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Orderly Liquidation Authority as an Alternative to Bankruptcy

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When a large nonbank financial firm becomes troubled and in danger of default, government policymakers traditionally have had two options: they could 1) allow the firm to enter bankruptcy, or 2) if policymakers believed bankruptcy is likely to produce widespread (system-wide or "systemic") financial difficulties, the government could provide aid (i.e., a bailout) to forestall failure. In 2010, a third option was made available by the Orderly Liquidation Authority (OLA) provisions, contained in the Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). This legislation authorizes the Federal Deposit Insurance Corporation (FDIC) to pursue an agency-administered wind down for certain troubled financial firms. The OLA provisions are modeled, in part, after the process long followed by the FDIC for handling troubled banks.

The OLA provisions are a reaction to policymakers' and legislators' dissatisfaction with the two options previously available for handling failing nonbanks. For example, Ben Bernanke, chairman of the Board of Governors of the Federal Reserve System, argued, in 2009 testimony before the House Committee on Financial Services, that bankruptcy was not an effective option for certain failing financial firms (Bernanke 2009):

> In most cases, the federal bankruptcy laws provide an appropriate framework for the resolution of nonbank financial institutions. However, the bankruptcy code does not sufficiently protect the public's strong interest in ensuring the orderly resolution of a nonbank financial firm

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> whose failure would pose substantial risks to the financial system and to the economy. Indeed, after Lehman Brothers and AIG's experiences, there is little doubt that we need a third option between the choices of bankruptcy and bailout for such firms.

In a 2010 speech, Chairman Bernanke expanded on his testimony and noted two goals for this "third option," or "orderly resolution" authority (Bernanke 2010):

> The government instead must have the tools to resolve a failing firm in a manner that preserves market discipline—by ensuring that shareholders and creditors incur losses and that culpable managers are replaced—while at the same time cushioning the broader financial system from the possibly destabilizing effects of the firm's collapse.

Legislators focused on these two goals in the language of the Dodd-Frank Act itself when explaining the purposes of the OLA provisions (or the OLA "title"):

> It is the purpose of this title to provide the necessary authority to liquidate failing financial companies that pose a significant risk to the financial stability of the United States in a manner that mitigates such risk and minimizes moral hazard.

In this article we review the features of bankruptcy and the OLA. We identify some problem areas when large nonbank financial firm failures are resolved through bankruptcy. We then describe two important features of the OLA that are meant to improve on bankruptcy as a means of handling these types of failures, and discuss how they attempt to achieve the goals of mitigating risk to financial stability while also minimizing moral hazard—goals that are not easily achieved simultaneously.

1. FAILURE RESOLUTION

Goals of any Failure Resolution Regime

Any resolution regime, whether bankruptcy, bailout, or OLA, must address two fundamental problems that arise when a firm faces financial troubles and becomes unable to repay creditors. These three regimes each take different approaches to solving these problems, and these differing approaches are at the core of each regime. The first problem (detailed below) is preserving "asset complementarities" and "going-concern value" in the face of detrimental creditor incentives to rush in and grab the firm's assets immediately upon a firm's default. Resolution methods must take these incentives into account and prevent the detrimental actions. The second problem is determining whether to "liquidate" or "reorganize" the troubled firm. Beyond addressing these two problems, an additional concern arises when the troubled firm is a large financial firm or one with many interconnections with other financial firms: What so called *systemic effects* might the liquidation or reorganization have? Will there be a significant negative effect on other financial firms or on the macro economy in response to actions taken to resolve the troubled firm? As noted in the introduction, policymakers are likely to have a strong interest in any systemic effects when deciding on the appropriate resolution method.

Preserving Complementarities and Going-Concern Value

Following a firm's default on a debt, creditors are likely to rush to seize, and separately sell, assets that, if sold together with other assets, could produce a higher sale price (assets that are "complementary"). For example, one can imagine that with numerous creditors vying for a manufacturer's assets, individual components of an assembly line might be sold off separately, when, if sold as a complete assembly line, these components would be of greater value and produce a higher price. Therefore, this incentive can reduce the total amount that creditors, as a group, receive and can also undercut productivity and economic efficiency. Creditors who manage to be the first to seize assets are likely to recover a higher proportion of their debts than creditors who are slower to react. As a result, creditors have a strong individual incentive to move quickly to undertake such seizures. Preserving complementarities can be important whether the firm is liquidated or is preserved via a reorganization process.

If creditors are allowed to rush in and seize assets, they are also likely to grab those assets that are fundamental to the firm's continued operations, so called "going-concern assets." Such assets might include, for example, necessary operating equipment for a manufacturing firm, or buildings for a financial firm. For a firm that is going to be closed and liquidated, protecting going-concern assets is unimportant, but for firms that might be successful if reorganized, creditors will be made better off, as a group, if their removal is prevented. Indeed, if creditors are allowed to seize going-concern assets, a troubled firm that might otherwise become quite productive in reorganization could be doomed to fail by the asset seizures.

In bankruptcy, the automatic stay (discussed in detail below) prevents immediate asset seizures, and creates a court-overseen process for allocating assets in a way that preserves complementarities and going-concern value.[1,2] The OLA process also involves a stay, but grants the FDIC this preservation role. Bailouts, by (typically) preventing the troubled firm's default on debts, remove the ability of creditors to seize the troubled firm's assets.[3]

Determining Whether to Liquidate or Reorganize

When a firm becomes unable to meets its debt payments, one of two outcomes are possible. First, as already mentioned, the firm might be closed and its assets liquidated. Alternatively, if the firm can be returned to profitability by restructuring (typically reducing) its debts, then, in many cases, it should be reorganized, allowing it to continue operating after a debt restructuring process. If the firm is unlikely to return to profitability, even with a lowered debt burden, because the firm's assets are unlikely to produce a market rate of return, then the firm should be liquidated: The firm should be shut down and its assets sold to the highest bidders. In this case, liquidation will distribute assets to firms that can make more productive use of them, enhancing economic

[1] According to Boul (2006): "Traditionally, the automatic stay has served to 'prevent dismemberment of the [bankruptcy] estate and insure its orderly distribution.' *SEC v. First Financial Group*, 645 F.2d 429, 439 (5th Cir.1981), *citing* S. Rep. No. 95-989, 95th Cong., 2d Sess. 50 (1978); H.R.Rep. No. 95-595, 95th Cong., 2d Sess. 341 (1977), U.S.Code Cong. & Admin. News 1978, pp. 5787, 5836, 5963, 6297, 6298. In that capacity, the automatic stay serves the interests of both the debtor and the creditors of the bankruptcy estate. For the debtor, it provides a 'breathing spell' by 'stopping all collection efforts, all harassment, and all foreclosure actions.' S. Rep. No 95-989, 95th Cong., 2d Sess. 54-55 (1978); H.R. Rep. No 95-595, 95th Cong., 1st Sess. 340 (1977), U.S.Code Cong. & Admin. News 1978, pp. 5787, 5840, 5841, 5963, 6296, 6297. However, the stay also serves the interest of creditors, insofar as it 'eliminate[s] the impetus for a race of diligence by fast-acting creditors.' *SEC v. First Financial Group*, at 439. The stay ensures that assets are distributed according to the order of priorities established by Congress. *Id. at 341*."

[2] Note that if the troubled firm had only one creditor, there would be no need for bankruptcy since that one creditor would always take actions that maximize complementarities and going-concern value. Only in the case where there are many creditors, who, because of their large number, cannot easily coordinate with one another, is bankruptcy necessary.

[3] One might imagine that an ideal solution—when a firm has suffered losses such that its capital level is low and default seems likely, but it could be profitable with a lower debt load—one that requires no intervention by bankruptcy courts or government agencies, is for the firm to gather new funding by issuing new equity shares. The new funding could be used to purchase new, profitable assets that will increase revenues available to service debt (lowering the ratio of debt to assets) and reduce significantly the chance of default. This course may be impossible, however, because of the so-called "debt overhang problem" and, as a result, bankruptcy and the reorganization of debt may be the only course available. Because of the overhang problem, existing equityholders will not vote in favor of a new equity issuance. They will not do so, at least in many cases, because most or all of the benefit flows to the debtholders by improving the market value of their debt, and the existing equityholders will suffer dilution because future earnings must be shared with the new equityholders (Duffie 2011, 43–4). The likelihood that new issues of equity might offer a solution is further reduced by an "adverse selection problem." Weak firms issuing new equity, and especially those firms whose assets are opaque, i.e., financial firms, will have to offer to sell shares at a very low price, because equity investors are likely to conclude, based on the fact that the firm wishes to issue new shares, that the firm is in exceptionally poor health (even worse health than it really is). As a result, existing shareholders will suffer a great deal of dilution and vote against new issues.

productivity and efficiency. Any resolution regime is faced with a decision between liquidation and resolution, and, ideally, will choose the one that produces the most economically efficient outcome.

