What Is Systemic Risk? Does It Apply to Recent JP Morgan Losses?

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Summary

JP Morgan recently disclosed that it suffered significant losses in a unit that traded complex financial instruments. Congress will be examining the JP Morgan trades and oversight by JP Morgan's regulators. Two of the questions that policymakers might ask are could the JP Morgan losses or similar trades trigger another financial crisis and how would the Volcker Rule in the Dodd-Frank Act have applied to the JP Morgan trades? This report explains general systemic risk analysis. It evaluates recent JP Morgan trades in light of our understanding of sources of systemic risk. If the sizes of the losses remain small, it appears extremely unlikely that JP Morgan's reported losses in its asset liabilities management unit could trigger a financial crisis or systemic event.

Systemic risk refers to the possibility that the financial system as a whole might become unstable, rather than the health of individual market participants. Stable financial systems do not transmit or magnify shocks to the broader economy. A firm, person, government, financial utility, or policy might create systemic risk if (1) its failure causes other failures in a *domino effect*; (2) news about its assets signals that others with similar assets may also be distressed, called *contagion*; (3) it contributes to *fire sales* during price declines; or (4) its absence prevents other firms from using an essential service, called *critical functions*.

There are a number of policy responses to systemic risk. Greater transparency can prevent uncertainty from magnifying panics and permit regulators to monitor the system as a whole. Lenders of last resort can prevent markets from becoming illiquid or healthy firms from being cut off from credit. Deposit guarantors can reduce the incentives for a firm's counterparties to run. Prudential regulations and capital requirements can reduce the chance of firm failure and the costs of the failures that nonetheless occur. However, policies to address systemic risk can create risks of their own, such as moral hazard, in which firms that believe they will be rescued take additional risks.

Although the reported JP Morgan trading losses are too small to be a significant threat to current financial stability, they do illustrate a potential source of systemic risk. When large firms trade in markets with low volume, they may have trouble liquidating their positions without affecting market prices. Under these conditions, their losses may be much greater than their risk-management models anticipated, if the models assumed normal conditions.

Once formal rules are finalized, the Volcker Rule's prohibition of proprietary trading would apply to JP Morgan. The applicability of the rule to the reported trades would depend upon the definition of a hedge. A hedge is a trade to offset the risks of another position, or exposure to a counterparty, or another existing risk. JP Morgan has argued that the trades were used to hedge another hedge and its general portfolio. It is not clear if regulators will agree in the future that such trades will be included in hedging for purposes of the Volcker Rule.

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Introduction

Amid concerns over reported losses by units at JP Morgan Chase & Company, Congress may be concerned that the financial system as a whole may still be vulnerable to the actions of a few firms. This report provides answers to some frequently asked questions regarding systemic risk and systemic events in the financial system, and it applies these concepts to recent JP Morgan trading losses.

Systemic risk is generally used to describe the fragility of the financial system as a whole, as distinct from the risks that any single firm or market participant might face—although there are several alternative definitions of systemic risk. Yet a single firm, or a single transaction, might trigger financial instability if features of a financial system can multiply and spread losses, or cut off vital services to other sectors of the economy.

As reported at this time, the trading losses at JP Morgan are small relative to the size of the company and relative to losses from other business activities. Reportedly, one of JP Morgan's asset management units conducted hedging trades that lost money, are difficult to unwind, and are expected to lose between $2 billion and $5 billion when all is said and done. Although a $5 billion loss is much too small compared with JP Morgan's consolidated assets ($2.3 trillion) to threaten the health of the firm or the broader financial system on its own, the transactions illustrate a number of sources of systemic risk that could be significant if they existed on a larger scale.

Policymakers may wish to investigate the possibility that losses at one of the largest systemically important financial institutions (SIFIs) could directly threaten the financial condition of its business partners and counterparties, that revelations of business practices at one SIFI could indirectly threaten the financial health of similar firms through investors' fears that the practice may be widespread, that the assumptions and techniques of modern risk management may unintentionally exacerbate losses in unanticipated environments, and that regulators may not have perfected prudential oversight techniques.

