Credit Quality of SplitShare Preferreds

James Hymas

I often discuss and recommend preferred share issues of SplitShare corporations even though, nowadays, the credit rating assigned to these issues by DBRS is in the Pfd-3 range. Some investors may well be prompted to question these recommendations, particularly in light of my long-standing preference for a high credit quality in fixed-income portfolios.

Part of the answer lies in the meaning of a Pfd-3 rating. It should always be borne in mind that credit rating agencies consider it their purpose to report only on the probability of default, not the severity of default – although they do sometimes opine on the potential for recovery after default for issues that are in imminent danger of crossing the line. This focus on default risk, as opposed to other investment risks, such as liquidity risk, is necessary if ratings are to be comparable when forcing all debt instruments into a single scale.

SplitShare corporations (see the *Canadian MoneySavers* for November 2006, July 2008, and November 2008) are an example of structured finance (just like the infamous tranches of sub-prime, mortgage-backed securities that have attracted a lot of attention in recent years!) and have a non-standard relationship between the "default" aspect of credit quality and the "recovery" aspect. An operating company will typically continue to pay its preferred share dividends until the moment it is forced into bankruptcy protection, but once it has reached that point, preferred shareholders will typically lose 100% of their investment. A SplitShare company that pays $9.99 on maturity rather than the promised $10 has defaulted – but the recovery of $9.99 is a very good consolation prize!

Rating agencies focus on the default component of investment risk in order to foster comparability between widely disparate issuers, but it is possible for investors to invert this focus, taking a narrower range of issuers to achieve a more general view of investment risk. To this end, I have developed a model of SplitShare corporations that allows different issues of this type to be compared and

provides an estimate of expected losses given reasonable assumptions.

This model was published and discussed in the December 2010, edition of my monthly newsletter, *PrefLetter*, and the spread sheet is available at http://www.prefblog.com/xls/splitShareCreditQuality.xls Readers are cautioned that before using this model, or any other model, as part of their investment process, they must ensure that they understand the model and that the reasonability of the values used as input is critical.

It is presumed that the SplitShare corporation holds a portfolio of common stock for which the user specifies the expected return, the dividend yield and, crucially, the volatility of the market price. This volatility may be set as a standard deviation, or may be set to reflect the historical experience of any issue or index reported by Yahoo! Finance. The probability distribution of expected returns over time may then be compared with the actuarial standards imposed by regulators on stock return models used by insurance companies (three such standards are reported: "OSFI Old" and "OSFI New" for Canada, and "American").

Having characterized the underlying portfolio, the user may determine the effects of this distribution on a SplitShare preferred. Users input the characteristics of the SplitShare corporation (see the table for details) and perform several thousand simulations to estimate the preferred shares' Probability of Default, Loss Given Default and Expected Loss.

Each simulation reflects the possible performance of the underlying portfolio until the maturity date of the SplitShare corporation. For every month until maturity an underlying return is selected randomly from the possible values (hence the name "Monte Carlo"). These possibilities are chosen so that, overall, they will result in the portfolio having the specified expected return, but the random selection of returns for each month in each individual simulation results in considerable variance in

the final number.

Following the determination of the monthly return of the underlying portfolio, the simulated corporation must attend to its internal business. It must pay its monthly expenses (the MER), dividends on its preferred shares and the appropriate level of capital unit distributions (depending on the simulated NAV relative to the "NAV Test"). To meet these cash requirements, it has some cash from dividends on the underlying portfolio, but any difference between cash inflows and outflows must be met by buying or selling the corresponding amount of the underlying portfolio.

Ay, there lies the rub. If a SplitShare corporation has a cash shortfall of $0.10 and a NAV (Net Asset Value) of $20, it need only sell 0.5% of its portfolio to make up the difference. But as the NAV gets lower, the proportion that must be sold increases, and the shares sold will no longer pay dividends to the corporation, or participate in future growth. This is simply another aspect of the "Sequence of Returns" risk popularized by Dr. Moshe Milevsky of York University.

With this in mind, we can examine some typical language from a SplitShare prospectus with a more critical eye: "Based on the initial anticipated composition of its Portfolio, the Company is expected to generate dividend income of approximately 3.33% per annum which, after deduction of expenses, will be distributed to shareholders.