Addressing Systemic Risk[4] and Moral Hazard

When faced with the failure of a large financial firm, or one with many connections with other financial firms, government decisionmakers will not only wish to ensure that complementarities and any going-concern value are preserved, and that the choice between liquidation or reorganization is optimally made, but they will also care greatly about systemic effects. Simply bailing out the troubled firm will prevent its failure, preserve complementarities and going-concern value, as well as avoid systemic effects. But any bailouts will create a "moral hazard" problem: the view, among investors, that large financial firms are likely to be protected, such that in the future, creditors of such firms will reduce their risk-monitoring efforts and these firms will be willing to undertake an inefficiently large amount of risk-taking. Therefore, any method employed to resolve a large or interconnected financial firm must balance systemic dangers against the danger of excessive risk-taking. Bailouts prevent current systemic problems but are likely to lead to less efficient resource allocation choices in the future. Relying on bankruptcy can avoid future moral hazard because, as discussed later, bankruptcy provides no source of funds for bailouts, but the bankruptcy of a large financial firm carries the risk of heavy current systemic problems. As such, when Congress crafted the OLA, addressing systemic risk was a priority, but so was resolving firms in a manner that does not simultaneously increase moral hazard. The OLA aims to address systemic risks that may otherwise be present when resolving systemically important financial institutions (SIFIs) through bankruptcy, in part, by 1) giving the FDIC broad discretion in how it funds the resolution process and pays out creditors, as well as by 2) changing the way derivatives and repurchase agreements (repos)—known as qualified financial contracts ("QFCs")—are treated.

Overview of Bankruptcy and OLA

When comparing bankruptcy and OLA, understanding their overarching goals is important. The goal of a bankruptcy proceeding is to maximize recoveries for creditors, through liquidation or the rehabilitation of the debtor. The goal of the OLA, on the other hand, is to resolve "failing financial companies that

[4] There is no clear consensus about the definition of "systemic risk" (See Taylor 2010). For purposes of this article, we will define systemic risk as "the risk that the failure of one large institution would cause other institutions to fail or that a market event could broadly affect the financial system rather than just one or a few institutions" (Government Accountability Office 2011).

pose a significant risk to the financial stability of the U.S. in a manner that mitigates such risk and minimizes moral hazard."

Bankruptcy achieves its goals through a court-overseen process that relies largely on the troubled firm's creditors and other investors to decide how best, and most profitably, to resolve the firm's troubles. Funding for a bankruptcy resolution typically comes only from the assets of the troubled company and from any funds that might be provided by private investors. See Table 1 for an outline of the bankruptcy process.

OLA borrows several important ideas from bankruptcy, but moves beyond bankruptcy because of policymakers' dissatisfaction with possible outcomes under bankruptcy. The OLA attempts to capture the firms whose resolution through bankruptcy could be detrimental to the broader financial system. Therefore, the OLA can be differentiated from bankruptcy based on several notable features that are designed specifically with SIFI, or covered financial company (CFC), resolution in mind. See Table 2 for a review of OLA's main features.

During the 2007–2008 financial crisis, an unwillingness to trust large firm failures to bankruptcy often resulted in government assistance to firms popularly described as "too big to fail," such as Bear Stearns and AIG. Yet the grant of government assistance sent strong signals to the market that other, similar firms would receive assistance as well if they were to experience trouble, thereby expanding credit subsidies for certain firms and moral hazard. For example, bond prices for the largest financial institutions remained relatively high during the crisis and prices for Lehman credit default swaps (CDS) may not have accurately reflected default risk (Skeel 2010). In contrast, allowing Lehman to fail can be seen as an attempt to mitigate moral hazard; however, some argue this was done at the cost of creating systemic risk.[5] These objectives are inextricably linked, and focusing on the reduction of one has the likely result of increasing the other. Therefore, the OLA, which charges the FDIC with administering these provisions, was an attempt to address this conflict. How does the FDIC meet this challenge?

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[5] The apparent worsening of the 2008 financial crisis following Lehman's entrance into bankruptcy provides, for many observers, an illustrative example of the deleterious effect of resolution by bankruptcy for large financial firms. Yet there is some debate about the conclusions one should draw from the Lehman experience. Some observers maintain that the cascading losses following Lehman's bankruptcy filing were not a result of troubles or anticipated troubles related to the bankruptcy process itself, but were instead the result of a shock to market expectations and therefore to the risk assessments of those who had previously anticipated that Lehman, and firms like Lehman, would certainly be bailed out (see Testimony from Skeel before the Subcommittee on Commercial and Administrative Law, Committee on the Judiciary, U.S. House of Reps., October 22, 2009). Available at http://judiciary.house.gov/hearings/pdf/Skeel091022.pdf.

Table 1 Corporate Bankruptcy

Types of Bankruptcy	
Chapter 7	Chapter 7 bankruptcy (liquidation), the troubled firm is closed down, with the longer-run outcome being the sale of all the company's assets (liquidation) because creditors or management do not believe it can be successfully reorganized. Assets of the troubled firm are assembled by the *bankruptcy trustee* and then sold in a manner that maximizes the sum of the payouts to the creditors. The trustee typically must sell all of the bankrupt firm before distributing funds to creditors [11 U.S.C. 704(a)1].
Chapter 11	Under Chapter 11 bankruptcy (reorganization), the troubled firm's debts are reorganized: debt maturities are lengthened, or interest rates or principal amounts are reduced. Creditors will only agree to a reorganization if they believe that preserving the firm as a *going concern* will produce larger payments than if the firm is liquidated.
Corporate Bankruptcies are Overseen by Federal Courts	
	The operating arm of the bankruptcy courts is the Justice Department's Trustee program, so that most bankruptcies are largely handled by trustees.
Circumstances Under which a Firm Enters Bankruptcy	
Voluntary Bankruptcy	When a firm's management petitions the court to place the firm in bankruptcy because it is unable to pay all its creditors in full. A firm will file for bankruptcy when unpaid creditors will otherwise seize complimentary or going-concern assets.
Involuntary Bankruptcy	When a firm's creditors petition for bankruptcy. Creditors have incentive to seek a firm's bankruptcy when they believe that other creditors might seize complementary or going-concern assets or that the firm might dissipate assets.

Table 1 (Continued) Corporate Bankruptcy

Automatic Stay	Immediately, upon the filing of a bankruptcy petition with the clerk of the bankruptcy court, creditors' are prohibited ("stayed") from attempting to collect on their claims. The stay allows a government-appointed trustee to ensure that assets of the bankrupt firm are liquidated in a manner that maximizes the total pool of funds available for creditor repayment. As a result, the stay allows the trustee to produce a better result for creditors in aggregate than if creditors were simply acting in their own self interest. The trustee can be thought of as solving a joint action problem. Similarly, the stay is also the means in bankruptcy by which creditors are prevented from seizing going-concern assets. Qualified financial contract (QFC) holders are typically exempt from the automatic stay: They can retrieve their collateral in the event of bankruptcy. Under bankruptcy law a number of financial instruments are QFCs, including repurchase agreements (repos), commodity contracts, forward contracts, swap agreements, and securities contracts. Reasons for the QFCs exemption: Observers worry that preventing QFC holders from retrieving their collateral could create systemic financial problems. Some observers believe that QFCs are not complementary with one another or with other assets, and can be removed without undercutting the troubled firm's going-concern value.

