SECURITIES LENDING REVISITED

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Summary

In the fall of 2008 Securities Lending programs came under increased scrutiny from institutional investors. At that time NEPC published our outlook on Securities Lending programs focusing on the factors underpinning the crisis and our future expectations for securities lending in institutional portfolios. In the last two years since the collapse of Lehman Brothers in September 2008 a cascade of events helped illuminate the embedded risks within the majority of securities lending programs. The purpose of this paper is to revisit our original comments, to provide further guidance on securities lending programs and to develop a framework which investors can use to help inform their decisions surrounding securities lending program structure.

Securities lending providers who offered a more conservative approach came through September 2008 and the ensuing credit crisis unscathed, but the vast majority of assets in securities lending programs experienced significant hardships including mark-to-market pricing pressure, reduction in liquidity and, in some cases, permanent loss of capital. Today, however, many of the problems investors faced over the last two years are beginning to abate with most providers having lifted withdrawal restrictions on both direct as well as indirect lending programs (or those which are embedded in index funds).

While there is no single right answer for each investor, in aggregate NEPC has maintained our positioning throughout the crisis that securities lending programs do continue to be a "viable activity for institutional investors when viewed within the same risk and return framework which governs all investment decisions."[1] In this paper we outline a process by which investors can evaluate whether or not securities lending has a place within their portfolio and how best to structure their programs giving consideration to liquidity concerns, risk tolerance and earnings requirements. There are a number of challenges involved in the evaluation of risks within a securities lending program and we recognize this may reduce the overall utility of the incremental value added to some programs resulting in the likely conclusion that some investors will seek to exit securities lending while others may seek to capitalize on the opportunity this reduction in lendable assets could create. NEPC has maintained ongoing contact with all the major lending agents throughout the crisis and stands ready to assist clients with this evaluation process.

Update on 2008 Paper

In October 2008, NEPC published our outlook on the issues facing the securities lending industry and what its future may look like. At that time the troubles in the securities lending marketplace were just surfacing. The Lehman Brothers default impacted programs in two primary ways. First, as a large counterparty, many clients had securities

1. Reichert, James. "Securities Lending Program Outlook." NEPC.com. NEPC, LLC, October 2008.

on loan to Lehman at the time of their default. Most clients are indemnified against borrower default risk by their lending agents and in fact the industry showcased its ability to effectively deliver on the indemnification. The industry in aggregate proceeded with an orderly buy-in process of securities not returned and, therefore, most clients were not adversely impacted by Lehman holding their securities at the time of their default. Secondly, and more painfully, some clients had exposure to unsecured Lehman Brothers debt within their collateral reinvestment pools. This exposure is not covered by the previously mentioned indemnification. In these cases clients experienced losses since a default results in a smaller amount of assets than required to adequately collateralize all of their securities on loan. This imbalance can only be rectified through an infusion of capital resulting in client losses. The Lehman default, however, was not the only stress on the collateral reinvestment pools. Many pools invested in Asset Backed Securities (ABS) since their floating rate structure is an attractive feature for cash collateral reinvestment pools. It was in the ABS asset class where many pools had exposure to the rapidly deteriorating real estate market through Residential Mortgage Backed Securities (RMBS) and structured investment vehicles (SIVs), including exposure to the lower quality credits in the sub-prime market. Certainly, there were a number of Asset Backed Securities that were (and continue to be) strong credits; however, the lack of discrimination by investors in both the finance and structured product markets caused spreads to widen across all similar instruments. The combination of defaulted bonds and reduced market value for what in many cases were "money-good" instruments resulted in the NAVs of large collateral reinvestment pools to fall significantly below $1.00, with some falling as low as 90-92 cents.

RECENTLY, MANY LENDING AGENTS HAVE BEGUN TO LIFT THE GATES ON THEIR PROGRAMS

As many institutional investors are painfully aware, there were a number of actions taken by securities lending agents across the industry in response to this situation. While certainly losing money through their exposure to defaulted bonds was the most impactful, it seems the greatest amount of pain and misunderstanding was related to the actions taken by many lending agents to impose gates on their collateral pools. To illustrate the Asset / Liability structure of a securities lending program and why these gates were necessary, please see the Appendix for a straightforward example.

Recently, many lending agents have either begun to lift the gates on their programs or begun the process of delineating a detailed plan to do so. Some programs have had capital injected from their parent companies to offset some of the realized and unrealized losses in the pools; others have opportunistically sold securities with stressed valuations at improved prices relative to September 2008 in order to reduce exposures. Many of the ABS positions have indeed increased in value but the pricing in the marketplace has not yet allowed for a full recovery of current valuations back to par. The primary reason for the sustained stressed pricing is tied to the higher spread demanded by the market to compensate for two key risks. First an environment of continued elevated credit risk and also the risk of principal prepayments slowing further on the RMBS securities causing their maturity to extend (extension risk). Because of these ongoing pressures many pools are still showing reduced NAVs at this time. In these cases, providers are working with clients to determine equitable treatment across participants, while acknowledging a client's need to access liquidity.

