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Insurer Investment in Provisionally Exempt Bonds

Julius Vizner, SVO Associate Research Analyst

■ Introduction

As the provisional exemption guidelines came into effect for insurers beginning with the 2000 annual statements, both regulators and industry appear interested in the implication of these guidelines on an insurer investment profile. Previous articles in the *SVO Research Monthly Newsletter* showed the impact of the provisional exemption guidelines on the distribution of securities contained in the Valuation of Securities (VOS) database.

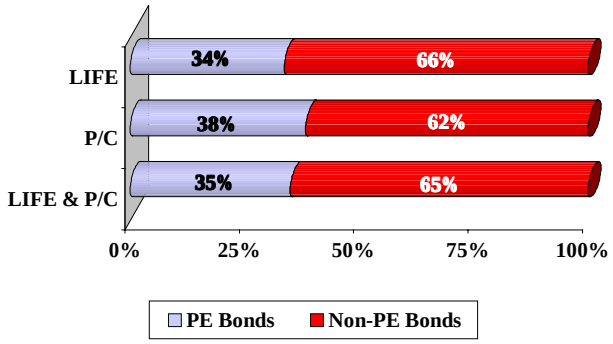
Perhaps another meaningful way to gauge the regulatory implication of the implementation of these guidelines is to examine the annual statements of insurers for their use of provisional exemption. That is, rather than just the number of securities claimed as provisionally exempt, an analysis of reported Schedule D bond investments will show the dollar amount of exempted securities claimed by industry.

■ The Data

Total bond investment for life and property/casualty insurers totaled $1.93 trillion dollars of statement value according to year 2000 annual statements. Provisionally exempt holdings were $674 billion, of that approximately 35% of the statement value of industry bond investment was claimed as provisionally exempt (Figure 1).

Continued on page 3

Figure 1. Insurers Bond Investment



Inside this issue:

From the Director

Chris Evangel, SVO Managing Director

Quite often those who engage in the sphere of analysis are usually called upon to evaluate events and then, more importantly, to extrapolate from that body of knowledge to offer a projection or prognosis for the future. Sometimes you make the correct judgement and many times other events, not contemplated in the original analysis, produce different outcomes.

In trying to provide the caveat above, we may have experienced a watershed event that only time will judge. The incident involved the proposed merger between General Electric (GE) and Honeywell resulting in the combination of aircraft leasing, engine manufacturing, and avionics (aircraft operational instruments). The implication may be much wider than focusing on the financial failure of this merger and its impact on their stockholders.

From a macro view, the GE-Honeywell deal produced some very notable results: a) the European Union (EU) regulators, for the first time, recommended against a proposed merger/acquisition by U.S. multinational companies after receiving clearance from U.S. regulatory officials; b) the EU regulators implied that the merger *could*, not will, result in a more powerful combined company with the potential to threaten the current competitive environment.

Without regard to one's view on the merits of the GE-Honeywell merger, the EU decision has the long-term potential to influence other multinational mergers and the world's regulatory environment. If one still prefers to deny the world's reduced size today in terms of a host of conditions, then the EU's decision to deny their approval of the merger should be a wake-up call. Globalization has been firmly established. What should also be highlighted is that GE and Honeywell could have chosen to consummate their agreement, despite the EU decision. However, their internal assessment would appear to conclude the importance of the EU market and the potential loss outweighed a more brazen option.

This failed merger highlights three important changes that may be difficult to reverse. First, a contemplated merger advanced in one part of the world could be undone in another part. Second, U.S. based companies may not get their own way. Third, and what should be of more interest to us, a U.S. based regulator's decision may not be the final word; conversely, a U.S. based regulator's decision could be the final word influencing another part of the global community. On this last point, will the failed GE-Honeywell merger serve as the catalyst to prompt the world community to consider a single regulator for these and potentially other activities that cross national borders? To speculate on a movement in that direction currently appears premature. However, given the billions of dollars at stake of this failed merger, the economic incentives could provide the catalyst in such an effort.

Finally, one can be more confident that what will probably endure from this decision is the quote from the economist who headed the EU's antitrust department: "...this is a matter of law and economic, not politics." Again, as stated in the opening, only time will test the validity of that statement.

Insurer Investment in Provisionally Exempt Bonds (Continued)

Looking at each industry separately, about one of every three dollars invested by life companies was, in aggregate, reported as provisionally exempt. As a percentage of total investment, property/casualty insurers held more dollars with exempt status than their life counterparts; 38 cents of each dollar invested was, in aggregate, reported as having exempt status (Figure 1 on page 1).