Table 1 (Continued) Corporate Bankruptcy

Priority Rules	
In Liquidation	Payouts coming from asset sales are divided among creditors based upon the creditor's location in the priority order, which is established in the Bankruptcy Code.
	Secured creditors are repaid from the assets that secure their debts prior to payments to unsecured creditors.
	A secured creditor will be fully repaid if the value of his security exceeds the amount he is owed.
	If not, he joins unsecured creditors and must depend on the sale of other assets for repayment.
	Unsecured claimants are paid based on the following priority list (White 1998, 1):
	First to be repaid are those owed any administrative expenses produced by the bankruptcy process.
	Second, claims are given statutory priority, such as taxes owed, rent, and unpaid wages and benefits.
	Third are unsecured creditors' claims, including trade creditors' claims, long-term bondholders, and holders of damage claims against the bankrupt firm.
	Last, equityholders receive any remaining funds.
In Reorganization	Payments to creditors and equityholders will often differ from those that would arise based simply on priority rules, because reorganization payments typically arise from negotiation between creditors and equityholders (White 1998, 8).
	Reorganization negotiations are driven by two rules: 1) each class of creditors and equityholders must consent to the bankruptcy plan adopted in the negotiation, and 2) if the negotiation produces no plan that is acceptable to all classes, then the firm is liquidated and payments are determined by the priority rules listed above.
	Because of the mutual consent requirement, some classes can be expected to receive more than would be expected if the priorities rules were strictly followed. For example, if assets are insufficient to repay all creditors, abiding by the priority rule would mean equityholders could expect to receive nothing. But creditors are likely to allow equityholders to receive payments in exchange for the investors' agreement to a plan that allows reorganization rather than liquidation, because the reorganization preserves some going-concern value for all classes. In other words, an equityholder agreement is achieved by paying them more than they would get if they held up the plan.
Debtor-in-Possesion (DIP) Loans	
	Loans made to a firm in reorganization, post-bankruptcy filing.
	Such loans are often senior to all pre-bankruptcy debts.

When the FDIC is appointed as the receiver of a failing financial firm designated as a CFC, it assumes complete financial and operational control of the institution. The FDIC has the authority to manage, sell, transfer, or merge all the assets of the failing firm, as well as provide the funds needed for an orderly liquidation, giving it broad discretion.[6] The FDIC's guiding principles in carrying out these responsibilities include using its best efforts to maximize returns, minimize losses, and, unique to this regime, mitigate the potential for serious adverse effects to the financial system and minimize moral hazard.[7] Moreover, the language of the OLA forces the FDIC to balance two competing interests. On one hand, it is to pay creditors no more than what they would receive in bankruptcy[8] and ensure that creditors bear losses in order to promote market discipline. On the other hand, it is to minimize adverse effects on financial stability. In bankruptcy, creditors only inject additional funds when the firm seems viable. The FDIC, on the other hand, may find it necessary to prop up a firm or perhaps protect certain creditors, at least for a time, to prevent any potential systemic consequences even though the firm may not be viable. The Dodd-Frank Act granted the FDIC a line of credit from the Treasury to fund these efforts. Because the FDIC has broad discretion over the way in which it balances these competing objectives, market participants may find it difficult to predict which objective might receive more weight in any given failure.

2. KEY FEATURES OF BANKRUPTCY, ITS WEAKNESSES, AND OLA AS AN ALTERNATIVE

In the United States, the failure of a business firm typically results in that firm entering *bankruptcy*, and actions taken by the firm shift from being determined by management to being guided by rules established under federal law, specifically under the U.S. Bankruptcy Code. What are the core features of bankruptcy? What features lead observers to conclude that bankruptcy is not an appropriate way to handle a SIFI whose failure could pose substantial risk to the financial system? What are the alternative resolution arrangements created by Dodd-Frank's OLA provisions?

[6] The OLA gives the FDIC authority to operate the company "with all of the powers of the company's shareholders, directors and officers, and may conduct all aspects of the company's business." Dodd-Frank Act § 210(a)(1)(B).

[7] Dodd-Frank Act § 204(a) and § 210(a)(9)(E).

[8] Dodd-Frank Act § 210(d)(2). Under § 210(d)(4)(A) additional payments (in excess of what would be received in bankruptcy) are authorized only with approval of the Treasury Secretary and only if determined to be necessary or appropriate to minimize losses to the receiver.

Table 2 OLA

Who Qualifies as a "Covered Financial Company" (CFC)?
A "financial company" whose failure would have serious adverse effects on financial stability.

Process for Designating a Firm as a CFC
1. Recommendation by Federal Reserve and either FDIC, Securities and Exchange Commission, or Federal Insurance Office, based on their findings that the following is true for the financial company:
   - It is in default or in danger of default
   - A resolution under the Bankruptcy Code would produce serious adverse consequences
   - There is no viable private-sector alternative
2. Determination made by the Treasury Secretary in consultation with the President
3. Appointment of FDIC as receiver of CFC

The FDIC's Powers and Duties
- They can 1) sell the CFC, or any portion of the assets or liabilities to a third party; 2) establish a temporary bridge financial company to preserve the company's value prior to being sold to a third party; or 3) liquidate the company.
- Use their best efforts to maximize returns, minimize losses, and mitigate the potential for serious adverse effects to the financial system.
- Must ensure unsecured creditors bear losses and ensure the directors and management team responsible for the company's condition are removed.
- Has authority to make additional payments to certain creditors (over what their priority would demand and possibly more than similarly situated creditors) if determined to maximize value or limit losses (excess may be "clawed back"), see below.

FDIC's Access to Funding
- Treasury: FDIC may immediately borrow funds from the Treasury (up to 10 percent of the CFC's pre-resolution book-value assets within first 30 days; 90 percent once fair-value is determined and liquidation and repayment plan is in place and approved by Treasury)
- If funds from disposition of failed firm's assets are insufficient to repay Treasury:
   - Creditors (who were paid more than they would in bankruptcy) would have to return excess funds ("claw backs")
   - Large financial institutions can be assessed

Notes: "Financial Company" includes bank holding companies, nonbank financial firms, and securities broker-dealers. Nonbank financial firms are characterized as firms that are supervised by the Fed (because of SIFI designation) or that derive at least 85 percent of their revenues from activities that are financial in nature.

Key Bankruptcy Feature: The Automatic Stay

The "automatic stay" is a primary component of bankruptcy and one that underlies many of the complaints raised against bankruptcy as a means of handling SIFI failures. The stay works as follows. Immediately upon the filing of a bankruptcy petition with the clerk of the bankruptcy court, creditors are enjoined from attempting to collect on their claims.[9] This feature of bankruptcy allows a government-appointed trustee to ensure that assets of the bankrupt firm are liquidated in a manner that maximizes the total pool of funds available for creditor repayment. Without the stay, as discussed earlier, creditors can be expected to rush in, grab, and then sell the bankrupt firm's assets. In so doing, creditors could destroy asset complementarities. The stay typically lasts for the length of the bankruptcy process, though the courts may grant exceptions.

In a Chapter 7 bankruptcy (liquidation),[10] the type of corporate bankruptcy in which the troubled firm is closed down (liquidated), the court-appointed trustee typically must sell all of the assets of the bankrupt firm before distributing funds to creditors.[11] The goal of the trustee is to sell the assets in a manner that maximizes the sum of payouts to creditors. Achieving this maximization goal can result in a lengthy process, so that creditors' funds may be inaccessible for an extended period. Based on a study of all corporate bankruptcies from two federal bankruptcy court districts between 1995 and 2001, the average liquidation lasts 709 days (Bris, Welch, and Zhu 2006; 1,270). It seems likely that for the largest, most complex financial firms the process will take at least as long as average or perhaps longer.

Compared to liquidation, a corporate Chapter 11 bankruptcy (reorganization) process tends to last longer still, 828 days on average according to Bris, Welch, and Zhu (2006), though in reorganization creditors will often be repaid well before this process ends. In reorganization, the troubled firm's debts are rescheduled or cut—but it continues to operate.[12] A corporation that finds itself unable to repay all creditors in full can seek protection from creditors' claims by petitioning the bankruptcy court to enter reorganization. This protection from creditors, which includes a stay of claims, is important when a firm is being reorganized because the stay prevents creditors from seizing "going-concern" assets (assets that might be necessary to keep the firm running). The stay can mean that, in aggregate, creditors receive more than

[9] 11 U.S.C. § 362

[10] In the remainder of the article, for the sake of simplicity, we will typically replace the phrase Chapter 7 bankruptcy with "liquidation" and the phrase Chapter 11 bankruptcy with "reorganization." We will use the phrase "orderly liquidation" or the acronym OLA when referring to a Dodd-Frank Orderly Liquidation Authority process.