This report is organized around five questions: (1) What is systemic risk? (2) What are the potential sources of systemic risk? (3) What policy options can mitigate systemic risk and do they involve risks of their own? (4) Are the recently reported trading losses at JP Morgan likely to cause a systemic event? (5) How would the Volcker Rule have affected the JP Morgan trades? Applicable changes to financial regulation made by the Dodd-Frank Act (P.L. 111-203) are discussed in the context of the questions.

I. What Is Systemic Risk?

Although there is no consensus definition of systemic risk, the Dodd-Frank Act addresses systemic risk in the context of avoiding financial instability. The act created a Financial Stability Oversight Council (FSOC), which is made up of the heads of various federal financial regulators. The FSOC describes systemic risk as follows: "Although there is no one way to define systemic risk, all definitions attempt to capture risks to the stability of the financial system as a whole, as

opposed to the risk facing individual financial institutions or market participants."[1] In this approach, systemic risk includes all potential sources of instability in the financial system, not just the failure of a single large firm. The FSOC then defines systemic risk by its negative, "A stable financial system should not be the source of, nor amplify the impact of, shocks."[2]

Systemic risk may create heightened public policy concerns because it is not in the interest of an individual financial institution to take into account the full potential costs of the risks of its own actions. Furthermore, several types of systemic risk are difficult to insure against, or hedge against, because the sources of insurance and hedging may be prone to damage during the same scenarios that expose the system to magnified losses.[3]

II. What Are Potential Sources of Systemic Risk?[4]

In theory, a single firm, person, government, financial utility, market, or policy can potentially trigger financial instability.[5] Several sources of systemic risk would only be realized if an entity were to fail to fully honor its obligations to its direct counterparties. The relatively small size of JP Morgan's reported losses makes these types of systemic risk unlikely in the present circumstances. However, some other sources of systemic risk may be realized through indirect channels, such as drastic changes in market prices faced by all market participants, or the creation of doubt and panic regarding the financial condition of similar entities.

A single entity might pose systemic risk because its contracts and relationships with others can spread and magnify shocks to the financial system. The term *domino effect* is sometimes used when interconnectedness causes the failure of one entity to result in the failure of some of its creditors and counterparties. In the unlikely event that $2 billion-$5 billion in trading losses were to cause JP Morgan to fail to honor its commitments to other firms, then the failure of one of its direct counterparties would illustrate a domino effect. JP Morgan's capital represents a source to absorb losses without failing; similarly, JP Morgan's financial market counterparties generally hold capital buffers of their own to absorb losses without failing. Thus, losses must be greater than capital buffers to spread through the domino effect channel.

Even if an entity does not fail, bad news about its assets and liabilities can trigger a panic if investors fear that others might have similarly damaged assets and liabilities. The term *contagion* is sometimes used when investors and potential creditors shy away from entities that they fear may be similar to another troubled entity. If revelations of the trading losses at JP Morgan were to

[1] Financial Stability Oversight Council, annual report, Washington, DC, July 26, 2011, p. 3, available at http://www.treasury.gov/initiatives/fsoc/Pages/annual-report.aspx.

[2] Ibid.

[3] CRS Report R40249, *Who Regulates Whom? An Overview of U.S. Financial Supervision*, by Mark Jickling and Edward V. Murphy.

[4] The list of sources of systemic risk is not exhaustive or mutually exclusive. The first four examples are taken from Federal Reserve governor Tarullo's discussion of systemic risk regulation. Governor Daniel K. Tarullo, "Regulating Systemic Risk," Speech, 2011 Credit Markets Symposium, North Carolina, Charlotte, March 31, 2011, Board of Governors of the Federal Reserve System, available at http://www.federalreserve.gov/newsevents/speech/tarullo20110331a.htm.

[5] Titles II and VIII of the Dodd-Frank Act directly address systemic risk created by individual firms and financial market utilities, respectively. Examples of financial utilities include automated payment systems and settlement systems.

raise fears that similarly risky practices were engaged in independently by Bank of America, Citigroup, or other SIFIs, then contagion could destabilize inter-bank lending markets. Because of the roles of uncertainty and panic, actual losses do not have to be greater than capital buffers to spread systemic risk through the contagion channel.