Securities Lending Program Recommendation

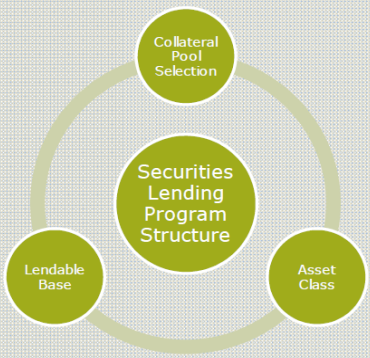
Many investors received quite an education on the practice of securities lending over the last two years, but much of this education was in an environment of stressed liquidity, stressed valuations, and stressed investors. This tense atmosphere was not one that was conducive to making sound

long-term investment decisions. NEPC advocated proceeding cautiously in late 2008 to avoid making hasty decisions resulting in the realization of what were then unrealized losses. The market recovery in many assets held in cash collateral pools has validated this overall thesis. Going forward the question arises as to how to proceed now that the crisis has principally passed. Investors have mostly regained their ability to make decisions on their securities lending programs and evaluate if there is still a role in the portfolio for this type of program.

For well-informed long-term investors securities lending offers an incremental return commensurate with the level of risk embedded within the program. The primary risks are: 1) Selecting a collateral reinvestment vehicle that suits the needs of the program; 2) Determining how much of the investment program should be eligible for lending, and; 3) Choosing which types of securities to lend. Often each of these choices will inform the others, but the starting point is one of client preference. See the sidebar for some thoughts on guiding these decisions.

Liquidity is an extremely important consideration when evaluating securities lending program structure. Options on collateral reinvestment pools can run the gamut from overnight treasury repo-only to enhanced cash type vehicles offering some credit and duration risk to enhance yields. This choice can often dictate how the other questions are answered. For instance, if the risk tolerance for capital loss is low, then the collateral reinvestment choice may be the starting point in the decision making process. A low risk pool can be chosen, however, the lower yielding nature of this pool may result in some loans not being profitable and hence a lower volume of lending will occur and earnings are likely to be low and choppy. If program liquidity is the goal, a cap may be imposed to ensure no more than a certain percentage of the assets are eligible for loan. Here, the investor may choose to have a longer time horizon since only a specific portion of the portfolio will be tapped. Since there is no single correct approach, we encourage clients to work with their

Securities Lending Program Structure



- **Collateral Pool Selection**
  - What type of risk profile do you have?
    - Collateral reinvestment options include low risk overnight only pools, registered 2(a)7 money market funds, 2(a)7 like commingled pools, enhanced cash pools, customized separate accounts
  - What are your earnings needs?
    - If program needs to generate a certain level of income, some of the more conservative options may not be practical
- **Lendable base**
  - How much of total portfolio should be on loan?
    - Consider liquidity needs of total program
    - Evaluate existing exposure to indirect securities lending programs in commingled/mutual funds
  - What are the investment horizons on various portfolios?
    - Consider upcoming asset allocation shifts
    - Match the time horizon of the particular investment with the riskiness of the associated collateral reinvestment pool
      - If a change is imminent, either shorten collateral reinvestment pool's duration, lower credit risk, increase liquidity, or remove portfolio from program entirely
      - For core assets in the portfolio (S&P 500 index or a treasury portfolio), time horizon is often quite long offering ability to extend duration or increase credit exposure to generate higher yield
- **Asset Class**
  - Treasuries: Generally lower returns, often have a high percentage of shares on loan
    - If used as a liquidity source, may want to cap lending to provide for liquidity needs
    - If used as a long term deflation hedge or in an LDI program, these are core assets, unlikely to be significantly adjusted and are appropriate to lend, possibly with a higher yielding/riskier reinvestment program
  - Equities: Loan volumes and earnings are dependant on asset class
    - High demand equities (ex. US Small Cap, International)
      - Can lend a smaller percentage of total assets, invest in lower risk collateral pools and still generate adequate income from lending activity, however earnings stream will not necessarily be consistent month over month
    - Low demand equities (ex. US Large Cap)
      - Need to lend a larger percentage and take on more reinvestment risk in collateral pools to generate adequate income, earnings stream tends to be more consistent

consultant to determine the best practice within the particular client context.

For investors who either have a short investment horizon or do not have the time to educate themselves adequately or monitor a securities lending program, we recommend either a very low risk program or none at all. Many defined contribution plans which had indirect securities lending exposure through active and indexed mutual funds have elected to reduce or eliminate those

NEPC ENCOURAGES INVESTORS TO RE-EVALUATE THEIR SECURTIES LENDING PROGRAM STRUCTURE

funds which participated in securities lending programs. As the end investor may not be able to evaluate the potential risk and reward of a particular securities lending approach, plan sponsors may need to provide additional education or disclosure on funds that have embedded securities lending programs; some have chosen to not offer them at all. Smaller pension and endowment funds may also have very low expectations for earnings from a securities lending program and hence may not want to pursue a direct strategy, but as long-term investors, may see some incremental benefit from evaluating whether a certain percentage of assets may be suitable in an indirect lending program (investments in index funds, etc.).

