

SECURITIZATION, LIQUIDITY AND MARKET FAILURE*

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The Winter of 2007-2008 may prove to be a winter of discontent in global financial markets. Initially the United States subprime mortgage problem created an insolvency problem for major underwriters as the exotic financial instruments that they created as mortgage backed assets lost liquidity and market value. This problem has proved contagious as it has started to spill over to other markets such as the auction-rate securities market and the credit default swap markets that are failing. The auction rate markets, which had seen few failures in recent years, suddenly experienced over a thousand failures in the early months of 2008. What has caused this contagion to spill over and cause this tremendous increase in market failures?

The answer is simple. This problem has developed as economists and market participants have forgotten Keynes's liquidity preference theory [hereafter LPT] and have, instead swallowed hook, line, and sinker the belief that the classical efficient market theory [hereafter EMT] is a useful model for understanding the operation of real world financial markets. The EMT suggests that all one has to do is to bring informed buyers and sellers together in an unregulated, free financial market and the market price will always adjust in an orderly manner to the market clearing price where the latter is based on market "fundamentals".

In the pre- computer age, financial markets required buyers and sellers to be represented by dealers who would meet in a physical location (e.g.,the stock market) to trade. Members of these stock exchanges recognized that at any given moment of the trading day, there may be a problem of getting a sufficient number of bone fide buyers and sellers together to maintain a well-organized and orderly market. It was, therefore, necessary to adopt financial market rules that required all market participants to deal only with authorized broker-dealers that were

permitted to execute trades in the market. The broker-dealers acted as fiduciary agents to place orders with other members of the stock exchange, sometimes called “specialists”. Each specialist kept the books on all buy and sell orders for a specific security at any price. If, for example, at any time during the trading day, the number of sellers heavily outweighed the number of buyers at any price that changed in an orderly manner from the previous trade price, then the specialist was expected to act as a “market maker” and buy on his/her own account in order to try to maintain orderliness (and vice versa if buyers heavily exceeded sellers) . Orderliness is a necessary condition to convince holders of the traded asset that they can readily liquidate their position at a market price close to the last publically announced price. In other words, orderliness is necessary to maintain liquidity in these markets.

Modern financial efficient market theory suggests that these quaint institutional arrangements for market maker specialists are antiquated in this computer age. With the computer and the internet, it is implied that the meeting of huge numbers of buyers and sellers can be done rapidly and efficiently in virtual space. Consequently there is no need for humans to act as specialists who keep the books and also make the market when necessary to assure the public the market is well organized and orderly. The computer can keep the book on buy and sell orders, matching them in an orderly manner, more rapidly and more cheaply than the humans who had done these things in the past.

Underlying this EMT of financial markets is the presumption that the value of traded financial assets is already predetermined by today’s market “fundamentals” (at least in the long run¹). Or, as former U.S. Treasury Secretary and Harvard Professor Lawrence Summers [Summers and Summers, 1989, p. 166, emphasis added] has written regarding financial markets “the ultimate social functions are spreading risks, guiding investment of scarce capital, and processing and dissemination the information possessed by diverse traders....prices always reflect fundamental values The logic of efficient markets is compelling”.

In the many financial markets that have already failed in the Winter of 2007-2008 (e.g.,

the markets for mortgage backed assets, auction rate securities, and credit debt swaps), the underlying financial instruments that were to provide the future cash flow for investors typically were long term debt instruments such as mortgages, or long-term corporate or municipal bonds. A necessary condition for these markets to be efficient is that the probabilistic risk of the debtors to fail to meet all future cash flow contractual debt obligations can be ‘known’ with actuarial certainty. With this actuarial knowledge, it can be profitable for insurance companies to provide holders of these financial assets with insurance guaranteeing solvency and the payment of interest liabilities by the debtors.

In the EMT, any observed market price variation around the actuarial value (price) of the traded liquid assets representing these debt instruments in the aforementioned markets is presumed to be statistical “white noise”. Any statistician will tell you, if the size of the sample increases, then the variance (i.e., the quantitative measure of the white noise) decreases. Since computers can bring together many more buyers and sellers globally than the antiquated pre computer market arrangements, therefore, the size of the sample of trading participants in the computer age will rise dramatically. If, therefore, you believe in the EMT, then permitting computers to organize the market will decrease significantly the variance and therefore increase the probability of a more well organized and orderly market than existed in the pre-computer era.