A financial utility like a settlement system or a clearinghouse can cause systemic risk if its failure eliminates the primary source for an essential financial service. The term *critical function* is sometimes used when an entity's failure results in the loss of an essential financial service with no close substitutes. JP Morgan provides a number of settlement and clearing functions for complex financial markets, such as the market for repurchase agreements. Although there are other firms that provide these services, JP Morgan's large market share raises concerns that its failure could spread systemic risk through the critical function channel.

A market can cause systemic risk if the price signal that it sends to all market participants encourages behaviors that reinforce losses under some circumstances. Collateralized debt financing may be one example. This refers to borrowing money to make an investment, and using the investment itself as collateral for the loan. (For example, a mortgage uses the house as collateral for the loan). When the market price declines, borrowers are more likely to default, yet if lenders seize the collateral to cover their losses, they will be offering more of the investment good for sale even as the price declines. The term *fire sale* is sometimes used when circumstances force someone to offer something for sale at lower prices in what they believe are temporarily depressed market conditions than they believe they could get if they could wait for what they believe are more normal market conditions. Collateralized debt financing is an example of a market that may be prone to self-reinforcing fire sales. For similar reasons these markets may be prone to price bubbles.

A policy can cause systemic risk if it increases the probability that a systemic event might occur.[6] For example, some have argued that a regulatory policy favoring mark-to-market accounting can contribute to systemic risk by increasing the likelihood of fire sales.[7] In mark-to-market accounting, firms do not report some assets on their books at historic cost; rather, they must report (mark) the value of the asset at current market prices. Critics argue that when asset prices decline, deteriorating balance sheets may force firms who face regulated leverage ratios to adjust their portfolios, perhaps by adjusting assets or trying to hoard liquidity and capital, even though in practice they have no intention of selling the assets at currently depressed prices. A rush by many firms to hoard liquidity or capital at the same time can result in financial instability.

The JP Morgan trades may raise concerns about market and policy sources of systemic risk. Reportedly, JP Morgan invested in markets that are thinly traded and prone to losses of liquidity. Reportedly, it is difficult for JP Morgan to liquidate its positions without causing prices to move disadvantageously. If so, policymakers may be concerned about the scale of participation of SIFIs in potentially illiquid markets. Similarly, policymakers may be concerned whether risk management policies inadvertently expose SIFIs to magnified losses if realized market conditions turn out to be different from the prior assumptions used in risk management calculations.

[6] A policy may be a government regulation, a private industry standard, or a generally accepted code of conduct. Any pattern of behavior that might be the source of financial instability or magnify losses through the financial system can also cause systemic risk under the FSOC definition.

[7] Mark-to-market is sometimes called fair value accounting. It is used merely to illustrate how a policy might contribute to systemic risk. Not everyone agrees that accounting played a significant role in the recent financial crisis. See CRS Report R40423, *Fair Value Accounting: Context and Current Concerns*, by Gary Shorter.

III. What Policy Options Can Mitigate Systemic Risk, and Do They Involve Risks of Their Own?

Financial markets have been prone to bouts of instability for millennia, and policymakers have struggled to create more stable environments for the financial system as a whole for as long as there are financial records. Some of the policies that have emerged include creating a lender of last resort, encouraging transparency, prudential regulation, capital requirements, deposit guarantees, size limits, and seals of approval.

Liquidity Provider and Lender of Last Resort. A lender of last resort (LOLR) is a central bank or similar institution that can lend funds in distressed financial conditions. During bouts of panic and contagion, some otherwise healthy firms may be unable to roll over their credit needs because many people try to hoard liquid assets at the same time. In the United States, the Federal Reserve has had the ability to act as LOLR since 1914. Similarly, during some fire sales of collateralized loans, the Federal Reserve can lend against good collateral so that firms do not have to sell the collateral in temporarily distressed markets. The Dodd-Frank Act limited the Federal Reserve's ability to create liquidity facilities for a single specific borrower; rather, such programs are now required to be open to financial market participants more generally.[8]