The Portfolio would be required to generate an additional return of approximately 5.30% per annum, including from dividend growth, capital appreciation and option premiums, in order for the Company to maintain its targeted distributions and maintain a stable net asset value, plus an additional 0.7% per annum to increase the Company's net asset value to an amount sufficient to permit the Company to return the original issue prices of the Preferred Shares and the Class A Shares on the Termination Date."

So, the corporation is receiving 3.33% dividends and needs merely another 6% to meet its targeted distributions while maintaining a stable NAV. The total of 9.33% is a relatively high hurdle for returns, but it does not sound entirely unreasonable, right?

Wrong. There is no allowance for volatility in the prospectus' calculation, and volatility has a huge effect on SplitShare corporations due to sequence of returns risk. Chart 1 shows results from a series of calculations with the model, showing how the expected loss on the preferreds varies when the standard deviation of monthly returns is changed while all other input parameters are held constant (specifics of the return fluctuations were taken from a sample of major equities on the Toronto Stock Exchange). Clearly, the prospectus' assumption of constant annual returns is highly optimistic. To achieve the portfolio goals in the presence of portfolio value

Parameter	Value for DF.PR.A in May	Comments
Return Volatility Template	XFN.TO, 2002-12-8 to 2010-12-8	XFN is a passive fund investing in TSX-listed financial issues; a reasonably close match to the DF portfolio
Expected Total Return	7.00% p.a.	A reasonable guess!
Underlying Dividend Yield	3.85%	Estimated from data published on the DF.PR.A website at http://www.divi-dend15.com/
Initial NAV	17.38	Fund website, 17.65 as of May 31
Preferred Redemption Value	10.00	Prospectus
Pfd Coupon	0.525	Prospectus
MER	1.23%	Annual Report
Capital Unit Dividend (above test)	1.20	Prospectus
Capital Unit Dividend (below test)	0.00	Prospectus
NAV Test	15.00	Prospectus
Whole Unit Par Value	25.00	Prospectus (it is assumed that if the NAV is higher than this value, the entire excess will be distributed to the capital units at year-end)
Months to Redemption	42	Prospectus
Output		
Probability of Default	3.80%	PD - The credit rating is based on the agency's estimate of this value.
Loss Given Default	11.43%	LGD - In an operating company, this will normally be 100%.55.
Expected Loss	0.43%	EL = PD x LGD
Further Calculations		
Expected Redemption Price	9.96	The preferred redemption value less the expected loss
Yield to Maturity	4.52%	Yield calculated normally, assuming no default
Yield to Expectations	4.41%	Yield calculated assuming that only the "expected redemption price" is received.

fluctuations, a total average return on the underlying of much more than 9.33% will be required.

Major Stocks
Standard Deviation vs. Expected Loss
Standardized Simulations
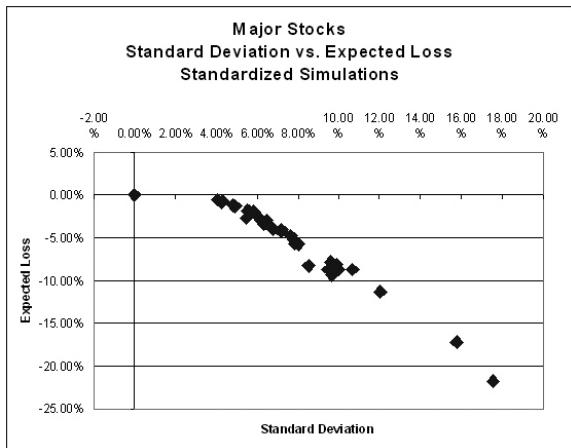
Results of using the model to examine the effects of an "NAV Test" on expected loss were shown in my *PrefPick* column in the May edition of *Canadian MoneySaver,* but all other elements of the model parameterization can be varied. One of the more interesting implications of the model is that increasing the expected return of the underlying portfolio while keeping the dividend yield constant has about the same effect of expected default losses as increasing the dividend yield while keeping the expected return constant. This emphasizes the importance of a healthy underlying cash flow when evaluating the credit worthiness of a splitshare preferred.

With all this in mind, we can create a table showing (see page 26) the parameterization of the model as it relates to the recommendation of DF.PR.A in the May 2011 edition of *Canadian MoneySaver.* Yields have been calculated as discussed in the July/August 2006 edition.

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