ISDA and similar Master Agreements. Thus, counterparties of firms whose insolvency is governed by the Code have some degree of protection of their netting and termination rights, though the scope of what qualifies as a "swap" is perhaps unclear. However, this provides no protection when the insolvent counterparty is a bank, broker/dealer, GSE, or insurance company, which would not be subject to resolution under the Code.

For insolvent insured depository institutions, FDIA as amended by FIRREA provides for netting of "qualified financial contracts" between insolvent insured depository institutions and other counterparties regardless of type. The term "…'qualified financial contract' means any securities contract, commodity contract, forward contract, repurchase agreement, swap agreement, and any similar agreement," with the FDIC being given the authority to make the final determination as to which contracts qualify.[31] This definition covers most over the counter (OTC) special financial instruments governed by ISDA and similar Master Agreements. The FDIC, as administrator or conservator of a failed insured depository institution, may transfer qualified contracts to another financial institution, for instance a bridge bank, subject to a requirement to notify the parties involved by noon on the next-business-day.[32] The FDIC may also repudiate any contract but must

pay compensatory damages, which has much the same effect as termination initiated by a solvent counterparty.[33] The FDIC has announced that it will not selectively repudiate contracts with individual counterparties—that is, cherry pick—but its legal obligations in this regard are unclear. However, the FDIC may not stay the execution of termination clauses, except where termination is based solely on insolvency or the appointment of a conservator or receiver.[34] Thus, the takeover of a bank by the FDIC is not an enforceable "credit event" under ISDA contracts in the U.S., so long as there is not some other basis for terminating an agreement, such as a failure to make a payment. If contracts are transferred, all contracts between the insolvent depositor institution and a given counterparty must be transferred together, thus prohibiting cherry picking of transferred contracts.[35]

The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) permits enforcement of close-out netting agreements in financial contracts between financial institutions.[36] Financial institutions are broadly defined as "… broker or dealer, depository institution, futures commission agent, or other institution as determined by the Board of Governors of the Federal Reserve System."[37] According to the Federal Reserve's criteria for determining whether an institution qualifies (laid out in Regulation EE), the firm must be a trader or dealer, rather than an end user, and meet a minimum size requirement.[38] For such designated financial institutions, the ability to net payment obligations under netting agreements is quite broad and includes close-out and termination rights written into Master Agreements. Furthermore, the law preempts any other agencies and courts from limiting or delaying application of netting agreements, effectively preventing stays of such contracts.[39] However, this law only recognizes the enforceability of netting agreements in contracts; it does not create a general right to net obligations. Furthermore, these provisions are limited to contracts between designated financial institutions and, thus, provide no protection for contracts between financial institutions and nonfinancial institutions.

Overall, therefore, the patchwork of laws governing termination and netting of special financial instruments provides some protection of close-out and netting agreements, but remains a source of legal uncertainties. For example, it is not clear whether unenumerated special financial instruments such as credit, equity, energy, and weather derivatives would fall under the rubrics of either "swap" or "qualified financial contract." Furthermore, the enumerated classes of covered counterparties—stockbrokers, financial institutions, and securities clearing agencies—fail to cover all important financial market participants. The FDIC's various rights under FDICIA remain unclear and untested in the courts. Attempts have repeatedly been made to clarify these questions going back at least to 1996. Most recently, both the House and Senate passed broadly similar bills (H.R. 333 and S. 420) to address these issues as part of a larger reform of the Bankruptcy Code. These efforts are strongly supported by trade groups, the Federal Reserve, and the Treasury. However, the resulting piece of legislation failed to pass due to unrelated political considerations.

Other issues in resolving LCFOs

As noted earlier, bankruptcy, and in the U.S., bank resolution procedures are predicated on the orderly liquidation or reorganization of a troubled firm under the supervision of a court, an administrator, or in the case of U.S. banks, the FDIC. The first step is to stay the exercise of most claims against the firm while the administrator ascertains assets and liabilities, determines the validity of claims, realizes the value of assets, and pays off creditors in a liquidation or negotiates with creditors to arrange a reorganization. These procedures take considerable time, sometimes even years.[40]

The issues discussed above were largely related to coordination—across competing legal and regulatory jurisdictions. Next, I discuss some additional issues complicating the bankruptcy process for LCFOs. These issues fall into two general categories—opacity and time.

