Investment Yields - Been down so long, but which way is up?

By Graham Segger, FCA

Does anyone remember the expression "cash flow underwriting"? That long ago concept was that underwriters might on occasion price their product at prices below the cost of claims and expenses using an assumption that their company could still thrive based on the healthy returns on invested assets. Never a terribly safe approach, anyone practicing this tactic today does so at their own peril. Investment yields on fixed income investments, still over 85% of P&C insurance company invested assets, have been on a downward spiral which sees no short term likelihood of reversing as bonds roll over into lower yielding instruments. The equity markets continue to be volatile and new capital rules being considered may make their use less attractive.

How serious is this loss of yield to the industry? Based on 2011 year end invested assets of $109 billion, a 1% increase or decrease in the effective yield of a portfolio could theoretically produce an over $1.1 billion change in before tax investment income. To offset each 1% change in yield would therefore require a 2.4% change to the approximately 100% combined ratio of the last two years. These statistics highlight the grave situation faced by the entire industry which has seen industry wide yields (excluding capital gains, capital losses and expenses) drop from 3.76% to 2.52% over the last five years (see Exhibit 1 - Ten Year Investment Yields). Factor in to this equation the fact that a large part of investment income is, theoretically at least, required to finance the accretion of the discounted unpaid loss reserves of prior years (see Exhibit 2) and not much is left over to fund underwriting over optimism.

Exhibit 1: Ten Year Investment Yields for Canadian P&C Insurance Industry

Year	Investment Yield (1)	Yield excluding gains, losses & expenses
2011	3.25%	2.52%
2010	3.51%	3.01%
2009	3.35%	3.18%
2008	2.88%	3.52%
2007	4.77%	3.76%
2006	4.78%	3.50%
2005	4.83%	3.38%
2004	4.31%	3.33%
2003	4.71%	3.82%
2002	4.30%	4.29%
(1) Calculated using OSFI page 10.60 formula		

Source: MSA Research Inc.

Exhibit 2: Analysis of Page 60.30 Unpaid Claims Run-off Investment Income Allocation – 2011

Total Unpaid Claims of Prior Years	Total Allocated Investment Income Per Regulators' Formula (2)	
$58,778,969	$1,904,226	3.24%
(2) This represents 42.6% of total industry investment income of $4,467,010		

Source: MSA Research Inc.

In this article we will not try to predict the direction of yields (though as noted in the title and first paragraph you may detect a slight bias), but rather we will try to answer a few questions about where P&C insurance companies are allocating their invested assets and what kind of returns they are achieving.

References are made throughout to the regulatory data submitted by companies and branches compiled in the P&C MSA Researcher Software (see separate article on changes to that data in 2011). All reporting organizations including provincial auto plans and Lloyds are included in the data used in this article unless specifically noted. Following are some of the questions we chose to address:

1. What yields are being achieved? Sadly, answered above!
2. What is the allocation of investment income to prior year unpaid claims all about? Also answered above.
3. How does the industry allocate investments across classes of invested assets and durations?
4. How have insurers classified investments for accounting and reporting purposes and which organizations are using the Fair Value Option to recognize changes in investment market values in current year investment income?
5. How prevalent is the use of non-investment grade securities in insurer portfolios?
6. What were the sources of investment income over the last five years?

How does the industry allocate investments across classes of invested assets and durations?
In Exhibit 3 we have summarized the data submitted by insurers on Page 40.07 over the last three years. In 2011, we now have additional information available on the one to five year versus greater than five years to maturity bond and debenture portfolios. This data is based on balance sheet values which are, for most companies, fair values. What is evident from this Exhibit is that allocations have not changed dramatically over the last three years. Looking back ten years, Common Shares have consistently remained close to 10%, but the allocation to greater than one year bonds and debentures has increased at the expense of shorter term instruments and preferred shares. This 10% Common Share figure for the industry is somewhat misleading however. The typical investor in common shares tends to hold a greater allocation than 10% while many companies have no exposure at all. A small group of large companies including Aviva, Allstate, Desjardins, Intact, ICBC and Wawanesa hold 20 to 30% common share allocations.

The new duration detail shows us that of the $90 billion of Short term investments, Bonds and Debentures held by the industry at the end of 2011, 13.4% have a duration of less than one year, 62.8% are one to five years and 23.7% are greater than five years. One to five year bonds continue to comprise over 50% of invested assets in total. Relatively few CFOs we have spoken to claim to be closely matching asset durations to those of their liabilities.