LOLR activity has potential costs. It can be difficult to distinguish healthy from unhealthy firms during times of financial distress, or to distinguish temporary asset price declines from long-run trends. Therefore, the LOLR may be assuming some of the credit risk of insolvent firms, rather than providing liquidity to temporarily illiquid firms. Similarly, the LOLR may be assuming the losses of permanently lowered collateral, rather than merely preventing fire sale prices. In addition, the existence of a LOLR might cause moral hazard, in which firms knowingly take on additional risks because they have access to emergency funds. Furthermore, the LOLR might fail to act (perhaps due to an uncertainty cited above), while its existence caused the firms to dismantle emergency funding facilities that they might have arranged in the absence of the LOLR.[9]

JP Morgan has direct access to the LOLR. JP Morgan's depository is able to borrow from the Federal Reserve's discount window and JP Morgan's broker-dealer subsidiary is in constant contact with the Federal Reserve Bank of New York's financial market activities.

Transparency. In general, greater transparency reduces systemic risk because potential counterparties will have the best available information before engaging in trades. Greater transparency can assist regulators in monitoring the interconnectedness of firms, and the characteristics of the financial system as a whole. Transparency also reduces any role that uncertainty might play in a panic. The Dodd-Frank Act increases reporting requirements for

[8] CRS Report R41384, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: Systemic Risk and the Federal Reserve*, by Marc Labonte.

[9] Many monetarists have argued that one of the reasons that the Great Depression was so intense was because the Federal Reserve failed to act as lender-of-last-resort. See Friedman and Schwartz, *A Monetary History of the United States, 1867-1960* (Princeton, N.J., Princeton University Press, 1963).

derivatives transactions and for many non-banks. It also creates the Office of Financial Research to collect and analyze financial data across firms, not just from individual firms.[10]

Under some circumstances, more information is not necessarily better. For example, the Federal Deposit Insurance Corporation (FDIC) does not release the names of the specific banks on the troubled bank list because it might cause a panic. Similarly, only limited information is provided in certain financial markets to keep the final products interchangeable. For example, if potential bidders are provided only general standards that an asset must conform to, then investors can create forward markets without specifying which specific asset must be provided. Fungibility of a class of assets may be preferred to additional information on individual assets if the combined costs of due diligence by all bidders may be greater than any gains to the winning bidder.[11] Information can also be costly to produce, collect, and analyze.

JP Morgan is subject to transparency rules of federal regulations. The firm is publicly traded and is therefore required to provide regular financial disclosures consistent with the securities laws as overseen by the Securities and Exchange Commission (SEC). The banking depository and the holding company also provide regular disclosures in the banking regulators' call and thrift reports. Under the Dodd-Frank Act, the firm also provides information to the new Office of Financial Research for data collection related to monitoring systemic risk.

Prudential Regulation. Even though systemic risk is not primarily about the risks to an individual firm, the failure of an individual firm can trigger financial instability. Therefore, regulating the portfolio of assets and liabilities of firms in the financial system may reduce systemic risk. For example, limits on the percentage of a firm's portfolio that can be in a single market, credit that the firm can extend to a single borrower, and trades that the firm can clear through a single system, can reduce the likelihood that problems in any one market, counterparty, or clearing system will spread to this firm. The United States has had prudential regulation for nationally chartered banks since 1863. The Dodd-Frank Act extends prudential regulation to non-banks that the FSOC designates as SIFIs, and increases the prudential standards for the banks that are designated as SIFIs.[12]

Prudential regulation has some potential downsides. It is costly to conduct. Prudential regulation might give the false impression that the firm cannot lose money, cannot fail, or that the government will save the firm if it fails. Prudential regulation may result in reduced credit for some activities if the regulator and the bank differ in their assessment of relevant risks.[13] Prudential regulation may fail to divert lending from risky activities if the regulator and the bank have the same assessment of relevant risks.

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[10] CRS Report R42083, *Financial Stability Oversight Council: A Framework to Mitigate Systemic Risk*, by Edward V. Murphy.