Consequently, EMT advocates such as Summers suggest that the spreading of probabilistic risks for holders of these assets is much more efficient while the cost of each transaction is diminished significantly. Underlying the EMT is a fundamental axiom, the ergodic axiom. This axiom presumes there exists an unchanged probability distribution governing past, present, and future events. If one accepts the ergodic axiom, then as Summers states “The logic of efficient market theory is compelling”.

For believers in EMT, the presumption that there is a plethora of market participants buyers and sellers that can be collected by a computer assures that the assets being traded are very liquid. In a world of efficient financial markets, holders of market traded assets can readily

liquidate their position at a price close to the previously announced market price whenever any holder wishes to reduce his/her position in that asset. If the EMT theory is applicable to our world, then how can we explain so many securitized financial markets failing in the sense that “investors are finding themselves locked into investments they can’t cash out of” (Wall Street Journal, 2008, p. D1)?

Keynes’s LPT can provide the explanation. LPT presumes that the economic future is uncertain. Consequently, the classical ergodic axiom² that is fundamental to any efficient market theory is not applicable³ to real world financial markets. Keynes’s analysis presumes that, in the real world of experience, the macroeconomic and financial systems are determined by a nonergodic stochastic system. In a nonergodic world, current or past probability distribution functions are not reliable guides to the probability of future outcomes [Davidson, 1982-3, 2007]. If future outcomes can not be reliably predicted on the basis of existing past and present data, then there is no actuarial basis for insurance companies to provide holders of these assets protection against unfavorable outcomes. Accordingly, it should not be surprising that insurance companies that have written policies to protect asset holders against possible unfavorable outcomes resulting from assets traded in these failing securitized markets find they have experienced billions of dollars more in losses than the companies had previously estimated. [Morgenson, 2008]. In a nonergodic world, it is impossible to actuarially estimate insurance payouts in the future.

In our world of (nonergodic) uncertainty, the primary function of financial markets that trade in resalable assets is to provide liquidity [see Davidson, 2007, chapter 7]. The degree of liquidity of the assets traded in any organized market will be enhanced by the existence of a credible market maker. A market maker is someone who attempts to create public confidence in the belief that there will always be an orderly resale market. In other words, in a market where a market maker exists holders of the asset can be reasonable confident that they can always execute a fast exit strategy and liquidate their position in the asset easily at a market price that is very

close to the last publically recorded price. In essence, the market maker suggests to holders that if buyers do not appear to purchase offered securities at an orderly decline in price, then the market maker will make his/her best efforts to maintain orderliness even if this requires the market maker to buy, for his/her own account, the securities offered for sale. If the market maker can not support his/her assurance with sufficient cash when a cascade of sell orders come onto the market, then the market will fail, and the asset becomes virtually illiquid as trading will be suspended until the market maker can rally enough additional support for the buyers's side of the market to reinstate orderliness.

In other words, in our world of nonergodic uncertainty, for an orderly liquid resale market to exist, there must be a "market maker" who assures the public that he/she will swim against any rip-tide of sell orders. The market maker must therefore be very wealthy, or at least have access to significant quantities of cash if needed. Nevertheless, any private market maker could exhaust his/her cash reserve in fighting against a cascade of sell orders from holders. Liquidity can be guaranteed under the most harshest of market conditions only if the market maker has easy direct or indirect access to the Central Bank to obtain all the funds necessary to maintain financial market orderliness. Only market makers having such preferred access to the Central Bank can be reasonably certain they always can obtain enough cash to stem any potential disastrous financial market collapse.

An interesting illustration of this occurred on the days following the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001. As the World Trade Center buildings collapsed there was a great fear that the public's confidence in New York financial markets and the U.S. government would also collapse. To maintain confidence in the government bond market, in the two days following the attack the Federal Reserve pumped \$45 billion into the banking system. Simultaneously, since the primary bond dealers in New York tend to "make" the government bond market, "to ease cash concerns among primary dealers in bonds — which include investment banks that aren't able to borrow money directly from the Fed — the Fed on

Thursday [September 13, 2001] snapped up all the government securities offered by dealers, \$70.2 billion worth. On Friday it poured even more into the system, buying a record \$81.25 billion of government securities” [Raghaven, Pulliman and Opdyke, 2001, p. A1]. In effect, these actions of the Federal Reserve removed securities from the general public by making liquidity available to financial intermediaries who would make the market by purchasing all government bonds offered by members of the general public who wanted to make a fast exit.