Exhibit 3: Three year summary of investments by class and duration – 2009 to 2011

Investment class and / or duration		2011 ('000)	% of total	2010 ('000)	% of total	2009 ('000)	% of total
Short Term Investments, Bonds and Debentures (1 year or less)	01	12,110,161	11.11	11,969,340	11.50	10,088,863	10.39
Bonds and Debentures > 1 year and < than 5 years	02	56,648,926	51.97				
Bonds and Debentures > 5 years	05	21,414,561	19.64				
Total bonds > 1 year		78,063,487	71.61	73,608,389	70.70	70,655,308	72.75
Mortgage Loans:							
- ≤ 80% (75% in prior) LTV Ratio	03	1,315,788	1.21	1,293,337	1.24	1,169,830	1.20
- Other	04	320,710	0.29	244,366	0.23	311,534	0.32

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Investment class and / or duration		2011 ('000)	% of total	2010 ('000)	% of total	2009 ('000)	% of total
Non-Mortgage Loans (consumer/commercial)	07	150,503	0.14	102,434	0.10	40,582	0.04
Preferred Shares:							
- Debt	10	519,217	0.48	665,386	0.64	852,681	0.88
- Equity	11	3,313,083	3.04	2,837,910	2.73	2,619,897	2.70
Common Shares	15	10,874,910	9.98	11,297,629	10.85	9,567,049	9.85
Investment Properties	20	628,456	0.58	501,261	0.48	425796	0.44
Other Investments	30	1,712,586	1.57	1,597,803	1.53	1,393,142	1.43
Total Investments	39	109,008,901	100.00	104,117,855	100.00	97,124,682	100.00

Source: MSA Research Inc.

How have insurers classified investments for accounting and reporting purposes?

Now you didn't really think you were going to get away without an accounting tutorial from me at some point did you? In 2011, the industry reported close to 95% of their invested assets at fair values, the only significant exception being those held at amortized cost. The distinctions are important as they drive the timing of the reporting of investment income. Changes in fair values of Held for Trading and Fair Value Option designated investments are recognized immediately, Available for Sale investments are reflected at fair values in the balance sheet but changes in fair value are not reflected in net income until realized and Amortized Cost investments do not reflect temporary changes in fair values until sold.

Exhibit 4 shows the allocation of industry wide invested assets among these classifications, though again, industry totals can be deceiving. Fewer than 20 groups, mostly large companies, devoted the extra effort required to comply with the regulatory restrictions on the use of the fair value option. These include Aviva, Co-operators, Desjardins, Economical, Intact, Northbridge, RBC, Saskatchewan Auto Fund, and TD.

Exhibit 4: Investments Accounting Classifications

	2011 ('000)	%
Held for Trading (HFT)	12,793,666	11.74
Available for Sale (AFS)	75,567,630	69.32
Hedges	200,606	0.18
FV Option (FVO) / Inv Prop FV	14,749,425	13.53
Amortized Cost	5,697,574	5.23
Total Investments per 20.10	109,008,901	100.00

Source: MSA Research Inc.

Another regulatory exhibit which can yield interesting investment data is page 20.42 (companies) and 20.47 (branches) which reconcile the changes in Comprehensive Income and display the year end Accumulated Comprehensive Income. By far the largest element of this Equity component relates to unrealized gains and losses on Available for Sale investments. Exhibit 5 below displays the industry wide data. The $1.0 billion plus increase in Accumulated Comprehensive Income relating to Bonds and Debentures is a reflection of declining interest rates and the huge bond portfolios. The industry is currently sitting on over $2.7 billion of fair value increments which have not yet been reflected in conventional net income. It would not require a very large increase in long-term interest rates, however, to see much of that unrealized gain disappear.

Exhibit 5:AFS Investments Unrealized Gains

Comprehensive Income			Accumulated Comprehensive Income		
	2011 ('000)	2010 ('000)		2011 ('000)	2010 ('000)
Changes in Unrealized Gains and Losses:			Accumulated gains (losses) on AFS:		
Loans	3,884	2,110	Loans	590	200
Bonds and Debentures	1,201,531	386,708	Bonds	2,280,546	1,229,369
Equities	-488,290	866,180	Equities	424,484	1,303,052
Reclassification to earnings of gains and losses	-547,450	-607,638	Unrealized gains and losses	2,705,620	2,532,621
Impact on Comprehensive Income	169,675	647,360			

Source: MSA Research Inc. based on Page 40.42 & .47 data

How prevalent is the use of non-investment grade securities in insurer portfolios?