[11] One example is the forward market for certain mortgage-backed securities. See Vickery and Wright, *TBA Trading and Liquidity in the Agency MBS Market*, FRBNY Staff Report no. 468, available at http://www.ny.frb.org/research/staff_reports/sr468.pdf.

[12] CRS Report R42150, *Systemically Important or "Too Big to Fail" Financial Institutions*, by Marc Labonte.

[13] Congress has expressed concern regarding potential trade-offs in bank regulation during the recent economic recovery. Policymakers have tried to balance the need for prudent banking with the possibility that reduced credit might impede recovery. For example, the House Financial Services Committee held a hearing on mixed messages in bank regulation on August 16, 2010. See http://financialservices.house.gov/News/DocumentSingle.aspx?DocumentID=255544.

JP Morgan and its subsidiaries are subject to several prudential regulators. The banking depository is regulated for safety and soundness by the Office of the Comptroller of the Currency (OCC). The consolidated holding company is regulated for safety and soundness by the Federal Reserve. The broker-dealer subsidiary reports to the SEC. Under the Dodd-Frank Act, the clearing and settlement facilities that JP Morgan participates in for certain financial derivatives markets will be subject to regulation by the Commodity Futures Trading Commission (CFTC) and the SEC.

Capital Requirements. In this context, capital refers to the loss-absorbing position of equity, and similar instruments.[14] Capital requirements can be thought of as increasing the ability of a firm to withstand losses without failing (or increasing the resources available to the resolution authority if the firm does fail). Therefore, capital requirements make it less likely that losses will be spread through the financial system through domino effects. The Dodd-Frank Act stated that capital requirements for SIFIs could not be lower than for banks in general.[15] Since the financial crisis, the banks of the United States have increased their capital reserves significantly.

Increasing capital requirements carries some costs. Increased capital requirements will tend to reduce aggregate credit availability or increase the cost of the credit that is available.[16] Because risk-based capital can be difficult to measure, or can be sensitive to changing financial conditions, the true loss-absorbing power of a firm's capital may not be accurately portrayed by its financial disclosures. Most of the large firms that failed or were saved in distress during the financial crisis had adequate capital prior to their failure as measured by international prudential standards.

JP Morgan is subject to capital requirements. The United States participates in international forums on capital standards, but specific capital requirements for JP Morgan arise from U.S. prudential regulations. U.S. regulators have encouraged banks to increase their capital buffers since the financial crisis in 2008.

Liability Insurance and Guarantees. If creditors to a distressed firm have insurance or similar guarantees, then they are less likely to cut off credit to their counterparty. For example, individual depositors are effectively creditors to their banks, which use their short-term deposits to fund longer-term loans. If deposits are guaranteed, then depositors may be less likely to run to the bank and withdraw their funds if there are rumors of the bank's distress. Similarly, various forms of third-party guarantees can be extended to other liabilities of financial firms and utilities. During the financial crisis of 2008, bank-like runs occurred among financial liabilities other than retail deposits. In the United States, the FDIC provides deposit insurance (up to a limit) for federally insured banks and the National Credit Union Administration (NCUA) provides similar insurance for federally insured credit unions.[17]

Deposit insurance can cause moral hazard and reduce market discipline. Creditors often monitor and limit the risks taken by their counterparties. Insured creditors have less incentive to perform

[14] There are several forms of capital, which are divided into tiers. Common shareholders have equity in the firm and are the first to absorb losses. There are other financial instruments with varying abilities to absorb losses and that are rated as lower quality capital.

[15] CRS Report R41339, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: Titles III and VI, Regulation of Depository Institutions and Depository Institution Holding Companies*, by M. Maureen Murphy.

[16] CRS Report R42372, *U.S. Implementation of Basel II.5, Basel III, and Harmonization with the Dodd-Frank Act*, by Darryl E. Getter and Gary Shorter.

[17] CRS Report R41718, *Federal Deposit Insurance for Banks and Credit Unions*, by Darryl E. Getter.

such monitoring. As a result, insured institutions may take greater risks than uninsured institutions. Prudential regulation might reduce moral hazard by insured institutions and prevent them from taking additional risks.