Opacity

LCFOs tend to be informationally opaque to outsiders because accounting methods are not designed to provide detailed information about contingent liabilities embedded in off-balance-sheet activities and nontraditional financial instrument portfolios. More importantly, for the purposes of failure resolutions, this detailed information is often unavailable to insiders as well. Rather, much of the information available to managers, counterparties, and regulators and/or courts is of a summary nature. LCFOs tend to manage their activities in a decentralized manner. Firm-wide coordination and risk management are usually based on summary information of profits, losses, risk exposures, and so forth passed up from the divisions to the head office(s). This summary information, where it is correctly structured, should be sufficient for normal risk-management purposes. However, in the event of financial distress, when the firm or an administrator seeks to sell off the special financial instruments positions, more detailed information is needed. The problem of decentralized information is sometimes exacerbated by incompatible legacy accounting systems arising

from recent mergers. Few large complex firms are in a position to rapidly provide detailed firm-wide information about individual positions at a level of detail sufficient for a potential buyer to make an informed valuation.[41] The result is that buyers will only purchase a special financial instruments book at a price well below the true market value, since in effect they are buying a grab bag of contracts with only a vague idea of the contents.

Time

Banking regulation frequently seeks to avoid the resolution process by having regulators become increasingly involved in a bank's activities as it approaches insolvency. In the U.S. prompt corrective action dictates a series of increasingly stronger actions that supervisors are required to take as a bank's capital declines below the regulatory minimum. These plans for preventing a bank from becoming insolvent presume that the decline in a bank's condition will be observable and sufficiently gradual to permit timely intervention. Prompt corrective action cannot work when perceived asset values change rapidly, either because their true value has been hidden and is suddenly realized or because of fluctuations in market values. Recent notable bank failures have been the result of fraud (First National Bank of Keystone, 1999) or incorrect valuation (perhaps fraudulent) of derivative assets (Superior Federal Savings Bank, 2001).

While fraud and rapid changes in asset values can frustrate the (ex ante) procedures that managers, counterparties, and regulators have adopted to prevent or minimize the incidence of insolvencies, the treatment of special financial instruments during an insolvency is apt to frustrate the (ex post) procedures for the orderly resolution of firms with large portfolios subject to close-out netting. The inability of insolvency administrators to effectively prevent or stay close-out of a significant portion of the distressed firm's contracts means that these contracts and their related collateral will be terminated and liquidated. This may leave the firm so impaired as to make reorganization impractical. Attempts to prevent such close-outs "for reasons solely of filing for protection" are unlikely to prove effective—contracts usually provide other termination conditions beyond the control of courts and/or regulators, for instance, "due-on-downgrade" clauses, which are likely to be triggered at the same time.

There exists some possibility that the close-out can be preempted by selling the book, or in the case of a bank insolvency transferring it to a bridge bank, but these decisions must take place with incomplete information about the assets to be sold or transferred and under extreme time pressure—close-out can only be postponed with the forbearance of the solvent counterparties that hold the option to exercise termination once the firm becomes sufficiently distressed. Since large firms have multiple counterparties, the situation is likely to be extremely unstable. The value of special financial instruments positions is liable to change rapidly due to the actions of other counterparties. Once one counterparty exercises its close-out rights, a "rush for the exit" will inevitably develop—counterparties will seek to liquidate their collateral and positions before the actions of others depress prices (the "fire-sale" effect) and their own losses increase.[42] This is the same prisoners' dilemma that gave rise to coordinated bankruptcy procedures—now recurring because removing the stays effectively exempts special financial instruments contracts from the process.