Figures 2 and 4 show the distribution of percentage holdings of provisionally exempt securities for life companies. Individual holdings averaged 44%, with a median value of 44.1%. Figures 3 and 4 show the distribution of percentage holdings of provisionally exempt securities for reporting property/casualty insurance companies. Individual property/casualty holdings averaged almost 45% with a median of 43.72%.

Figure 4. Distribution of PE Securities as a Percentage of Total Holdings

Year-end 2000	Property/Casualty	Life
Median	43.7%	44.1%
Minimum	0.0%	0.0%
Maximum	100.0%	100.0%
90th percentile	74.5%	67.9%
10th percentile	15.1%	19.1%

Figure 2. Property/Casualty Companies

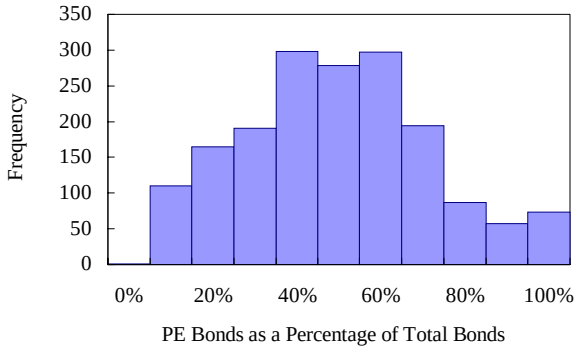
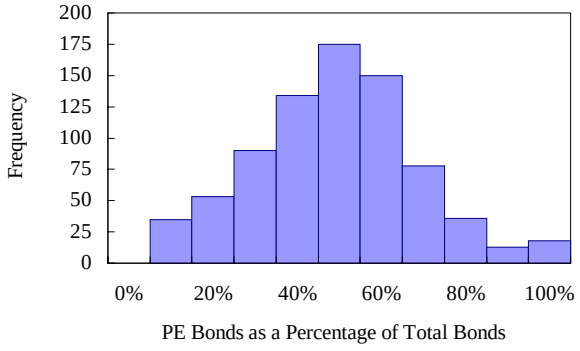


Figure 3. Life Companies



One noticeable difference between the life and property/casualty distributions is that the provisionally exempt/total ratio is more scattered for property/casualty insurers. The distribution of ratios has less variance for life insurers.

■ Summary

This preliminary look at the data indicates many companies are using the provisional guidelines to self report the credit risk of portions of their bond portfolios, as the guidelines intended. The data also show that the depth of use varies substantially by companies. While some companies are holding almost purely provisionally exempt portfolios, many others are not holding or claiming any provisional exemptions. Additional research underway is examining the use of the provisional exemption guidelines by other types of insurance companies, and as well the distribution of the use of the exemptions by the size of the company and the portfolio. Periodic updates to the analysis will continue to appear in this *Monthly Newsletter*.

Convertible Bonds in Demand

Ray Spudeck, SVO Research Manager

■ Background

In the unusual markets facing investors over the last year and a half, one segment of the financial marketplace is enjoying a relative boom time. Convertible bonds, for a long time relegated to a minor role in the marketplace, are currently quite in demand by institutional investors. As of June 5, Bloomberg L.P. reports that companies have issued almost $70 billion in new convertible bonds to date, following the issuance of almost $103 billion in 2000. While not nearly as large as the market for traditional corporate debt, either investment grade or high-yield, the market has enjoyed considerable growth in the last two years.

Moreover, where historically convertibles were issued by smaller, less well-known or well-established companies, the current crop of new convertible issues includes more familiar names.

As these securities continue to enjoy their current popularity, some new twists to contract design and new trading strategies have emerged. To place these developments in context, a review of the nature of convertibles and the motivation for issuing and investing in them is needed.

■ What is a Convertible Bond

Convertible bonds are an example of the family of "hybrid" securities that combine features of a traditional debt investment with features of a traditional equity investment in order to create a different risk/return profile. Convertibles are corporate debentures offering many of the features of a traditional bond, including fixed interest payments and a scheduled return of principal, but they can also be converted into the common stock of the issuing corporation at a conversion price established when the bond is issued. This conversion price is set above the current market price of the stock.