[11] 11 U.S.C. 704(a)1

[12] The airline industry provides many well-known examples of reorganization, in which planes continue to fly and contracts are renegotiated with creditors and employees.

they would if individual creditors had been allowed to seize assets to protect themselves. Because creditors must agree to the troubled firm's proposed reorganization plan—if not, the firm is likely to proceed to a liquidation—firms receiving reorganization treatment are those for which creditors, as a group, believe going-concern value exceeds the value of firm assets if such assets are sold, i.e., if the firm is liquidated (White 1998, 2–3).

While reorganization can last longer than liquidation, payouts to creditors will often be made well before the end of the reorganization process. As part of the reorganization, creditors may agree to lower repayments and some may receive these repayments quickly. Further, additional funding can flow into the troubled firm fairly quickly to help keep it afloat.

A source of funding often available to a firm in reorganization is "debtor-in-possession" (DIP) funding. In reorganization, the troubled corporation, the debtor, continues to operate, or "possess," the troubled entity. Any loans to the troubled corporation are therefore loans to the DIP. Such loans are often senior to all former—prior to the bankruptcy filing—debts of the bankrupt firm. The prospect of being senior to other creditors allows funding to flow as long as creditors can be convinced that the firm is likely to survive and therefore repay.

Key Bankruptcy Feature: Limited Sources of Funding

Repayment of a bankrupt firm's creditors and funds to sustain a firm reorganized under bankruptcy can only derive from two sources: the assets of the troubled firm, and, in the case of reorganization, added (DIP) loans that might flow to the troubled firm. While bankruptcy law and practice do not prohibit government aid to troubled firms, such funding is not typically available. As a result, creditors have an incentive to carefully evaluate the riskiness of any firm prior to providing funding and to monitor its activities once funding has been provided. Such monitoring will tend to ensure that the firm undertakes only those risks with a positive expected return. Yet, the government has often provided aid to troubled firms because of the sluggishness with which creditors are often repaid following failure and because of the apparent difficulty of lining up DIP funding. In some cases this aid has been provided prior to bankruptcy, in others during bankruptcy.[13] Therefore, the

[13] Bear Stearns and AIG provide examples of financial firms that received government aid prior to bankruptcy. In 2009, both General Motors and Chrysler received aid from the federal government during their reorganizations. Earlier cases of government aid include Penn Central Railroad in 1970, Lockheed Aircraft in 1971, and Chrysler in 1980.

monitoring advantage offered by bankruptcy can be diminished by the expectation of government aid for certain (especially large) financial firms.[14]

There is no DIP financing in a liquidation. In liquidation, a "bankruptcy estate" is created, including all of the assets of the bankrupt firm. One of the responsibilities of the trustee is to locate all assets and gather them into the estate. The estate assets are sold by the bankruptcy trustee and the proceeds of the sale provide the funds from which creditors are repaid. Funds from no source beyond the assets of the failed firm are available to the trustee and therefore to the creditors.

In a reorganization proceeding, debts are restructured in a manner such that the firm can continue operating. For example, the creditors of a firm might come together and all agree to reduce the amounts the bankrupt firm owes each of them by 30 percent, and extend the maturity of all debts by two years. As a result, the bankrupt firm faces lower monthly debt payments, payments that it might successfully manage. The creditors will only agree to such a plan if they believe that sustaining the operations of the firm is likely to mean larger payments than if the firm descends into liquidation. The debt restructuring and the mode of future operation is called the "reorganization plan" and is subject to court review and creditor appeal to the bankruptcy court. Typically the current management of the troubled firm operates the reorganized firm. If the firm's liabilities exceed its assets, owners are wiped out and the creditors inherit the decisionmaking rights formerly enjoyed by owners. The debtor can acquire funding for the reorganized firm because it can offer very favorable terms to the lenders who provide DIP funding because the new lenders have a claim that is senior to all other creditors. Thus, lenders will have an incentive to provide DIP funding if they believe that the reorganized firm is likely to be able to repay their loans from future earnings—that the reorganized firm will be profitable.

Weaknesses of Bankruptcy

A Weakness of Bankruptcy for Financial Firms: The Stay Threatens Short-Term Debtholders

While the automatic stay, in liquidation or reorganization, may cause no spread of losses when the creditors of the troubled firm are typically long-term debtholders (who are not counting on quick receipt of their funds), in the

[14] One might argue that there could be times in which government aid is appropriate, for example if credit standards have become inefficiently (or irrationally) strict, as in a financial panic. If market participants believe that government aid will only be forthcoming at such times, and will only provide the amount of funding that private lenders would provide if they had not become irrationally strict, then the expectation of government aid will not diminish private investors' risk-monitoring efforts.

case of a failing financial firm, creditors are likely to include a large contingent of those with very short-term claims. Funds invested in financial firms (such as investment banks) often have maturities of one or a few days. Creditors with such short maturity claims are likely to be dependent on the immediate access to their funds in order to pay their own creditors. If funds are tied up for an extended period, as assets are gathered and sold in a liquidation process or as a reorganization agreement is negotiated, the bankrupt firm's creditors may find themselves unable to make payments to their own creditors. As a result, the bankruptcy of one firm may result in the failure of some of its creditors, especially if some of these creditors are also financial firms with their own very short-term debts to repay. Therefore, while the automatic stay may have significant value in preventing creditors from separating complementary assets in liquidation and preserving going-concern value in reorganization, the stay, if it continues more than a very short time, may cause financial distress to spread. The importance of short-term funding, which is often present for nonbank financial firms, may make policymakers unwilling to rely on bankruptcy when such firms become troubled.

A Weakness of Bankruptcy for Financial Firms: Opacity Reduces Availability of DIP Financing

New funding, quickly available, will often be necessary in order for a troubled firm to be successfully reorganized. After all, funds from former sources may have dried up because of the losses these creditors suffered on former loans to the troubled firm. But, financial firms may find it to be relatively difficult, compared to nonfinancial firms, to quickly obtain DIP funding. Such firms often have quite opaque assets: assets that are difficult for outsiders, such as lenders, to value. For example, assets of financial firms often include a heavy concentration of loans to other firms. The value of such loans may depend importantly on information that can be gathered only by performing detailed analyses of the financial condition of the borrowing firms.[15] As a result, DIP loans may be available only after lenders spend a great deal of time reviewing the troubled firm's assets. Further, DIP loans made to financial firms are likely to involve unusually high interest rates to compensate for time spent in asset review and for the potential risk of lending to a firm with highly opaque assets.

[15] Using statistical analysis to measure firm opacity, by comparing the frequency of bond rating disagreements, Morgan (2002, 876) finds that banks and insurance firms are the most opaque of major industry groups. Large nonbank SIFIs are likely to have a portfolio of assets that are fairly similar to bank asset portfolios so can be expected to be similarly opaque. Interestingly, Morgan notes that the industry grouping "Other Finance and Real Estate" seems to be among the least opaque, though, according to Morgan, this is likely because the securities being analyzed for this group are "asset-backed bonds backed by a pool of specific, homogeneous assets 'locked' up in special purpose vehicles. This structure, which reduces the risk of asset substitution, seems to make the securities relatively safe and certain to outsiders" (2002, 877).