JP Morgan's bank depository is insured by the FDIC. The FDIC does not guarantee all deposits, rather deposits are guaranteed only up to a ceiling (currently $250,000). However, in some past times of extreme financial conditions, the FDIC has expanded the scope of deposits that it was willing to guarantee.

Caps on Financial Institution Size. Policymakers could cap the size of financial institutions relative to their markets or their activities to attempt to limit some types of risk exposure of the firm and the market. In the United States, there is a cap on the percentage of the nation's deposits that a single bank may hold. There are caps on the percentage of a bank's portfolio that may be devoted to particular sectors. Some have called for applying this concept to the overall size of the firm. The Dodd-Frank Act does not cap overall firm size, but it does instruct regulators to set single counterparty credit limits for a variety of financial firms, not just banks.

A cap on firm size has potential costs. Smaller institutions are generally less diversified geographically and along business lines. As a result, economic downturns that are limited to one region or a few industries are more likely to be threats to smaller institutions.

JP Morgan's overall size is not capped, but certain subsidiaries may have their own rules. For example, the depository subsidiary is subject to the limit on the percentage of deposits that one firm can have. Other subsidiaries may be subject to anti-trust merger review should they seek to acquire another firm in the same product line, depending on the business sector and circumstances.

Seals of Approval. A seal of approval is an independent measure of asset quality. During some systemic events, market participants may be unable to distinguish high quality assets from low quality assets. As a result, they might flee from all assets in that class, causing fire sales or drastic price declines. A third party can reduce systemic risk if its seal of approval helps reassure market participants that the asset they are considering purchasing is of high quality. Credit rating agencies, such as Moody's and S&P, are examples of seals of approval. The Dodd-Frank Act created an office within the SEC to oversee credit rating agencies.[18]

Relying on seals of approval has potential disadvantages. If the financial system becomes reliant on third party approvals, then damages to the reputation of the ratings agencies themselves can cause financial distress for a broad asset class.[19] Similarly, the ratings agencies may be susceptible to the same misperceptions (use the same imperfect models and data) as other market participants. The ratings agencies might also have informal power because so many market participants desire high ratings. If the government offers its own seals of approval, it raises the question of its potential obligations, if only informal, if it also makes mistakes.

[18] CRS Report R41503, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: Title IX, Investor Protection*, by Rena S. Miller.

[19] CRS Report R40173, *Causes of the Financial Crisis*, by Mark Jickling.

IV. Are the Recently Reported Trading Losses at JP Morgan Likely to Cause a Systemic Event?

Although there are a number of channels through which trading losses in general may result in a systemic event, details available to this point do not suggest that the reported JP Morgan transactions are likely to do so. Before applying concepts of systemic risk, it may be useful to provide a very general overview of the JP Morgan transactions.

The Recent JP Morgan Transactions. Exact details of the trades are not available at this time.[20] Reportedly, one of JP Morgan's units invested in a combination of securities that depended on trends in general economic conditions. JP Morgan invested in an index that tracked a basket of corporate bonds in the near term, at the same time that the unit invested in a similar basket over a longer time horizon. The trades were reportedly structured so that if general economic conditions improved in the near term, then the default risk of the underlying bonds would decline, and JP Morgan would make money. However, if perceptions of near-term conditions deteriorated, then JP Morgan would lose money.

The size of the losses reported thus far is small relative to JP Morgan's total assets and total stockholder equity. Although exact losses cannot be known until the JP Morgan position is fully liquidated, press reports suggest that the losses could be in the $2 billion-$5 billion range when all is said and done. In comparison, JP Morgan reports total assets of $2.3 trillion and total stockholder equity of $184 billion as of December 31, 2011.[21] The losses are also small in relation to the assumptions in the Federal Reserve's recent stress tests, which are designed to evaluate the resilience of financial institutions under various scenarios. The Fed's stress test for JP Morgan assumed $56 billion in loan losses in addition to assuming $28 billion in losses in transactions similar to the reported $2 billion-$5 billion transactions. JP Morgan passed the stress test.[22]