Furthermore, The Wall Street Journal reported that just before the New York Stock Exchange reopened on September 17 for the first time since the attack, investment banker Goldman Sachs, loaded with liquidity due to Fed activities, phoned the chief investment officer of a large mutual fund group to tell him that Goldman was willing to buy any stocks the mutual fund managers wanted to sell. The Journal notes that, at the same time, corporations “also jumped in, taking advantage of regulators’ newly relaxed stock buyback rules” [Raghaven, Pulliman, and Opdyke, 2001, p. 1. These corporations bought back securities that the general public had held, thereby making the market for their securities by propping up the price of their securities.

In a more recent case, on March 13, 2008, the Federal Reserve worked out a deal via J.P. Morgan Chase to provide Bear Stearns with a loan against which Bear Stearns pledged as collateral its basically illiquid mortgage backed securities. This permitted Bear to avoid having to dump securities on an already set of failing markets in an attempt to obtain enough liquidity to meet Bear’s “repo” loans obligations due on March 14. Accordingly, Bear has gained some breathing room and the selling pressure on financial markets are, at least temporarily, relieved. J. P. Morgan was the conduit for the loans to Bear because Morgan has access to the Federal Reserve’s discount window and it is supervised by the Federal Reserve. Nevertheless, it was obvious on March 13 that if Bear Stearns fails and the collateral is insufficient to cover the loan, the Federal Reserve and not J. P. Morgan will take the loss.

On the (Sunday) evening of March 16, the Federal Reserve and J. P. Morgan announced

that J.P. Morgan would buy Bear for the fire sale price of \$2 per share. (Bear shares had closed at \$30 per share on Friday March 14.) The Fed also agreed to lend up to \$30 billion to J. P. Morgan to finance the illiquid assets it inherits from the purchase of Bear. In essence the Fed is acting almost like the Resolution Trust Corporation (RTC) that dealt with the illiquid assets of insolvent Savings and Loan banks in the 1989 S&L insolvency crisis⁴ by preventing J. P. Morgan from having to dump Bear assets on the market to obtain cash to meet the Bear obligations that J. P. Morgan inherited...

The post September 11, 2001 activities of the Federal Reserve flooding the banking system directly and other financial institutions indirectly with liquidity vividly demonstrate that the Monetary Authority can either directly or indirectly make the market by reducing the outstanding supply of securities available for sale to the general public. The public could then satisfy its increased bearishness tendencies by increasing its money holdings without depressing the spot market price for financial assets in a disorderly manner. Until, and unless, the public's increase in bearishness recedes, the Monetary Authority and the market makers can hold that portion of the outstanding liquid assets that the public does not want to own.

In sum, although the existence of market maker provides, all other things being equal, a higher degree of liquidity for the traded assets, this assurance could dry up in severe sell conditions unless the Monetary Authority is willing to take direct action to provide resources to the market maker or, even indirectly to the market. If the market maker runs down his/her own resources and is not backed by the Monetary Authority indirectly, the asset becomes temporarily illiquid. Nevertheless, the asset holder "knows" that the market maker is providing his/her best effort to search to bolster the buyers's side and thereby restore liquidity to the market.

In markets without a market maker , on the other hand, there can be no assurance that the apparent liquidity of an assets can not disappear almost instantaneously. Moreover, in the absence of a market maker, there is nothing to inspire confidence that someone is working to try to restore liquidity to the market.

Those who suggest that one only needs a computer-based organization of a market are assuming the computer will always search and find enough participants to buy the security whenever there was a large number of holders who would want to sell. After all, the “white noise” of buyers and sellers at prices other than the equilibrium price in efficient markets is assumed to be normally distributed. Hence, by assumption, there can never be a shortage of participants on one side or the other of financial markets.

With the failure of thousands of auction-rate security markets in the first weeks of February 2008, it should be obvious that the computers failed to find sufficient buyers. Moreover the computer is not programmed to automatically enter into failing markets and begin purchasing when almost everyone wants to sell at, or near, the last market price. The investment bankers who organize and sponsor the auction rate securities markets (and many other securitized markets) will not act as market makers. These bankers may engage in “price talk” before the market opens⁵ to suggest to their clients what the probable range of today’s market clearing price is likely to be. These “price talk” financial institutions, however, do not put their money where their mouth is. They are not required to try to make the market if the market clearing price is significantly below their “price talk” estimate.