The opacity of financial firm assets contributes to the desire to employ some method (i.e., bailouts or OLA) for their resolution instead of bankruptcy.[16]

Key Features of OLA and OLA's Weaknesses

As in bankruptcy, when a troubled financial firm enters the OLA process, creditors—with the exception of holders of QFCs, discussed below—are stayed (prevented) from collecting their debts. The stay lasts the duration of the period in which the financial firm is in the OLA process. During the stay, the FDIC will typically establish a receivership estate into which most assets and liabilities will be placed. Assets placed in the receivership will be sold by the FDIC in the manner that results in the largest returns to creditors—so that the receivership may last, and creditors wait, an extended period while the FDIC lines up buyers. In addition, some of the bankrupt firm's assets and liabilities can be moved into a "bridge entity," a separate company formed by the FDIC, which might be sold off as a whole entity to a private buyer or might even be capitalized by some of the creditors of the bankrupt firm, and continue as a going concern.[17] One purpose of a bridge can be to preserve going-concern value of portions of the troubled firm.[18]

The Dodd-Frank OLA process also abides by a priority schedule similar to the one defined in bankruptcy law (see Table 1 for an overview of bankruptcy priorities). But Dodd-Frank authorizes the FDIC to violate the priority list established in OLA under certain circumstances. Specifically, section 210(d)(4) of the Dodd-Frank Act permits the FDIC to pay a creditor more than priority rules might otherwise allow "if the Corporation determines that such payments or credits are necessary or appropriate to minimize losses to the Corporation as receiver from the orderly liquidation of the covered financial company." According to the FDIC's discussion of its proposed rules related to this section of the Dodd-Frank Act, such additional payments may be made if they are necessary to "continue key operations, services, and transactions that will

[16] An alternative to bailouts or OLA that would address the problem of a lack of DIP funding as a result of SIFI opacity is to allow a troubled SIFI to enter reorganization, and permit the government to make DIP loans to the bankrupt firm. The government could quickly provide DIP funds to keep the firm operating but the bankruptcy process could handle all other aspects of the resolution.

[17] See Acting Chairman Martin J. Gruenberg's (2012) presentation before the Federal Reserve Bank of Chicago Bank Structure Conference for a discussion of how a bridge bank might be capitalized and continue operations as a private entity.

[18] Acting FDIC Chairman Gruenberg (2012) discussed the formation of a bridge, and noted its advantages for protecting going-concern (franchise) value: "... the most promising resolution strategy from our point of view will be to place the parent company into receivership and to pass its assets, principally investments in its subsidiaries, to a newly created bridge holding company. This will allow subsidiaries that are equity solvent and contribute to the franchise value of the firm to remain open and avoid the disruption that would likely accompany their closings... In short, we believe that this resolution strategy will preserve the franchise value of the firm and mitigate systemic consequences."

maximize the value of the firm's assets and avoid a disorderly collapse in the marketplace."[19]

Beyond the authority to, in some cases, make greater payments to creditors than their priority might allow, the Dodd-Frank Act also provides the FDIC with Treasury funding that might be used to make payments to creditors. The Act provides that the FDIC can borrow, within certain limits, from the Treasury. Immediately upon their appointment as receiver of a firm, the FDIC can borrow 10 percent of the value of the firm's pre-resolution assets. For a large financial firm, this initial amount can be significant. In the Lehman failure, for example, 10 percent of assets would have amounted to $63.9 billion. Once the fair value of the failing firm's assets is determined and a liquidation and repayment plan is in place, the FDIC may borrow an additional 90 percent of the value of the firm's assets (with approval from the Treasury). The Act provides that these funds are to be repaid to the Treasury from the sale of the liquidated firm's assets. But, importantly, the Act also specifies a means of repayment if such assets are not sufficient for repayment, first by attempting to "claw back" any "additional payments" (payments beyond what would have been received in a liquidation) made to creditors, and, if that is insufficient, by taxing all large bank holding companies and other SIFIs (Dodd-Frank Act § 210(o)(1)(A)).[20,21,22] The fact that assets might not be sufficient to repay the Treasury in full, and that the legislation authorizes taxes (on large financial

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19 http://edocket.access.gpo.gov/2011/pdf/2011-1379.pdf; 4,211

20 The Dodd-Frank Act § 210(o) specifies that assessments (taxes) to repay the Treasury are to be imposed on bank holding companies with assets greater or equal to $50 billion and on nonbank financial companies supervised by the Board of Governors of the Federal Reserve (meaning nonbank SIFIs). Assessments are to be sufficient to repay the Treasury within 60 months, with the opportunity for extension if repaying in 60 months would have a "serious adverse effect on the financial system." Assessments are to be graduated based on company size and riskiness. When determining assessment amounts, the FDIC, in consultation with the Financial Stability Oversight Council, should take account of "economic conditions generally affecting financial companies so as to allow assessments to increase during more favorable economic conditions and to decrease during less favorable economic conditions...the risks presented by the financial company [being assessed] to the financial system and the extent to which the financial company has benefitted, or likely would benefit, from the orderly liquidation of a financial company under this title," and any government assessments already imposed on the firm under such government programs as deposit insurance or securities investor protection insurance.

21 The Dodd-Frank Act § 210(o)(1)(D)(i) prohibits the FDIC from imposing claw backs on creditors who receive "additional payments" if such payments are "necessary to initiate and continue operations essential to implementation of the receivership or any bridge financial company." The FDIC's implementing regulation, at 12 CFR 380.27, seems to imply that a good portion of any additional payments made by the FDIC will be for such essential purposes so will be protected from claw back. Note that if all additional funds could be clawed back, there might be little reason to be concerned about the potential moral hazard problem created by FDIC payments. But, given that the FDIC is likely to be prohibited from imposing claw backs on some significant portion of payment recipients, the moral hazard concern seems to be in play.

22 Analysts (Acharya et al. 2009, 31–2; Acharya et al. 2011, 10–1) have noted that it would be more appropriate to impose this tax prior to any failure, and base the tax rate on a firm's riskiness. Such a tax would discourage risk-taking. The current tax does not discourage risk-taking, since the failing firm does not pay it. In fact, because it is paid by survivors, it punishes, and therefore discourages, caution.

firms) to repay the Treasury, implies that creditors may be repaid more than the sum of funds generated by asset sales—more than they would have been repaid in liquidation.

It seems likely that Congress intended to provide the FDIC with a good bit of discretion to bypass strict priority as well as discretion over whether to borrow Treasury funds in order to mitigate systemic risk. For example, given the FDIC's ability to pay some creditors more than they would receive in bankruptcy, these creditors may be less likely to pass on losses to other firms, lowering the risk of a systemic problem.

One might argue that legislators' intention for providing the FDIC with the authority to borrow from the Treasury was simply to allow the FDIC the ability to move quicker than bankruptcy courts. By providing an immediate source of funds, the FDIC could gather funds, which it could then use to make payments equivalent to what would be paid in bankruptcy. In this way creditors would not be denied access to their funds for months or years (as in liquidation), and the FDIC could slowly sell the assets of the failing firm such that fire sales are avoided. Under such an arrangement, legislators could have required the FDIC to immediately estimate the value of the failing firm's assets (similar to the type of analysis currently performed by the FDIC when it determines—and announces in a press release—the cost to the FDIC of a bank's failure), and then limit itself to paying creditors no more than their pro-rata share (given priorities) of this estimated amount. Yet, Congress did not choose this course, i.e., it did not require the FDIC to limit the sum of its payments to be no more than the estimated value of the failing firm's assets. Instead it left the FDIC to determine payments to creditors and authorized taxes on large financial firms if payments exceed the liquidation value of assets. Therefore, it seems clear that Congress intended for some creditors of a failing firm to receive larger payments than bankruptcy allowed, as a means of mitigating systemic risk.

Investors certainly realize that the OLA provisions provide the FDIC with the authority to make larger-than-bankruptcy payments to creditors. As a result, they will tend to under price risk-taking by nonbank firms that might get OLA treatment and such firms will engage in more risk-taking than if they did not enjoy the potential benefits of receiving government aid.[23] Congress was aware that larger payments would have this moral-hazard-exacerbating impact on firm risk-taking and took steps to mitigate the impact in the OLA provisions of the Dodd-Frank Act. Broadly, the legislation requires that the FDIC attempt to liquidate SIFIs "in a manner that . . . minimizes moral

[23] Some authors, such as Jackson (2011), argue that a modified bankruptcy procedure can address this excessive risk-taking weakness and better resolve SIFIs. According to them, a system of established rules, judicial oversight, and full public disclosure has a better chance of both reducing bailouts and making the costs of them known than does a non-bankruptcy resolution authority.

hazard."[24] More specifically, the law calls on the FDIC to ensure that any member of the management or the board of directors of the failed firm who is deemed responsible for the failure is fired. Similarly, the OLA provisions require the FDIC to "ensure that the shareholders of a covered financial company do not receive payment until after all other claims and the Fund are fully paid and ensure that unsecured creditors bear losses..."[25,26] The provisions requiring the removal of management and directors are likely to encourage these corporate leaders to limit risk-taking. However, the OLA contains provisions for certain creditors to receive better treatment than they might in bankruptcy, even if some creditors suffer losses, so that creditor oversight is likely diminished by the prospect of OLA treatment.

