Wells, Canning & Associates

Research Note: Applying OTTI in Unusual Times

December 2008

Overview

The purpose of introducing the accounting concept known as other than temporary impairment (OTTI) is to reflect in financial statements the decline in value of investments if the decline is not temporary. It is important to note that OTTI does not require the price decline to be permanent; it only requires it to be other than temporary. One of the well known problems with OTTI guidance is that no bright line test has been established. While lack of guidance in normal markets is an issue, it is a real problem in today's chaotic financial environment.

A common test within the insurance industry is to review a security for possible impairment if there has been a 20% decline in value over a specified time period. In the current market environment, pricing across all asset classes is experiencing volatility that is several standard deviations away from any historical norms. This argues both that current pricing is temporary and that the 20% test applied by many insurance companies is not relevant.

The analysis that follows quantifies the fact that current fixed income pricing, by definition, cannot be anything but temporary. We do not expect pricing to return to the unusually tight spreads seen just prior to the market downturn. What we do expect is significant improvement in spreads when liquidity returns to more normal levels. An additional spread tightening would also be expected as we move through this business cycle.

The following examples illustrate the unusual nature of our current situation:

- ABS, in the shorter duration buckets with yields 7 and 8 standard deviations from the norm, spreads would decrease by 600 to 700 basis points if the market were to tighten to a 2 standard deviation event. A 700 basis point decrease in yield for a bond with a duration of 3 would lead to a price increase of 21%.

- A rated corporates in the 4-6 duration bucket would fall 445 basis points if the market were to tighten to a 2 standard deviation event. This will lead to expected price returns of 22% from current levels.

A decline in spreads to two standard deviations above the historical mean was chosen as a conservative level. A two standard deviation event in itself is considered an extreme event.

Methodology

The analysis looks at corporates, municipals, agency debentures and securitized sectors, all broken into duration buckets. In addition, corporates were subdivided by credit quality into AA, A and BBB categories. An historical average spread was calculated from March 1998 to March 2008 using constituent level data of the Merrill Lynch indices (Table 1). If a specific duration bucket did not have at least 20 constituents consistently over the time frame, the bucket was removed from the analysis to minimize security specific influence on the sector averages.

Table 1. Historical Spreads (bps)						
Sector	0-2	2-4	4-6	6-8	8-10	>10
ABS	70	114	150	152		
Agency	30	45	60	52	56	40
AA Corp	60	70	84	98	99	100
A Corp	84	100	115	122	129	130
BBB Corp	151	161	183	169	204	173
MBS		160				
Municipal	92	101	98	95	94	97
CMBS	72	97	93			

The same methodology for calculating historical averages was used to calculate current spreads as of 11/30/2008 (Table 2).

Table 2. Current Spreads (bps)						
Sector	0-2	2-4	4-6	6-8	8-10	>10
ABS	916	1,075	836	661		
Agency	135	158	135	98	95	99
AA Corp	551	515	485	373	288	284
A Corp	918	738	752	523	603	403
BBB Corp	1,001	907	889	625	619	479
MBS		371				
Municipal	161	201	210	214	273	292
CMBS	1,044	1,233	1,251			

The difference between current and historical spreads was calculated and expressed as a number of standard deviations. Taking the difference between current spreads and historical averages and dividing it by the standard deviation, known as the Z score, provides a measure of the uniqueness of current spreads (Table 3). Z scores can be translated into a probability of occurrence in a normal distribution bell curve. A Z score of 2, a two standard deviation event, occurs only 2.3% of the time.

Table 3. Number of Standard Deviations (bps)						
Sector	0-2	2-4	4-6	6-8	8-10	>10
ABS	8.5	7.3	4.5	3.5		
Agency	3.6	3.3	2.1	1.2	1.2	2.4
AA Corp	7.8	5.6	5.4	3.4	2.3	2.5
A Corp	8.9	5.7	6.6	4.1	4.4	3.4
BBB Corp	4.7	4.6	4.5	3.8	2.6	3.8
ABS		1.9				
Municipal	1.7	2.8	4.3	6.7	11.6	14.0
CMBS	5.2	10.9	13.5			

The final step examines the extent of spread tightening if spreads move to a two standard deviation event (Table 4). A drop in spreads to two standard deviations above the mean was chosen as a conservative level. A two standard deviation event in itself is considered an extreme event.

Table 4. Change in Spreads 2 Standard Deviation Event (bps)						
Sector	0-2	2-4	4-6	6-8	8-10	>10
ABS	(648)	(699)	(381)	(218)		
Agency	(46)	(44)	(2)	31	25	(10)
AA Corp	(365)	(285)	(253)	(113)	(26)	(39)
A Corp	(647)	(412)	(445)	(204)	(260)	(113)
BBB Corp	(490)	(424)	(392)	(217)	(97)	(143)
MBS		17				
Municipal	12	(30)	(60)	(83)	(148)	(167)
CMBS	(598)	(927)	(986)			

Impairment is not just about price

As stated previously, we do not expect spreads to return to the historically tight levels. Conversely, we do not expect spreads to remain at the current extremes. Despite concerns about the severity and the longevity of the current recession, we expect most investment grade securities to mature as stated or estimated in the case of securities such as mortgages. Some securities are even expected to improve in credit quality as they move closer to maturity.

> **Example:** many commercial mortgage backed securities (CMBS) that were underwritten during times of stricter standards show improved levels of coverage today versus

origination. At the same time however spreads have widened to extreme levels. This is evident in the 13.5 standard deviation event in the 4-6 year duration bucket. Given that spreads over a two week time frame in December widened 500 basis points (bps) and then tightened 200 bps, one can argue that any spreads seen today are temporary. If these extremely wide yield spreads had occurred on December 31st, many investors would be faced with impairing CMBS holdings at the current levels. A better method is to examine the credit quality of individual holdings. Clearly those with strong fundamentals should not be considered impaired at prices that are driven by a lack of liquidity and a surplus of fear. Lack of liquidity and extreme fear are by their very nature temporary.

Even those securities that have experienced some form of credit deterioration should not be impaired. The concept of impairment involves a firm's ability and willingness to hold the security to recovery or maturity. If the recovery value is likely to be at or higher than cost in a time frame that can be considered temporary, the asset should not be impaired.

What is temporary?

Due to the lack of guidance given on addressing OTTI, there is no definition of how long is temporary and how long is other than temporary. Many, for lack of better guidance, have used a six month or a twelve month time frame before reviewing the security for impairment. We argue that such time frames are arbitrary and too short in many cases. In the current market environment, the time frame should be more closely related to a return of reasonable levels of liquidity.

One way to measure levels of liquidity is to examine the bid-offer spreads on securities. Insurance companies should work with their investment managers to address specific spread targets to indicate that the market has returned to normal trading. Another method of defining temporary is to use points in the business cycle. Many investments suffer temporary price declines during recessions only to recover as we move toward a recovery.