Conclusion

I have provided an overview of the bankruptcy laws and the problems relating specifically to resolution of LCFOs within the current legal and regulatory framework. In particular, the combination of rapidly developing insolvency, opaque special financial instruments positions, and the exemption from stays of contracts has the potential to preempt the usual options open to regulators and courts to conduct a deliberate and well-considered (that is, leisurely) liquidation or reorganization of an LCFO. How to ensuring appropriate treatment of such an institution is a subject for future research.

NOTES

[1]Energy derivatives are financial contracts tied to the price of various forms of energy and are used for hedging by energy consumers and producers. Credit derivatives are financial contracts that allow financial market participants to make loans and enter into contracts while laying off the risk that their counterparty will default onto other agents willing to assume that risk (for a price).

[2]One possible exception is when common factors lead to the failure of large numbers of small institutions generating significant macroeconomic costs—the savings and loan crisis in the early 1980s being an example.

[3]Recent research suggests that this fear may be unwarranted, for example, Furfine (2003).

[4]These special financial instruments include swaps, options, futures, forward rates agreements, as well as repurchase agreements, and various transactions cleared through clearing houses (payments and exchange traded derivatives). Most financial contracts, however, are not exempt from insolvency stays.

[5]See Kennedy (1994) and Knight (1992). This process would today be considered to be undesirable. Determining whether such an insolvency procedure might have been helpful in reducing the incidence of default is beyond the scope of this study.

[6]Homer (1977) notes that the Code of Hammurabi (Babylonia, circa 1800 BC) limited the term of personal slavery for debt to three years—a liberal innovation at the time.

[7]Armour (2001) provides a thorough analysis of this and subsequent analytic frameworks.

[8]One of the earliest "games" analyzed by game theory, the prisoner's dilemma in its classic form considers two suspects interrogated separately. Each is offered freedom if they implicate their partner (provided that their partner does not do likewise) and a maximum sentence if their partner implicates them. If both implicate each other, they both receive an intermediate sentence (reduced from the maximum for "cooperating" with the authorities); and if both refuse to implicate their partner, they receive a minimum sentence (say for a related offence). Because the prisoners cannot cooperate with each other or bind each other to prior commitments to say nothing, the inevitable outcome is that they implicate each other and receive the intermediate sentence, whereas if they could credibly cooperate they would both be better off (receive the minimum sentence).

[9]Kahl (2002) finds that "Chapter 11 may buy poorly performing firms some additional time, but it does not seem to allow many of them to ultimately escape the discipline of the market for corporate control."

[10]See, among others, Franks and Torous (1994).

[11]As of October 2002, the model law had been adopted, at least in part, in Eritrea, Japan**,** Mexico, South Africa, and within Yugoslavia, Montenegro (www.uncitral.org).

[12]This is rather a smaller step forward than it may appear. Conflicts in bankruptcy laws remain and are likely to give rise to anomalies such as French pro-debtor courts enforcing British pro-creditor laws in subsidiary proceedings to a UK-based bankruptcy. Furthermore, the absence of mechanisms for Europe-wide registration of creditors will make coordination of related proceedings difficult. (See Willcox, 2002.)

[13]To "set off" obligations means to reduce the amount owed to a counterparty by any amounts due from the same counterparty.

[14]The concept of an unpublicized security carries over to collateral arrangements. In the U.S., the claim on the collateral must be "perfected" by registering it in a manner that provides other creditors with an opportunity to learn of the claim; still, courts are likely to disregard the agreement and retain the collateral in the estate of the insolvent firm, thus reducing the improperly collateralized creditor to general creditor status.

[15]In practice, creditors are often divided by law into classes having different priorities. For instance, taxes and lawyers are usually paid before suppliers. The principle of equality of distribution, as discussed in this article, should thus be thought of as applying within a particular creditor class defined by the bankruptcy code. The Franco-Latin concern is that collateral and netting arrangements result in privately negotiated alteration of these priorities.

[16]12 USC 1811 *et seq.* (1989).

[17]The exposition in this section borrows heavily from Johnson (2000).