Dealing With Systemic Risk in Failure Resolution: Exceptions to the Automatic Stay

The class of financial contracts, which are exempt from the automatic stay, are commonly referred to as "qualified financial contracts" (QFCs).[27] Therefore, investors who are holding QFCs have the ability to immediately terminate and net-out their contracts or liquidate the collateral on their claims once a party has defaulted or filed for bankruptcy. Today, under bankruptcy law, a number of financial instruments are QFCs, including repos, commodity contracts, forward contracts, swap agreements, and securities contracts.[28] The treatment of QFCs in bankruptcy (and under OLA provisions) has been the focus of a great deal of public debate.

A possible explanation for exempting QFCs is that the collateral that typically backs QFCs is not directly tied to the defaulting firm's going concern value. A primary objective of the automatic stay in bankruptcy is to prevent

[24] Dodd-Frank Act § 204(a)

[25] Dodd-Frank Act § 206(1-5)

[26] The Dodd-Frank Act includes other provisions intended to minimize moral hazard including 1) a requirement that SIFIs create resolution plans ("living wills") to increase the likelihood that they would be resolved through bankruptcy [Dodd-Frank Act § 165(d)]; and 2) a requirement that the FDIC have a plan in place, before borrowing greater than 10 percent of the failing firm's asset, for repaying the Treasury [Dodd-Frank Act § 210(n)(9)(B)].

[27] In the Bankruptcy Code, contracts exempt from the automatic stay are referred to as "safe harbor contracts." The Federal Depository Institution Act and the Dodd-Frank Act refer to the safe harbor contracts as QFCs. Since safe harbor contracts and QFCs generally refer to the same types of contract, we will use the term "QFC" to refer to both, which is consistent with industry practice.

[28] The types of contracts exempt from the stay are listed in the following sections of the Bankruptcy Code: 11 U.S.C. § 362(b)(6), (b)(7), (b)(17), 546, 556, 559, 560. All terms are defined in 11 U.S.C. § 101 with the exception of a "securities contract," which is defined as "the purchase, sale, or loan of a security, including an option for the purchase or sale of a security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any option entered into on a national securities exchange relating to foreign currencies, or the guarantee of any settlement of cash or securities by or to a securities clearing agency" (11 U.S.C. § 741).

the separation of complementary assets (an important goal of the trustee in liquidation) or to preserve the going-concern value of a firm (typically a goal in reorganization). QFCs can be immediately closed out because the collateral backing them will typically not be complementary to other assets of the firm, nor will QFC collateral be important to the firm's going-concern value. For instance, collateral consisting of highly marketable or cash-like securities (for example Treasury bills or mortgage-backed securities) can be removed from the firm without necessarily undercutting the firm's ability to produce loans or other financial products, since the production of these products depends on such resources as the skill of lending staff, staff contacts with possible borrowers, IT assets, office space and equipment, and funding (liabilities) from which to make loans. However, some argue that the collateral backing certain QFCs can be firm-specific (e.g., a pool of mortgage cash flows used as repo collateral) and therefore not all QFCs should be treated equally (Jackson 2011).

Another possible explanation for exempting QFCs is that the markets in which QFCs trade are special, such that delaying creditor recovery attempts in these markets (by imposing a stay on QFC counterparties) is especially destructive, compared to staying creditors operating in other markets. More specifically, proponents who hold this view seem to be arguing that staying QFCs is more likely to create systemic problems than staying the collection of other debts. This explanation for special treatment—what we will call the "systemic risk" rationale—appears to stand out as the argument used by policymakers supporting the expansion of the list of QFCs that took place over several decades through numerous reforms to the Bankruptcy Code. The rationale offered by those supporting the exemption is that in a fast-paced, highly interconnected market, a counterparty to a QFC may need the proceeds from the contract to pay off other debts in a timely manner. If this counterparty is unable to meet other obligations as a result of having its contracts held up in bankruptcy, other firms relying on that counterparty may become exposed and experience financial distress, which could bleed to other counterparties, and so on, causing a ripple effect and possibly "destabilizing" markets (Edwards and Morrison 2005).[29]

Today, the transactions and agreements covered under the definition of a QFC include a wide range of instruments. However, when the automatic stay

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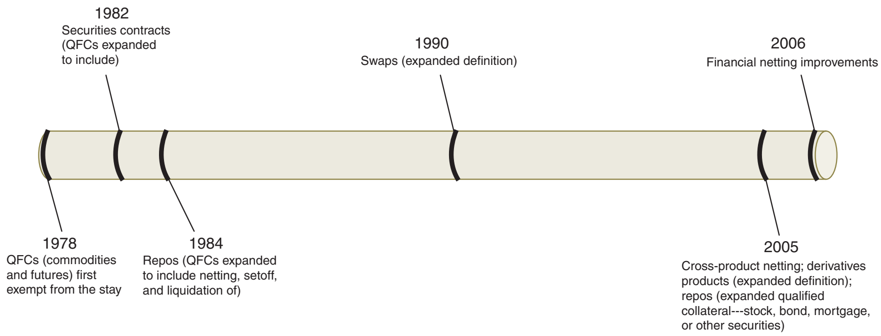
[29] In a letter dated September 30, 1998, to Hon. George W. Gekas, Chairman, Subcommittee on Commercial and Administrative Law, Committee on the Judiciary, Robert Rubin, former Treasury Secretary, argued that applying traditional insolvency laws, such as the stay, to QFCs could cause a "possible domino effect that could turn the failure of one market participant into a failure of the market." See www.wilmerhale.com/files/Publication/eacecfbd-0400-4cb1-80a0-cf3a2c3f1637/Presentation/PublicationAttachment/29b1ce6d-1ce1-4544-a3ec-63ecd65d11e1/Bankruptcy%20%20Derivatives%20outline%20-%20_final_.pdf.

Figure 1 History of QFC Exemptions from the Stay



was first created as part of the new Bankruptcy Code in 1978,[30] only commodities and futures contracts were exempt.[31] At the time, these protections were intended to "prevent the insolvency of one commodity firm from spreading to other brokers or clearing agencies and possibly threatening the collapse of the market."[32] In the decades to follow, various reforms to the Bankruptcy Code expanded the types of contracts classified as QFCs, as well as expanding the types of collateral that could be used to back them (see Figure 1 timeline).

Legislation enacted in 2005 and 2006[33] expanded the safe harbor treatment significantly by broadening the definition of a QFC to such an extent that it would capture any newly created derivatives product that may otherwise not be explicitly included.[34] Moreover, the most recent reforms also expanded contractual netting rights to allow for "cross-product netting" of QFCs (Figure 1). Netting occurs when a non-defaulting counterparty of a defaulting bankrupt firm is allowed to offset debts it owes to the defaulting firm against debts owed it by the defaulting firm.[35] Cross-product netting allows contracts

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30 The *stay* existed as a fundamental feature of bankruptcy before 1978. The Bankruptcy Reform Act of 1978, however, created the "automatic stay," which takes effect immediately upon the filing of a bankruptcy petition. Prior to the Bankruptcy Reform Act of 1978, the stay typically took effect only after the grant of an injunction by a court. Such grants were typical, but were often not immediate, and certainly not automatic (Jessup 1995).

31 U.S.C. §362(b)(6)

32 See H.R. Rep. No. 97-420, at 2 (1982).

33 The Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (Pub. L. 109-8, 119 Stat. 23) and the Financial Netting Improvements Act of 2006 (Pub. L. 109-390, 120 Stat. 2692).

34 The following language was added to the definition of commodities, forward, repo, and securities contracts: "any other agreement or transactions referred to" in the definition and "any combination of the agreements or transactions referred to" in the definition.