An analysis of the new Page 40.22 Bonds and Debentures exhibit, which P&C-1 companies had to file for the first time in 2011, indicates that 4.37% of total bonds and debentures are reported as being below investment grade. A closer look at the numbers shows that several companies including Co-operators, ICBC, Northbridge, RBC and Wawanesa have significantly higher percentages than the average and represent a large portion of the industry total. Caution should be exercised however before assuming that these companies are simply pursuing yield in these riskier investment classifications. Some of these assets might have been acquired at BBB or higher and downgraded.

Sources of investment income

We discussed investment yields at the beginning of the article, but have not yet looked closer at the sources of the investment income. Exhibit 6 displays the sources of gross investment income before investment expenses allocations and Exhibit 7 shows the components of net investment income over the past five years on a dollar value and percentage basis.

As expected, Exhibit 7 shows that gains and losses have been quite variable over the last five years of market volatility. Investment expenses have remained relatively static as a percentage of investment income. Investment income excluding gains has shown a steady decline throughout the five year period and, even after adding strong investment gains, is down on an absolute value from 2010.

Exhibit 6: Composition of 2011 P&C Insurance Industry Investment Income

		Balance Sheet ('000)	Realized Gains / (Losses) ('000)	Income excluding gains / losses on FV Option ('000)	Gain / (Loss) From FV Option ('000)
Short Term Investments, Bonds and Debentures (1 year or less)	01	12,110,161	21,185	423,040	-8069
Bonds and Debentures > 1 year and < than 5 years	02	56,648,926	346,399	1,854,816	193317
Bonds and Debentures > 5 years	05	21,414,561	303,818	757,638	74124

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		Balance Sheet ('000)	Realized Gains (Losses) ('000)	Income excluding gains/ losses on FV Option ('000)	Gain / (Loss) From FV Option ('000)
Mortgage Loans					
- ≤ 80% Loan to Value Ratio	03	1,315,788	814	80,488	2325
- Other	04	320,710	541	5,619	0
Non-Mortgage Loans (consumer/commercial)	07	150,503	0	1,988	0
Preferred Shares					
- Debt	10	519,217	2,317	18,187	-274
- Equity	11	3,313,083	67,472	113,658	-4509
Common Shares	15	10,874,910	258,652	378,893	-443429
Investment Properties	20	628,456	8,464	28,852	9383
Other Investments	30	1,712,586	86,707	-31,150	-34743
Total Investments	39	109,008,901	1,096,369	3,632,029	-211875
(1) Investment income figures exclude allocation of investment expenses					

Source: MSA Research Inc. based on P&C page 40.07 available data

Exhibit 7: Five Year Summary of Sources of Net Investment Income

Year	Investment Income Excluding Gains ('000)	Investment Gains (Losses) ('000)	Investment Expenses ('000)	Net Investment Income ('000)
2011	3,485,219	1,136,132	154,038	4,467,010
2010	3,907,014	788,876	153,964	4,541,926
2009	3,831,049	345,293	143,347	4,032,996
2008	4,096,594	-605,887	128,710	3,361,997
2007	4,202,341	1,258,564	159,844	5,301,058
2011	78.02%	25.43%	3.45%	100.00%
2010	86.02%	17.37%	3.39%	100.00%
2009	94.99%	8.56%	3.55%	100.00%
2008	121.85%	-18.02%	3.83%	100.00%
2007	79.27%	23.74%	3.02%	100.00%

Source: MSA Research Inc. based on P&C page 20.30 available data

An interesting road ahead

Effectively deploying a Canadian P&C insurance company's invested assets has always been a challenging management duty. The trade-offs between maximizing yield and preserving capital, while at the same time juggling capital rules and tax efficiency are difficult, particularly when several key determinants, such as equity portfolio capital weightings and actuarial accounting rules are in flux. And all that is before insurers take a position on market and rate direction. We are not naïve enough to assume that this stark information will cause changes in underwriting discipline but the reality is that, without such discipline, insurers will not justify their cost of capital and indeed put their capital at risk. A situation that is not good for insurers, their brokers or the policyholder they serve.