Nevertheless there are many reports that representatives of these investment bankers have told clients that the holding of these assets “were ‘cash equivalents’” (Kim and Amand, 2008). Many holders of auction rate securities believed their holdings were very liquid since big financial institutions such as Goldman Sachs, Lehman Brothers, Merrill Lynch, etc were the dealers who organized the markets and normally provided “price talk”. In an article in the 2/15/2008 issue of the New York Times it was reported: “Some well-heeled investors got a big jolt from Goldman Sachs this week; Goldman, the most celebrated bank on Wall Street, refused to let them withdraw money from investments that they considered as safe as cash.... Goldman, Lehman Brothers, Merrill Lynch, etc. have been telling investors the market for these securities is frozen – and so is their cash”. (Anderson and Bajaj, 2008, p. D4)

Obviously, participants in the market believed they were holding very liquid asset. Nevertheless, the absence of a credible market maker has shown these assets can easily become illiquid! Had these investors learned the harsh realities of Keynes's LPT, instead of being seduced by the dolce tones of EMT Sirens, they might never participated in markets whose liquidity could be merely a fleeting mirage. Should not U.S. security laws and regulations provide sufficient information, so investors could have made such an informed decision?

POLICY

The policy response to the financial market failings we are experiencing can be broken into two parts. First, what can be done to prevent future reoccurrences of this widespread failure of public financial markets?. Secondly, what, if anything can be done today to limit any depressing effects of the current credit crunch developing in these securitized financial markets.

The question of prevention is the easier of the two to answer.

According to the web page of the United States Securities and Exchange Commission (www.sec.gov)

“The mission of the U.S. Securities and Exchange Commission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.” The SEC Web page then goes on to note that the Securities act of 1933 had two basic objectives: “require that investors receive financial and other significant information concerning securities being offered for public sales, and prohibit deceit , misrepresentations, and other frauds in the sale of securities”

The SEC regulations typically apply to public financial markets where the buyer and the seller of an asset do not ordinarily identify themselves to each other. In a public financial market each buyer purchases from the impersonal marketplace and each seller sells to the impersonal market. It is the responsibility of the SEC to assure investors that these public markets are orderly.

In contrast, a private financial market would be where both the buyer and the seller of the any financial asset are identified to each other. For example, bank loans are typically a private

market transaction that would not come under the purview of the SEC. Normally there is no resale market for securities created in private financial markets. The issued asset from a transaction in private a market traditionally has been an illiquid asset.

On its web page, The Securities and Exchange Commission also declares that:“As more and more first-time investors turn to the markets to help secure their futures, pay for homes, and send children to college, our investor protection mission is more compelling than ever”. Given the current experience of contagious failed and failing public financial markets, it would appear that the SEC has been lax in pursuing its stated mission of investor protection. Accordingly the United States Congress should require the SEC to enforce diligently the following rules:

1. Public notice of potential illiquidity for public markets that do not have a credible market maker. In the last quarter of a century, large financial underwriters have created public markets , which, via securitization, appeared to convert long term debt instruments (some of them very illiquid, e.g., mortgages) into the virtual equivalent of high yield, very liquid money market funds and other short term deposit accounts. As the newspaper reports that we have cited indicate, given the celebrated status of the investment bank-underwriters of these securities and the statements of their representatives to clients, individual investors were led to believe that they could liquidate their position at a orderly change in price from the publically announced clearing price of the last public auction.

This perceived high degree of liquidity for these assets has now proven to be illusionary. Purchasers might have recognized the potential low degree of liquidity associated with these assets if the buyers were informed of all the small print regarding market organization. In markets such as the auction rate security markets, for example, although the organizer-underwriter could buy for their own account, they were not obligated to maintain an orderly market. Since the mandate of the SEC is to assure orderly public financial markets, and “require that investors receive financial and other significant information concerning securities being offered for public sales, and prohibit deceit , misrepresentations, in the sale of securities”, it is

would seem obvious that all public financial markets that are organized without the existence of a credible market maker should, either (1) be shut down because of the potential for disorderliness, or (2) at a minimum, information regarding the potential illiquidity of such assets should be widely advertised and made part of essential information that must be given to each purchaser of the asset being traded.

The draconian action suggested in (1) above is likely to meet with severe political resistance, as the financial community will argue that in a global economy with the ease of electronic transfer of funds, a prohibition of this sort would merely encourage investors looking for higher yields to deal with foreign financial markets and underwriters to the detriment of domestic financial institutions and domestic industries trying to obtain capital funding.