Systemic Risk Applied to Recent JP Morgan Trading Losses

Sudden Market Illiquidity and Fire Sales. As reported, the JP Morgan transactions demonstrate how changes in market liquidity and firm size can affect asset prices. As reported, at least some of the markets in which JP Morgan traded have a relatively low volume of trades. This means that the market is prone to bouts of illiquidity, especially if one firm's size dominates either the sellers or the buyers. Reportedly, because JP Morgan's position was so large, other traders were able to identify JP Morgan's position. The size of JP Morgan's position caused prices to move disadvantageously as the firm tried to unwind its trade. Therefore, the losses that JP Morgan actually experiences might ultimately be larger than the firm's risk models estimated if the firm

[20] The following description is taken from press reports. At this time, Federal regulators with oversight of JP Morgan's asset management unit have not confirmed the details as reported in newspapers. See "J.P. Morgan Struggles to Unwind Huge Bets," Gregory Zuckerman and Scott Patterson, *Wall Street Journal*, May 18, 2012. Available at http://online.wsj.com/article/SB10001424052702303879604577412613778263918.html?mod=WSJ_hp_LEFTWhatsNewsCollection.

[21] JP Morgan, Mergent Online, derived from JP Morgan 10-K filings with the SEC, available at http://investor.shareholder.com/jpmorganchase/sec.cfm.

[22] The Federal Reserves stress tests assumed that the losses would be in even more challenging conditions, including a 40% drop in JP Morgan income. See "Methodology and Results for Stress Scenario Projections," Federal Reserve, March 16, 2012 , available at http://www.federalreserve.gov/newsevents/press/bcreg/20120313a.htm.

had assumed that asset prices would stay in the historically liquid realm. At the time of this writing, it does not appear that the sudden loss of liquidity in the market for this index has transmitted distress to other firms trading in the same index, or triggered fire sales.

Dominoes. If the size of JP Morgan's losses remains in the range reported thus far, it is unlikely that there will be a domino effect because it is unlikely that JP Morgan will fail to honor its own commitments. That is, $2 billion-$5 billion in trading losses are unlikely to cause JP Morgan to fail given that the policymakers believe that JP Morgan can survive more than $80 billion in combined losses while suffering a 40% drop in income. However, if the size of the losses is many times larger, or if there are a great many heretofore undisclosed similar trades, then it is in theory possible that JP Morgan could fail, and that its failure would start a chain reaction among its counterparties.

Contagion. Has the trading at JP Morgan transmitted information about similar trades and assets at other large financial firms? Thus far, markets seem to believe that the losses that JP Morgan is experiencing in this trade are unique to JP Morgan. However, it is possible in theory that investors might shun large financial firms if they feared that they took large positions similar to JP Morgan's. However, other than embarrassment and criticism of trading strategies, there has not been evidence of contagion to other financial institutions.

Loss of a Critical Function. Thus far, there has not been any loss of a critical function due to the reported trades. For example, there are no reports that JP Morgan has failed to execute any repurchase agreements because of the trading losses.

V. How Would the Volcker Rule Affect the Reported Trades?

The Volcker Rule is a common name for Section 619 of the Dodd-Frank Act, which limits the ability of depository banks and certain large nonbanks to engage in proprietary trading or affiliate with speculative investment firms.[23] The Volcker Rule attempts to limit the amount of risk that insured banking depositories can take in financial markets.

The Volcker Rule applies to "banking entities," which covers depositories, their holding companies, and all the affiliates in the financial or bank holding company.[24] JP Morgan is a financial holding company and therefore subject to Section 619. (SIFIs that are not bank holding companies may engage in proprietary trading but will be subject to additional regulations, such as capital requirements.) Therefore, the only question is whether the reported trades would qualify for an exemption under Section 619. A legal interpretation of that question is beyond the scope of this report, but the following discussion addresses the purported policy goals of the Volcker Rule.

[23] "The Volcker Rule" Daniel Tarullo, Testimony before the Subcommittee on Capital Markets and Government Sponsored Enterprises: Committee on Financial Services, U.S. House of Representatives, January 18, 2012, available at http://www.federalreserve.gov/newsevents/testimony/tarullo20120118a.htm.