Conclusion

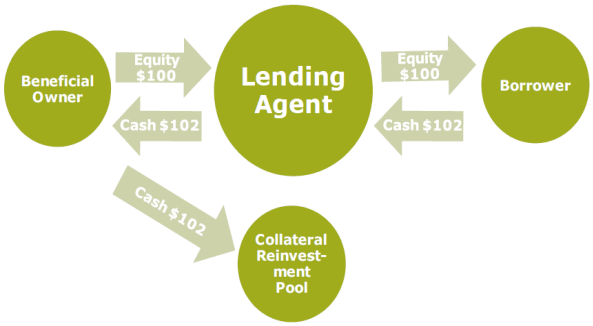
The market environment surrounding securities lending programs has improved greatly. This improvement further validates our comments from the aftermath of the various defaults nearly two years ago that fueled the crisis in securities lending. We continue to encourage our clients, and other investors, to re-evaluate their goals and expectations for their securities lending programs and to consider it in the same risk/reward context as any investment decision made by institutional investors. Fortunately the liquidity squeeze in the securities lending marketplace has largely abated and clients now have the ability to think carefully about the composition of their lending programs going forward and enact changes to optimize and reshape these programs to best suit their individual goals. We realize some investors may elect to exit their securities lending programs for a variety of reasons. This shift away from securities lending for certain investors is likely to result in an overall reduction of supply of lendable assets in the marketplace. This ultimately may lead to enhanced earnings potential for those investors who elect to continue to participate. NEPC has worked with many clients to help redefine and reshape lending programs and continues to stay at the forefront of the evolving securities lending landscape.

APPENDIX – WHY DID LENDING PROGRAMS NEED GATES?

Suppose an investor (known as beneficial owner) loans a domestic equity valued at $100 to a borrower. In return for the security, the borrower will give the beneficial owner cash as collateral in the amount of $102.

The beneficial owner has a few choices as to what to do with the cash collateral. They can take the $102 and 1) leave it in cash, 2) invest it at a risk free rate, or 3) invest in something with some credit or duration risk to seek a higher yield. Option 1 results in a loss at the end of the period as there are no earnings generated to pay the rebate rate. Option 2, if you assume the risk free rate is equal to the rebate rate, results in a break-even; no risk has been taken, but no return has been earned. Option 3, in a stable credit and interest rate environment, offers the beneficial owner the opportunity to generate additional incremental returns. Options 1 & 2 were generally not a problem in 2008, so this example assumes Option 3.

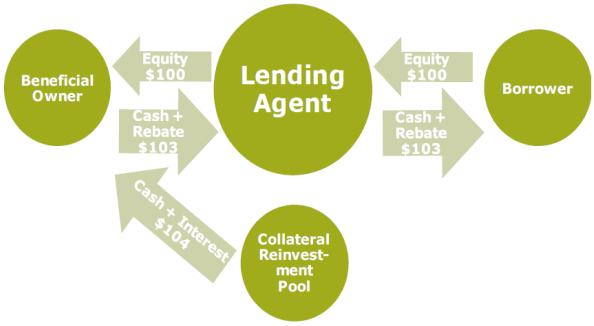
- At the beginning of a lending transaction equity moves from beneficial owner to borrower in return for cash collateral



- Beneficial owner then makes investment decision as to how and where to deploy cash collateral

At the end of the loan, the beneficial owner will receive their security back and the borrower will receive back their cash collateral PLUS an amount known as the rebate rate which can be considered an interest cost on the funds. For simplicity's sake, let us assume the loan is outstanding for 1 year and the interest charge (rebate rate) due back to the borrower is 1% and the value of the security in question is unchanged. At the end of the 1 year, the beneficial owner must return to the borrower $103.02 or $102 + 1% interest for one year. While Option 3 allows for additional returns from the securities lending transaction, it also exposes the investor to additional credit or duration risk. Since the beneficial owner needs to pay back $103.02 at the end of the loan in this example, one can see how any slight downward movement in the value of the investment can impact this transaction resulting in an asset/liability mismatch and hence a capital loss.

- At the end of a lending transaction the equity is returned and the beneficial owner returns cash collateral plus rebate rate to borrower



- In this example, the equity did not change in value over the holding period of one year and the collateral reinvestment pool earned a 2% annual yield

When this example is expanded to include multiple beneficial owners, borrowers and a single commingled collateral reinvestment pool, it becomes evident that should the value of the pool fall below $1.00, then the investors in the pool, in aggregate, have an asset/liability imbalance. It is because of this imbalance that gates were imposed so as not to allow any one beneficial owner preferential treatment over another.