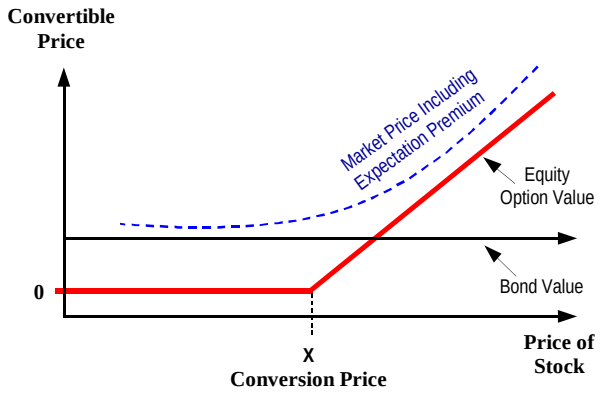
Convertibles, then, can be viewed as a combination of a bond and a long-term call option on the underlying stock. At the time of issue, the embedded call option in the convertible is an out-of-the-money option (e.g., the conversion price, akin to an option's strike price, is above the current market price of the stock, so that the conversion option has no immediate cash market value). If the underlying stock's price rises over time, the option goes into the money, and the embedded option gains in value. If not, the holder of the bond still receives the interest and principal cash flows promised in the bond indenture. The risk/return profile of a convertible then offers some of the upside gains available from a stock price rise, while limiting the downside losses from a collapse of the stock price.

The holder of a convertible bond pays the premium for the embedded call option through an opportunity cost. The coupon promised in the convertible's indenture is set, sometimes substantially, below the current market coupon rate of traditional debentures of similar risk and maturity. How much lower depends on how low or high the conversion price is set relative to market expectations about the future prospects of the underlying stock, as well as by the level of market demand for convertibles when the bond is issued. Currently, some investors historically active in the convertible market are complaining about the size of the premiums being paid in the currently active market, noting the relatively lower coupons and higher conversion prices contained in recent issues.

The observed market pricing and valuation of convertibles, then, is the result of the convertible having two implicit prices, the bond's value as a fixed income instrument (its bond value), and the bond's value as an option on the underlying stock (its option or equity value). At any point in time, the convertible will trade for the greater of its bond value or its option value. Thus, the bond value serves as a floor price, limiting the losses to the holder should the stock price not appreciate in line with investor expectations. Figure 1 below shows this pricing structure under the assumption of no change in market interest rates.

Continued on page 5

Figure 1. Convertible Bond Price Structure



Convertible Bonds in Demand (Continued)

Interestingly, this floor price has, recently, become more volatile with respect to interest rate movements. As convertible coupons have become relatively lower than straight debt issues of similar risk and maturity, bond mathematics dictate that the price reaction of these convertibles to interest rate movements will be greater (e. g. these convertibles, evaluated as bonds, will have longer durations than straight bonds of similar maturity).

■ Why Issue Convertibles

Corporations seeking capital in the markets are, of course, interested in obtaining their finance as cheaply as possible. A corporation seeking new capital may periodically feel the need to raise equity funds, in order to satisfy existing bond/loan covenants while expanding or to keep their financial structure within some target debt/equity range. New external equity is the single most expensive source of finance to most corporations, especially with regard to the issuing costs. Convertible bonds allow the issuing company the opportunity to ultimately obtain equity capital at much lower issuance cost, that is they serve as a delayed equity financing vehicle. The corporation initially issues a convertible bond, makes the interest payments as contracted until such time as, hopefully, their stock price rises sufficiently to make the embedded option in the convertible valuable (e.g., the bond can be converted into stock at less than the current market price). At that point, the bonds will begin to be converted as stock price rises and at some point, the corporation can frequently ensure that all of the bonds are converted to common stock by announcing the exercise of the bond's call provision. This provision allows the corporation to buy back the bond at a set price (par, par plus interest, etc). At high enough stock prices the conversion value of the bond is sufficiently higher than the call price that all holders will convert rather than be forced into the call.

In recent history, a number of technology and telecommunication firms issued convertible bonds in order to obtain finance, including E-Trade, Verizon, and Digital Island. The current market for convertibles also includes a number of better known firms such as Royal Caribbean, Merrill Lynch and Starwood Hotels.