35 For example, in the simplest case of two contracts, the non-defaulting firm is owed $1,000 by the bankrupt firm on, say, an interest rate swap (derivative) contract, and owes the defaulting

of differing types to be netted against one another, for example a debt owed on a swap to be netted against a debt owed on an option contract. Netting, whether the netting of like product contracts or cross-product contracts, can reduce the credit exposure of firms that use financial contracts. In turn, the chance that the bankruptcy of one firm might lead to large losses for its financial contract counterparties is reduced, which some observers argue could reduce systemic risk (Jones 1999).[36]

Observers explain that the expansion of special treatment for QFCs occurred in order to account for the considerable growth in the number and diversity of complex financial products over the previous decade (Jones 1999, Skadden 2010). These instruments grew in popularity as they served as mechanisms for financial firms to insure and hedge against risk, helping to reduce uncertainty and stabilize earnings. This increasingly expansive protection for derivatives and repos was intended to achieve the goal of "minimizing the systemic risks potentially arising from certain interrelated financial activities and markets."[37,38]

Some Possible Weaknesses of Bankruptcy's QFC Exemption

The onset of the financial crisis led many observers to reexamine whether this systemic risk rationale was consistent with the events that occurred when financial markets became severely stressed during the recent financial crisis. Therefore, the idea that QFCs should be exempt from the stay was revisited in the lead up to Dodd-Frank and ultimately addressed in the OLA. The systemic risk argument is the prominent justification given by those supporting the expansion of the special treatment given to QFCs. However, there is another cohort, which argues that any reduction in systemic risk, because of QFC exemptions, may be offset by another form of systemic risk

firm $800 on a different interest rate swap contract. Under bankruptcy law, the creditor firm may net the two contract debts such that the $800 it owes the defaulting firm is cancelled (netted against the $1,000) and the defaulting firm ends up owing only $200 to the non-defaulting firm. The non-defaulting firm will have to wait for the bankruptcy process to proceed before being repaid any portion of the remaining $200 it is owed. This outcome is superior for the non-defaulting party compared to the case in which netting were not allowed. Here the non-defaulting party would be required to pay the defaulting party the $800 it owed, but wait for the bankruptcy process to be completed before getting any of the $1,000 defaulting party owes it. Of course, in reality, the defaulting firm and the non-defaulting firm are likely to have many contracts outstanding with one another at the time of default, all of which might be netted (Mengle 2010).

[36] This may have magnified the concentration of the derivatives industry according to Bliss and Kaufman (2006, 67–8), who argue that "by explicitly protecting these netting agreements, the 2005 bankruptcy changes reinforced the competitive advantage of the biggest counterparties."

[37] See Jones 1999.

[38] "Immediate termination of outstanding contracts and liquidation of collateral facilitates the acquisition of replacement contracts, reduces uncertainty and uncontrollable risk, improves liquidity and reduces the risk of rapid devaluation of collateral in volatile markets" (Yim and Perlstein 2001, 3).

involving runs on repos[39] and fire sales[40] of the collateral underlying closed-out derivatives contracts (Edwards and Morrison 2005, Taylor 2010, Acharya et al. 2011). The simultaneous termination and liquidation of numerous QFCs (which is allowed by the exemption of QFCs from the stay) may lead to fire sales and possibly further insolvencies. In Lehman's case, of their 930,000 derivatives counterparties, 733,000 sought to terminate their contracts upon their bankruptcy filing on September 15, 2008 (Miller 2009).

Additionally, some observers note that the 2005 bankruptcy laws, which, among other things, extended QFC protections to repos backed by all types of collateral, including all mortgage-related securities, may have encouraged use of mortgage-backed securities as repo collateral (Lubben 2010), and thereby contributed to losses during the financial crisis (Skeel 2010, Government Accountability Office 2011). As Skeel (2010) points out, mortgage values could have spiraled down even more had AIG's counterparties been forced to sell a significant amount of the mortgage-related securities they had posted as collateral on their QFCs (which was avoided when AIG was bailed out).

The idea that QFC fire sales might result from their exemption is not new. In fact, it appears to be what led the Federal Reserve to step in and encourage private firms to come to the aid of Long-Term Capital Management L.P. (LTCM), preventing it from entering bankruptcy (Edwards and Morrison 2005).[41]

As discussed, the bankruptcy process can be long, but among other things, this is intended to give the troubled financial firm and its creditors the time to develop plans to salvage the value of the firm. However, with the exemption from the stay, a large financial firm facing possible default (because of a number of factors, such as a recent credit downgrading or an overall crisis of confidence) has a strong incentive not to file for bankruptcy since doing so would likely trigger simultaneous termination of all QFCs (Skeel and Jackson 2012). Thus, a troubled firm may put it off until the last moment and be forced into a rapid liquidation that significantly depresses values to the detriment of other market participants. These arguments suggest that bankruptcy's current treatment of QFCs may not be optimal.

Observers also find that the special treatment given to QFCs—in order to prevent the perceived systemic risks that arise when these instruments are

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[39] By "runs on repos" we mean when counterparties, en masse, seize the collateral underlying these deposit-like instruments.

[40] The phrase "fire sale" typically refers to the possibility that the sale of an asset might yield a lower-than-typical price if holders of one type of asset attempt to sell en masse. In comparison, the "typical" (non-fire sale) price will result if sales are distributed over time.

[41] Krimminger (1999, 1) notes that, "[i]n the case of LTCM, the absence of any mechanism under the Bankruptcy Code to 'slow' the liquidation of assets and collateral, [a power granted to the FDIC under the Federal Deposit Insurance Act] and the resulting 'dump' upon the markets, was a key motivation for the pre-insolvency facilitation provided by the Federal Reserve Bank of New York."

subjected to the automatic stay—not only create a different form of systemic risk, but weaken market discipline (Edwards and Morrison 2005, Scott 2011). The special treatment awarded to QFC counterparties in bankruptcy essentially places them ahead of all other creditors in the bankruptcy repayment line, allowing QFC counterparties to get out of their contracts when all other creditors cannot. As a result, their incentive to monitor the debtor prior to bankruptcy and base their pricing and investment decisions on the perceived risk of the counterparty may be significantly reduced, increasing moral hazard (Edwards and Morrison 2005, Roe 2011). It is argued that this leads to market distortions whereby debtors favor short-term repo financing over traditional sources of funding, encouraging a more fragile liability structure (Edwards and Morrison 2005, Skeel and Jackson 2012). For example, at the time of Bear Stearns' failure, a quarter of its assets (approximately $100 billion) were funded by repos (Roe 2011). Roe (2011) suggests that, without the priority given to these instruments in bankruptcy, it is plausible that Bear would have financed a much larger proportion of its assets with longer-term debt, which would have allowed for a more stable funding structure during the financial turmoil.

Some observers who support these arguments maintain that QFCs should be subject to the automatic stay provisions in the Bankruptcy Code, although there are a range of views concerning the length of the stay and whether all QFCs should be treated equally. According to Harvey Miller (2009), lead bankruptcy attorney for the Lehman bankruptcy, the automatic stay, as originally contemplated, is intended to provide a firm with the "breathing space" to find a third party source of liquidity or to carry out an "orderly, supervised wind down of its business assets." Miller argues that, had the special treatment given to QFCs not applied, Lehman's failure may have been avoided and certainly would not have been as "systemically challenging." For instance, Lehman suffered a significant loss of value when nearly 80 percent of their derivatives counterparties terminated their contracts upon their filing of bankruptcy (Miller 2009).

The OLA's One-Day Automatic Stay for QFCs

Given the controversy—with some experts arguing the exemption from the stay is necessary to prevent systemic risk and others arguing that the exemption creates systemic risk—it is natural that Congress chose a solution that leaves the FDIC with discretion to determine the treatment of QFCs for covered financial companies. Under Congress's solution, QFCs are subject to a one-day automatic stay upon appointment of the FDIC as receiver, whereas QFCs are subject to no stay in bankruptcy.[42]

During the one-day stay under the OLA, the FDIC, as receiver of the failing financial company, must quickly identify how to manage the SIFI's QFC portfolio. The one-day stay is aimed at addressing fears associated with a failing firm's QFC counterparties cancelling their contracts all at once and driving asset prices down. Instead, counterparties' rights to cancel their contracts are put on hold for one day while the FDIC determines how to treat these contracts. The FDIC has this same type of authority when dealing with bank failures. Under the OLA, during this short period, the FDIC has the option to retain the QFCs in receivership, transfer QFCs to another financial institution (to an outside acquirer or to a bridge company created by the FDIC), or reject the QFCs.[43] However, in all instances, the FDIC must retain, reject,[44] or transfer *all* of the QFCs with a particular counterparty and its affiliates.[45,46]

Each action taken by the FDIC has different implications for QFC counterparties of the debtor, as well as the failing firm. Retaining the QFCs in receivership is most similar to bankruptcy in that after the one-day stay expires, QFC counterparties may terminate or net-out their contracts.[47] What differs significantly from bankruptcy, but is very similar to the FDIC's resolution process for depository institutions, is the FDIC's ability to transfer or reject QFCs. If the FDIC chooses to transfer all of the QFCs with a particular counterparty and its affiliates to a third party (including a bridge company), the counterparty is not permitted to exercise its rights to terminate or close out the contract.[48] This awards the FDIC an opportunity to possibly preserve the value of the contracts by removing the ability of counterparties to terminate contracts early and sell off the collateral at fire sale prices (Cohen 2011).