[18]In 2002, U.S. banks had total derivatives credit exposures of $525 billion, 96 percent of which (measured by notional value) was concentrated in seven banks. Netting reduced banking system-wide gross exposures by 75.8 percent, a figure that had increased from 44.3 percent in the second quarter of 1996. Still, a number of major banks have (net) derivatives credit exposures exceeding their risk-based capital, in the case of J. P. Morgan Chase by a factor of 589 percent. (Preceding data are from Office of the Comptroller of the Currency, 2002).

[19]See for instance, President's Working Group (1999).

[20]The recovery of net in-the-money positions (that is, where a solvent counterparty is owed money) is still subject to uncertainty, but net positions are smaller than gross positions and can be managed through adjusting net exposures.

[21]In some cases, there may be several Master Agreements covering different classes of contracts and with different divisions of holding company. Thus, counterparty netting protection may be less than complete. This has led to the development of Cross-Product Master Agreements, in effect master Master Agreements. ISDA is lobbying for legislative recognition of these innovations to reflect industry risk management practices. Recent proposed changes to the U.S. bankruptcy code have supported this idea.

[22]Bankhaus Herstatt was a medium-sized bank that was active in foreign exchange markets. In 1974, it failed and was closed by German authorities at the end of their business day. The dollar leg of the bank's dollar–deutschemark transactions had not cleared, leaving its U.S. counterparties with losses exceeding $600 million. The resulting direct losses and, more importantly, the uncertainty as to whether the losses would lead other banks to fail (contagion) seriously disrupted foreign exchange markets for weeks.

[23]An additional major issue is the treatment of collateral, which I do not cover in this discussion.

[24]Termination events may include cross defaults (defaulting on other contracts), mergers, changes in legal or regulatory status, changes in financial condition, and changes in credit rating (Johnson, 2000).

[25]A recent example is the acceleration of some $4 billion of Enron's debt following its downgrade by rating agencies. The firm could not meet the resulting demand for immediate payment of principal and was forced to file for bankruptcy. Until that time, Enron had not actually failed to make a payment on any obligation, though it was surely already insolvent.

[26]11 USC 362.

[27]Scott v Armstrong 146 U.S. 499 (1892).

[28]For instance, the right of the depositor to offset the value of the deposits against the depositor's indebtedness was recognized in Heiple v. Lehman, 358 Ill. 222, 192 N.E. 858 (1934) and FDIC v. Mademoiselle of California, 379 F.2d 660 (9th Cir. 1967). In all cases "mutuality" of obligations must be established. For instance, if a holding company fails, deposits made by one subsidiary usually may not be seized to pay off a loan taken out by another subsidiary. Where insured deposits are involved, netting occurs prior to the determination of insurance coverage.

[29]11 USC 362(b)(17) and 11 USC 560.

[30]11 USC 365(e)(1).

[31]12 USC 1821(e)(8)(D)(i).

[32]12 USC 1823(d)(2)(G) and 12 USC 1821(e)(10).

[33]12 USC 1821(e)(1) and 12 USC 1821(e)(3).

[34]12 USC 1821(e)(8)(E) and 12 USC 1821(e)(12).

[35]12 USC 1821(e)(9).

[36]12 USC 4401–05.

[37]12 USC 4402(9).

[38]The size requirements are $1 billion of gross notional principal outstanding or $100 million of gross marked-to-market value of outstanding positions (Johnson, 2000, p. 87).

[39]12 USC 4405.

[40]Franks and Torous (1994) report that in their sample of firms filing for Chapter 11, a median 27 months was required to complete reorganization.

[41]Following Enron's failure, J. P. Morgan announced revised firm-wide exposures over a period of weeks.

[42]This is markedly different from other assets. If a bank collateralizes a loan with a real asset such as an apartment building and the borrower defaults, the building is not going to disappear and its value is unlikely to change significantly over the next few weeks. On the other hand, terminated derivatives contracts cease to exist and the value of financial assets that are held as collateral can change rapidly.

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