■ Why Buy Convertibles

Clearly, convertible bond investors are not seeking ordinary bond risk/return profiles. Rather, convertibles offer investors the chance for a participation in equity gains should the stock price rise, while at the same time offering a level of fixed income return should the stock price movements not live up to expectations. Convertibles, then, have historically appealed to investors who for a variety of reasons have held largely fixed income portfolios. The addition of convertibles to a traditional bond portfolio adds some level of potential equity returns, at a lower level of risk than outright equity investment. As well, convertible mutual funds offer individual and retail investors the opportunity to participate in this market. More recently, a new group of investors have emerged. These investors are convertible arbitrage hedge funds, who use convertible bonds as the basis for complex trading programs, in conjunction with other cash market and derivative securities; the equity components and bond components are stripped and traded.

Notice that neither the issuers nor investors become involved with convertibles with the expectation that the bonds will be held until maturity. In fact, if a bond is held until maturity, neither party's expectations were met. The holders will still be able to claim some level of return, although the realized yield in this case would be much lower than if a straight debenture of similar risk and maturity had been purchased. At the same time, the issuing firm did not get its desired equity financing, but was able to obtain debt financing at favorable terms.

■ Some New Considerations

With the resurgence in demand for and supply of convertible bonds, one of the newest wrinkles in these securities is the creation of zero coupon convertibles. As mentioned, convertible bonds have always offered discounted coupons relative to the market level of similar risk debt instruments; for companies with high enough credit standing, convertibles are now being issued with a zero coupon rate. That is, the issuer is not obligated to pay any interest over the life of the bond. If the bond is converted, the issuer is as well not required to return any principal payments. A zero is sold at a discount from face value, and subsequent market prices are either the option value of the paper or the accreted value of the bond as it moves toward maturity.

A second newer facet of the current convertible market is a trading strategy based on investing in "busted" convertibles. A convertible bond is considered "busted" when the underlying stock price has fallen so far below the conversion price that the probability of converting the bond into stock is extremely unlikely. For example, one fairly recent convertible was issued with a conversion price of $131.61. At the time the stock was trading around

Convertible Bonds in Demand (Continued)

$107. Recently, the stock was trading at the $2 level; it was perceived unlikely that the price would rebound from this level before the bond matured. Thus, a "busted convert."

Holding busted convertibles can be a profitable strategy, largely because of language in the bond indenture. In many cases, the indenture contains provisions that require the convertible bond to be paid off in full in the event the issuing company is acquired for cash. That is exactly what happened to the bond described above. In fact, when the acquisition was announced this convertible's price rose 390% in a day. More generally, Morgan Stanley estimates that if an investor had bought every busted convertible available in the market, their year to date return would be slightly over 27%.

Even if the bonds are not redeemed at full face value, they are frequently transferred to the acquiring company who assumes responsibility for payment. If a highly rated company acquires the company who issued the convertible (again, generally a lower credit quality firm), the bond price will jump as the credit worthiness of the acquiring firm supplants the credit worthiness of the original issuer. The required rate of return falls, causing the rise in price. For example CNN Financial reported that when the Johnson & Johnson (AAA rated) acquisition of Heartport, who had issued CCC rated convertibles, was announced, the Heartport bond prices tripled.

Since a number of technology companies and telecommunications companies issued convertibles before the collapse of stock prices in these sectors, there are currently a large number of busted convertibles available. Indeed, Lehman Brothers estimates that the busted convertibles accounted for about 40% of the convertible market in May of 2001.

■ Summary

Demand for convertibles bonds has been responsible for over $170 billion in new issuance over the last year and a half. Issuers who have not previously used this market are moving into it as a way to obtain finance on favorable terms. The number of higher credit quality firms has led to the development of zero coupon convertibles. At the same time, as the tech bubble burst a number of convertibles busted. Owing to contractual provisions of these bonds for either redemption or assumption, an active strategy of trading busted convertibles has appeared. The combination of deep discounts and volatile pricing has necessitated the need for more advanced analytics for convertible investors than has historically been the case.

The current robustness of the convertible market is a reminder that financial markets are a remarkable mechanism for pricing and transferring risk in its various forms.

Insurer Investment in Catastrophe Bonds in 2000

Ray Spudeck, SVO Research Manager

■ Introduction

The development of the catastrophe bond market as a means of transferring underwriting risk from an insurer's balance sheet to the capital markets has been written about extensively since the initial deals were offered in the mid-1990's. Most of the discussion to date has focused on the nature of the risk transfer out of the insurance industry, the "depth" of the market for absorbing this risk, and the nature of these catastrophe bonds as investments. On the other hand, there is frequently surprise among some when the discussion turns to insurance companies holding catastrophe bonds in their own investment portfolios. What follows is an analysis of insurer holdings of catastrophe bonds as reported on their 2000 annual statements as filed with the NAIC.