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[42] The one-day stay lasts until 5:00 p.m. on the business day following the date the FDIC is appointed as receiver. Therefore, the "one-day" stay could last four days if the FDIC is appointed as receiver on a Friday.

[43] For the most part, the FDIC's powers under the OLA to reject or transfer a QFC during their limited one-day stay are much like the powers of the FDIC and bankruptcy trustees under the Federal Deposit Insurance Act and the Bankruptcy Code, respectively, with the exception that they are not supervised by a court nor do they receive counterparty input (Skadden 2010).

[44] In bankruptcy, only contracts or leases that are executory—a contract where both parties have unperformed obligations—may be rejected.

[45] Dodd-Frank Act § 210(c)(9)(A). This is intended to eliminate "cherry picking" (selective assumption and rejection) of QFCs by the debtor.

[46] This differs from the Bankruptcy Code's setoff provision, which allows a creditor to offset all obligations under a single master agreement but not all of the contracts with a single counterparty and its affiliates (Skeel 2010, Cohen 2011). When Lehman filed for bankruptcy, they were a counterparty to 930,000 derivatives transactions documented under 6,120 master agreements (Summe 2011).

[47] If a nondefaulting counterparty has an unsecured claim after terminating a QFC and liquidating any collateral, the claim would then be subject to the same claims process as other unsecured creditors.

[48] If the counterparty were to default at a later time on a separate occasion, they may exercise their close-out rights.

Moreover, a QFC counterparty may find that their contracts are held with a new, and presumably more stable, counterparty or a temporary bridge bank following the one-day stay and, therefore, may have no incentive to terminate (in addition to the fact that it has no ability to terminate), leaving the market undisrupted by their original counterparty's failure while also maintaining what are possibly valuable hedge transactions. Finally, the FDIC may reject (or repudiate) the QFCs of a given counterparty to the debtor, effectively closing them out at the current market value, if they determine that they are somehow burdensome or doing so would otherwise promote orderly administration.[49] However, counterparties may recover, from the FDIC, any damages suffered as a result of the FDIC's rejection of QFCs.[50]

Possible Weaknesses of OLA's One-Day Stay

Some commentators find that the one-business-day stay does not provide the FDIC with sufficient time to identify the potential recipients of the failed firm's derivatives portfolio (Skeel 2010, Bliss and Kaufman 2011, Summe 2011). Given this time constraint coupled with the "all or nothing" approach to the treatment of QFCs (where the FDIC must retain, reject, or transfer all QFCs with a particular counterparty) and the potential systemic risks from its failure to protect a SIFI's QFCs, some suggest that the FDIC is highly likely to transfer all QFC contracts of a given counterparty to a bridge financial institution (i.e., protecting or guaranteeing them in full) (Skeel 2010). After all, if the FDIC does not protect all contracts, then the non-defaulting counterparties may close out and liquidate their contracts upon the expiration of the one-day stay, effectively resulting in the systemic problems previously discussed related to the QFC exemption—closing out the contracts and selling collateral at fire sale prices. Thus, even if various QFC counterparties have differing risk exposures to the defaulting firm, they are all likely to be treated the same and "bailed out." If counterparties believe that their QFCs are likely to be protected by placement in a well-funded bridge company, they are likely to provide more funding (or provide lower-cost funding) to a risky firm than they otherwise would. Further, counterparties may care little about the differing risks associated with the various types of QFCs, because all QFCs of a given counterparty are treated the same. Therefore, while bridge company placement of QFCs may limit systemic risk, it is likely to do so at the cost of increasing moral hazard.

In response to the concern that a one-day stay is likely to lead to the protection of most QFCs, some observers, such as Thomas Jackson, author of a proposal to create a new chapter in the Bankruptcy Code tailored to the

[49] Dodd-Frank Act § 210(c)

[50] Damages are calculated as of the date of repudiation. The word "damages" is defined as the "normal and reasonable costs of cover or other reasonable measures of damages utilized in the industries for such contract and agreement claims" Dodd-Frank Act § 210(c)(3)(C).

resolution of SIFIs (Chapter 14), proposes an extension of the duration of the automatic stay for QFCs to three days. Jackson and others argue that a longer stay duration will give the FDIC additional time to make an informed decision regarding how to handle the failing firm's QFC portfolio (Jackson 2011). Jackson's three-day stay appears to be an attempt to balance the desire to give the FDIC more time, against the danger of producing QFC counterparty failures.[51]

Moreover, the protections for derivatives contracts have broadened over the last several decades and this legislation does not account for the differences across QFC products (such as between repos and swaps), or the types of collateral backing QFCs, which some observers believe should be considered. For instance, several observers find that special treatment (i.e., exemption from the stay) should be limited to derivatives collateralized by highly liquid collateral, such as short-term Treasury securities, since there is little reason to assume that such instruments are important for the going-concern value of the bankrupt firm (Herring 2011, Jackson 2011). In Jackson's 2011 Chapter 14 proposal, highly liquid, or otherwise highly marketable, instruments with no firm-specific value remain exempt from the stay so that creditors who rely on the immediate availability of their funds can get them back quickly and without disruption upon the failure of a firm. On the other hand, the exemption is removed (i.e., the stay would apply) for less liquid instruments, such as CDS, in an effort to prevent these creditors from running on the troubled firm. Clearly, there remains a good bit of controversy about the best way to handle the QFC exemption, in both bankruptcy and the OLA, with no obvious best solution.

3. CONCLUSION

While bankruptcy probably provides the ideal failure resolution mechanism for most corporations, it may not be optimal for some financial firms (i.e., SIFIs). Financial firms are typically more heavily dependent on short-term funding, often including a heavy reliance on QFCs, and their balance sheets are opaque. Because of this dependence on short-term funding, a long stay, while the bankruptcy process plays out, is likely to result in financial difficulties for some of the troubled firm's counterparties. Moreover, DIP funding, which is the usual means of keeping a troubled, but viable, firm alive during reorganization, is likely to be quite difficult to arrange, given the opacity of most financial firms. Because of these weaknesses, handling a SIFI through bankruptcy is likely

[51] While the three-day stay may not provide significantly more time than one day to make such valuations, the Dodd-Frank requirement that SIFIs create resolution plans or "living wills" and provisions forcing swaps to be traded on exchanges could expedite the QFC valuation process, improving the ability of the FDIC to make appropriate decisions within a three-day stay period.

to result in significant risks to financial stability. Policymakers are therefore understandably reluctant to allow SIFIs to enter bankruptcy, given that these risks can be mitigated through bailouts. But bailouts, or the expectation that they could be forthcoming, drive down economic efficiency by exacerbating moral hazard problems.

In an effort to address these difficulties, the OLA was created with the explicit goals of mitigating risk to the financial system and minimizing moral hazard. Specifically, the OLA adjusts the way that QFCs are handled and how creditors are paid out. Despite the attempt to achieve these well-founded goals, because they are conflicting, reducing one inevitably leads to an increase in the other. The one-day QFC exemption does not clearly resolve potential risks to financial stability and it also does not go far to ameliorate the moral hazard problem that is apparent when giving QFCs special treatment. Additionally, the ability to pay some creditors more than they would be likely to receive in bankruptcy may reduce systemic risk, but at the cost of increasing moral hazard. In conclusion, the threat of a SIFI's failure, or the failure itself, presents policymakers with a daunting challenge that neither bankruptcy nor the OLA seems capable of fully resolving.

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