[24] CRS Report R41298, *The "Volcker Rule": Proposals to Limit "Speculative" Proprietary Trading by Banks*, by David H. Carpenter and M. Maureen Murphy.

Proprietary trading refers to taking a position for one's own account.[25] For example, when an average person buys or sells a stock or a fund for their retirement account, that person is proprietary trading in the stock. However, banks and other financial intermediaries sometimes trade for the account of their customers. These customer-driven trades are not proprietary trading. In addition, banks sometimes trade to hedge other risks or comply with prudential regulations. Section 619 exempts certain hedges and other prudential trades from the ban on proprietary trading. The financial regulators have not finalized their interpretation of Section 619, and even if they had, firms would have until July 2014 to comply, therefore it is impossible to know if the JP Morgan trades would be exempt from the Volcker Rule.

In addition, one of the exemptions provided in Section 619 is for trades that are intended to reduce the risks of the bank. Specifically, Section 619 (d)(1)(C) exempts "risk-mitigating hedging activities in connection with and related to individual or aggregated positions, contracts, or other holdings of a banking entity that are designed to reduce the specific risks to the banking entity in connection with and related to such positions, contracts, or other holdings."

The proposal by regulators to implement the Volcker Rule establishes a number of criteria to qualify for the risk-mitigating hedging exemption. In general, the criteria attempt to assure that a proposed trade is being used to offset a bank's existing portfolio, not take advantage of perceived new speculative opportunities. Among the qualifications, the banking entity must already be exposed to the risk being hedged, that the hedge not earn appreciably more profits than the firm would lose on the hedged position, and that the hedge be reasonably correlated to the risk being hedged.

Some critics argue that the proposed rule is too permissive and will fail to prevent speculative trading. They argue that a large and complex banking organization will likely be able to justify almost any speculative trade as being "reasonably correlated" to other positions held by the institution. Critics argue that the definition of hedge should be narrowed and that firms should not be able to justify trades by reference to the general condition of the banking entity.

Other critics argue that the proposed rule is too strict and will prevent legitimate hedging activities. They point out that prudential hedging must address a variety of risks, not just the risk of individual assets. For example, when a bank provides a loan commitment to an industrial manufacturer, the bank is exposed to counterparty risk (the risk that the manufacturer will default); interest rate risk (the risk that interest rates will move in a disadvantageous direction during the period of the loan commitment); and a number of other risks. These critics point out that the natural diversification of large portfolios makes measuring risk more complex. In this view, firms should be able to use hedging strategies to address residual risks after a portfolio is netted, which might not be easy to document to satisfy the qualifications in the proposed rule.

JP Morgan argues that their trades were hedges to address potential losses in other parts of their balance sheet. Without more details, and because the ultimate regulatory interpretation of the Volcker Rule is not final, it is not possible to authoritatively analyze JP Morgan's assertion. However, there are several questions that can be asked: Will the regulatory agencies consider a trade designed to gain or lose based on general economic conditions a hedge? If a firm's strategy

[25] The proposed rule to implement section 619 is not final. See "Prohibitions and Restrictions on Proprietary Trading and Certain Interests in, and Relationships With, Hedge Funds and Private Equity Funds," Proposed Rules, Federal Register, vol. 76, no. 215, November 7, 2011, p. 68846, available at http://www.fdic.gov/regulations/laws/federal/2011/11proposedNov7.pdf.

makes money when general economic conditions deteriorate, is that a hedge? If a firm has one hedge that unexpectedly increases its exposure, may it conduct a counter-hedge, which would otherwise not be permissible?

The implications of the JP Morgan trades for the final implementation of the Volcker Rule may be inconclusive. On the one hand, the trading losses demonstrate that complex trading strategies by large banks are subject to unexpected bouts of illiquidity and larger-than-expected losses. If so, then perhaps a stricter interpretation of the Volcker Rule is warranted. On the other hand, the trades demonstrate that a strategy that was initially a hedge can change positions in an evolving market, and that an otherwise pro-cyclical trade might actually be a hedge under the changed conditions. If so, then a looser interpretation of the Volcker Rule may be more prudential.

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