■ Catastrophe Bonds as an Investment

Most discussion of catastrophe bonds as an investment centers on their relative returns and the nature of the risk inherent in these bonds. The catastrophe bonds issued to date have been carefully constructed so that the risk inherent in the bond is singularly the risk that a sufficiently large catastrophe of a specific type, over a specific period in a specific location, would set off a contractual trigger that would allow the issuing entity to not pay interest and/or principal on the bond. Most of the bonds issued to date use an "indemnity" trigger that is based on the underlying insurance company's actual losses. A growing number of deals use either an index of losses or a "parametric" trigger based on some measure of the intensity of the catastrophe (for example, hurricane category, barometric pressure of the storm, earthquake magnitude).

The attraction of these bonds for investors is that they offer relatively high returns for the perceived risk being assumed while also offering a low degree of correlation to the risks inherent in a typical bond portfolio. These bonds offer investors returns of between 300 to 500 or so basis points (3 to 5%) over LIBOR (the London Interbank Offer Rate, a measure of the wholesale cost of dollars among large investors in the global market). Many bond investors and portfolio managers find this to be a lucrative spread for the perceived risks taken. This spread has also not yet declined significantly as the market ages.

The catastrophe risks that trigger these bonds are seen to be uncorrelated to general economic and/or business cycle movements. As such, the risks inherent in holding a corporate or government bond portfolio are independent of the risks associated with the catastrophe bond. Most allocation models that describe the addition of catastrophe bonds to a portfolio imply the holding of catastrophe bonds at between the 2-4% of portfolio investment range. That is, they have not been suggested as a major part of a bond portfolio.

The catastrophe bond market is both young and small relative to other financial markets. The first deals occurred in 1994 and 1996, but no real development occurred until 1997. To date, there have been a total of about $12.6 billion of catastrophe bonds issued. The investors in these bonds are large institutional investors, including insurance companies. Insurance companies have purchased about 18% of the outstanding catastrophe bonds offered to date.

■ Insurer Investment in Catastrophe Bonds

Like other fixed income portfolio managers, insurance companies may be attracted to the risk/return profile offered by catastrophe bonds. An additional consideration for an insurance company in deciding to invest in these would be the level of correlation between the risk of the catastrophe bond and the company's own underwriting risks. For example, a property/casualty insurer writing a large block of homeowner's insurance along the Florida coast may find that Florida hurricane catastrophe bonds, while offering diversification and return to the asset portfolio, may be so highly correlated to their underwriting risk as to be an unacceptable investment.

As shown in Figure 1 below, life and property/casualty insurer investment in catastrophe bonds for the year 2000 totaled $141.7 million dollars of book value. Total Schedule D bond investment for these companies totaled approximately $2.0 trillion dollars in statement value, so that total catastrophe bond exposure for the industry amounted to less than 0.01% (one one-hundredth of one percent). Life insurance companies held $91.2 million and property/casualty companies held $50.5 million of statement value in catastrophe bonds.

As a percent of portfolio investment, catastrophe bonds represented between 0.03% to 1.4% of bond investment

Figure 1. Insurers Investment In Catastrophe Bonds

Year-end 2000	
Property/Casualty Companies	$50,504,557
Life Insurance Companies	$91,194,171
TOTAL	**$141,698,728**

for life companies and between 0.005 and .14% of bond investment for property/casualty companies. Figure 2 provides a summary of these statistics. Clearly, catastrophe bonds do not seem to reflect, in aggregate, or by company, a solvency issue for insurance companies to date.

Figure 2. Insures Investment in Catastrophe Bonds as a Percentage of Total Investment

Year-end 2000	Property/Casualty	Life
High	0.0624%	0.0536%
Low	0.0045%	0.0011%
Average	0.0263%	0.0161%
Number of Insurers	8	9

Most of the bonds held were triggered by either US hurricane damage (primarily in the East Coast, although some Gulf Coast and Hawaiian exposure was also purchased), or US earthquake damage (primarily California earthquake exposure, although some New Madrid exposure was held). As for underwriting diversification, US insurers held $37.5 million of bonds exposed to Japanese earthquake risk and $18 million of bonds exposed to Japanese typhoon.