Elsewhere, I have proposed [Davidson (2007)] an innovative international payments system⁶, that could prevent US residents from trading in foreign financial markets that the U.S. deemed detrimental to American firms that obeyed SEC rules while foreign firms did not follow SEC rules. If, however, we assume that the current global payments system remains in effect, and there is a fear of loss of jobs and profits for American firms in the FIRE industries, then the SEC could permit the existence of public financial markets without a credible market maker as long as the SEC required the organizers of such markets to clearly advertise the possible loss of liquidity that can occur to holders of assets traded in these markets.

A civilized society does not believe in “caveat emptor” for markets where products are sold that can have terribly adverse health effects on the purchaser. Despite the widespread public information that smoking is a tremendous health hazard, government regulations still require cigarette companies to print in bold letters on each package of cigarettes the caution warning that “Smoking can be injurious to your health”. In a similar manner, any purchases on an organized public financial market that does not have a credible market maker can have serious financial health effects on the purchasers. Accordingly, the SEC should require the following warning to potential purchasers of assets traded in a market without a credible market maker: **“This market**

is not organized by a SEC certified credible market maker. Consequently it may not be possible to sustain the liquidity of the assets being traded. Holders must recognize that they may find that their position in these markets can be frozen and they may be unable to liquidate their holdings for cash.”

Furthermore, the SEC should set up strictly enforced rules regarding the minimal amount of financial resources relative to the size of the relevant market that an entity must possess in order to be certified as a credible market maker. The SEC will be required to re-certify all market makers periodically , but at least once a year.

To the extent that mutual fund managers who deal with the public wish to participate in financial markets that operate without a SEC certified credible market maker, then the fund manager must set up a separate mutual fund that only deals in such securities. These specific mutual funds must advertise in bold letters the aforementioned warning – and this warning must be repeated to every investor any time he/she makes an investment in these mutual funds as well as every time the investor receives a statement either electronically or by regular mail of his/her position in the specific mutual fund.

2. Prohibition against securitization that attempts to create a public market for assets that originated in private markets - The SEC should prohibit any attempt to create a securitized market for any financial instrument or a derivative backed by financial instruments that originates in a private financial market (e.g., mortgages, commercial bank loans, etc)

3 Congress should legislate a 21 century version of the Glass Steagall Act. The purpose of such an act should force financial institutions to be either an ordinary bank lender creating loans for individual customers in a private financial market, or an underwriter broker who can only deal with instruments created and resold in a public financial market.

What can be done to mitigate the depressing consequences of the current financial mess? In two earlier papers [Davidson, 2008a, 2008b], I proposed (1)the creation of a 21st century equivalents of the Roosevelt era Home Owners Loan Association (HOLC), and the Bush I

Administration's Resolution Trust Company (RTC) to alleviate the United States housing bubble crisis and to prevent potential massive insolvency problems, and the (2) the need for massive infusions in cash for financial institutions that are too big to fail.

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NOTES

*I am grateful for many useful comments by Peter L. Bernstein on an earlier draft of this paper. I am solely responsible for the contents of this draft.

- 1..If the EMT is buttressed by the assumption of rational expectations, then expectations about the long run assure that short run market prices do not get far out of line with their long run “fundamentals” determined price.
- 2..In deterministic economic models the ordering axiom plays the same role that the ergodic axiom does in probabilistic efficient market models
- 3... The ergodic axiom asserts that past and current probability distributions determine the probability distribution that governs any future market price outcome. Accordingly, the future is never uncertain, it is only probabilistically risky but technically insurable against probabilistically risky outcomes. The association of Keynes’s concept of uncertainty with the a nonergodic economic environment was first developed by Davidson [1982-3]. For the latest discussion see Davidson [2007, pp. 30-35, 102-3, 110-112]
4. The need for a revived Resolution Trust Company to help solve the financial market crisis that was initiated with the sub prime mortgage problem was emphasized in my earlier paper on “How to Solve the U.S. Housing Mess And Avoid A Recession: A Revised HOLC and RTC” [Davidson, 2008a].
- 5.. Before the day’s auction begins, the investment banker will typically provide “price talk” to their clients indicating a range of likely clearing rates for that auction. This range is based on a number of factors including the issuer’s credit rating, the last clearance rate for this and similar issues, general macroeconomic conditions, etc.
- 6.. My proposed international payments system is a variant of the Keynes Plan that was presented by Keynes at the Bretton Woods conference in 19 44 and rejected by the United States.