■ This Hurricane Season

As the hurricane season is now officially underway for the US, a survey of the climate for catastrophe bonds is useful. After a number of years of perceived "soft" reinsurance rates for catastrophe cover, a number of sources are reporting a hardening of rates. Most predictions for hurricane activity for the US this season are calling for moderate to above average hurricane activity. Globally, recent news reports of earthquakes and floods in a number of parts of the world seem to be on the increase. Most indications are that the planet has moved into a more active seismic and meteorological cycle. This, all else being equal, could stir increase the supply of catastrophe bonds created by property/casualty insurers seeking to lay off some of their high dollar catastrophe exposure.

On the purchasing side, insurance companies, operating under the current SVO *Purposes and Procedures Manual*, can invest in "catastrophe bonds" that are defined as bonds originally created by (indirectly) an insurance company to hedge a catastrophe resulting from natural (seismic and meteorological) events. The bonds' triggers can be either indemnity based or based on a trigger, providing the trigger level was based on acceptable modeling efforts.

So far this "season," two deals have come to market with quite a bit of attention. Munich Re issued a $166.5 million dollar catastrophe bond that matures, absent a qualifying event, in 2004. A majority of catastrophe bonds to date have been issued with one-year maturities. The bonds define were issued for hurricane damage cover. The issue covers hurricanes that make landfall in either an area of the New York coast (the New York "gate", defined by latitude and longitude) or one of two Miami "gates." Rather than the trigger being based on actual damages, or an index of insured losses, the trigger for these bonds is based on the central barometric pressure of the hurricane as it makes landfall in a designated gate area. The principal amount of the bond for holders is at risk, with either a 20% loss, an 80% loss or a 100% loss contractually mandated based on the recorded central barometric pressure at the landfall location.

The second deal is a $120 million dollar windstorm protection bond created by Swiss Re. The deal has two major pieces; the first piece is protection against first and subsequent event French windstorm and as well as subsequent event Florida and Puerto Rico hurricane. The second piece covers first and subsequent event Florida and Puerto Rico hurricane as well as subsequent French windstorm. This deal is unique to the market in several ways. Most catastrophe bonds issued to date have been single event bonds, with only a few covering more than one peril, so the "cross-collateralization" feature of this bond is new. Moreover, this mingling of first and subsequent events has given Swiss Re a reinstatement option that is a first for the catastrophe bond market.

Catastrophe bonds, and insurance linked securities in general, are a new bond class for the securities markets. Most investment managers and analysts view these as a separate asset class for portfolio considerations, based on the unique risk/return profiles they offer relative to most corporate or municipal bond portfolios. The market is still small, how it grows in the future remains an open question. Insurers do invest in these bonds, however, as this article suggests, they do not invest either a large amount or in any significant concentration relative to their size and existing portfolios. If and as this market develops, research into the holdings of catastrophe bonds by insurers and the portfolio risks they offer will be reported.

SVO Activity

In June, Ray Spudeck, Research Manager, gave a presentation on provisional exemption at the annual meeting of the Insurance Accounting & Systems Association (IASA) in San Antonio, TX. In June, Ray also gave a 2-day financial markets seminar to the Minnesota Department, and gave an overview of provisional exemption guidelines and their results to the New York Department's Life Bureau.

Frederic P. Vigneron, Senior Credit Analyst, participated in a panel discussion on the proposed new Basle Capital Accord and its Implications for the Collateralized Debt Obligation (CDO) market at the Institute for International Research CDO Summit in June in New York City.

Dick Newman, Associate Credit Manager, will be acting as an Instructor at the Ken Smith Program for Financial Examiners, held at Drake University in early July. Ray Spudeck will also be acting as an instructor at the same program.

Chris Evangel, Managing Director, Tony Urick, Credit Manager, Pradip Vyas, Credit Manager, Roberta Freifeld, Systems and Records Manager, and Ray Spudeck will be making presentations at the North American Securities Valuation Association (NASVA) annual meeting July 18-20 in Orlando, FL.

Tony Urick has been working with industry interested parties in revamping the security filing process to reflect questions regarding relevant changes to a security's credit position.

The next "How to File Securities with the SVO" program is scheduled for September 13-14, 2001 at the Mayflower Hotel, in Washington, D.C. Registrations for this program are still open and can be made by contacting the Education department of the NAIC.

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