

Constant Maturity Swap Rates and Related Bonds and CDs

Part One – Introduction

The financial markets have seen an explosion of products that are much different from what investors have viewed as “traditional” investments. Floaters, inverse floaters, principal protected notes, range notes, curve steepeners, and CPI-linked notes are among some of the types of products being offered in today’s market. What many of these investments have in common and what makes them different from “traditional” securities is that the return that you receive for the term (life) of the investment depends upon the performance of an underlying index or rate. For example, an investment that is linked to the CPI (Consumer Price Index) typically pays the investor, periodically, a “spread” above the reference CPI rate. The coupon may be set at +240 points above the CPI. If the current CPI rate is 3.00%, +240 would set the coupon rate for that time period at 5.40%.

Another common reference rate for many financial products is something known as the “Constant Maturity Swap” rate. Below is an easy way of understanding how this reference rate works.

A swap is an agreement by two counterparties in a transaction to exchange the future stream of cash flows according to an agreed formula. How are those cash flows determined? By their interest rate. Interest rate swaps are the most common type of swap in the financial markets. Let’s say that Company A wants to borrow money. They decide that the interest rate that Bank B is going to charge is acceptable — let’s assume 4.00% for the 5 year loan. After several months, the market conditions change. Company A finds that they would rather take advantage of the floating rates available in the market than pay a fixed rate. At this time, another party, Company B, is in the market looking to do the opposite. They find that a fixed payment fits their business planning better than the floating rate that they are paying on their \$1 million 5 year loan. An exchange of cash flows occurs between the two companies. The reason for this exchange is that swapping the two income streams alters the quality or structure of the coupon cash flows making them more compatible with the financing needs of each company. Now let’s apply the swap idea to Constant Maturity Swap Rates.

Remember that the swap has a floating rate portion and a fixed rate portion. How do you determine the interest rate? One part of the swap is usually set against LIBOR (London Interbank Offered Rate) an index similar to our Fed Funds rate. The other part of the swap, the constant maturity side (where the CMS name comes from) is set against a point on the fixed maturity market rate (like an interest rate curve) on a periodic basis. The constant maturity rate is the yield on an instrument with a LONGER LIFE than the reset period, so the investor who is exposed to a constant maturity swap based security is affected by changes in interest rates. The most important factor for the constant maturity swap is the shape of the future yield curve. This will give the investor an idea of what to expect as the coupon pays or resets periodically. Generally speaking the CMS Rate is closely related to the rate you would expect on the same maturity treasury bond. Therefore, to get a feel for where those rates are currently, you can look at the 2 year treasury rate and compare it to the 30 year treasury rate. In practice, the yield curve and the swap rates are sometimes different because of the different maturities of real bonds versus the point on the yield curve identified by the CMS

The CMS rates are published in the major U.S. newspapers, like the Wall Street Journal, a few times each week. This information can be found in the financial or investing section of the paper. Simply subtract one rate from the other, 10 yr. CMS from 2 yr CMS for example, and apply that to whatever factor is used for your investment. You can also check rates at <http://www.federalreserve.gov/releases/h15/update/> (Look at Interest Rate Swaps.) By checking the rates from time to time, you can keep track of how your investment is performing! **You may also view the Interest Rate Swaps section on our new Rates page on the Shop4Bonds website at: <http://www.jwkorth.com/rates.php>.**

Part Two - Q and A: Constant Maturity Swap Rate Based Bonds and CDs

Q. WHAT IS THE CONSTANT MATURITY SWAP RATE, OR CMS?

A. To precisely understand a Constant Maturity Swap Rate or CMS, you need to understand the following concepts:

1. The Swaps Market Meets a Financial Need — many financial entities who either owe fixed rate debt or own fixed rate debt are desirous of changing that commitment to a floating rate obligation or vice versa. *(A good example is a bank that pays a floating rate on deposits and lends on a fixed rate. If they can change the floating rate to a fixed one, they can lower their risk that the floating cost will exceed their lending rate - in which case they would lose money.)*

2. One Party Pays Interest to the Other Party — each party to a fixed versus floating swap pays the other the interest rate on the same amount of money indicated by what side he is on. In the case of a Constant Maturity Swap the floating side pays the 3 Month LIBOR rate and the fixed side pays the rate set by the market place for the period of the swap. Generally 1 to 30 years.

3. Both Parties Have Risk And the Longer the Swap the More Risk — owners of the floating side will pay more money to the fixed rate side than vice versa if the floating side ever gets higher than the fixed rate side.

4. The Risk is Priced by the Market in the Fixed Rate Side — The floating rate payer must always pay the 3 month LIBOR rate and he offers to pay this based on what fixed rate he will receive. The longer the swap period in most normal markets the higher the fixed rate that will be charged.

5. Constant Maturity Swap Rates Have A Reported Market and History — there is a broad market to help financial entities swap rates between each other and the market prices are reported by the Board of Governors of the Federal Reserve System Daily. *(You can view these prices at the following link: <http://www.federalreserve.gov/releases/h15/update>. More on how to read them is below.)*

Q. HOW IS THE CONSTANT MATURITY SWAP RATE (CMS) REPORTED?

A. The Constant Maturity Swap Rate is reported by the US Federal Reserve in the release shown by the link above as "Interest Rate Swaps" and in the Wall Street Journal periodically as Swap Rates. They are shown for maturities 1, 2, 3, 4, 5, 10 and 30 years. Please see the complete Federal Reserve Release at the end of this Q and A. **You may also view the Interest Rate Swaps section on our new Rates page on the Shop4Bonds website at: <http://www.jwkorth.com/rates.php>.**

Q. WHY SHOULD I INVEST IN A SECURITY WITH THE CONSTANT MATURITY SWAP RATE IN THE FORMULA FOR HOW I WILL BE PAID INTEREST?

A. In a nutshell, because there is a large chance you may receive higher interest than with a straight fixed rate instrument.

There are currently many different structured corporate bonds and FDIC insured certificates of deposit that have a formula for paying interest based on the Constant Maturity Swap Rate. Usually the interest rate is fixed for one or two years and then it floats based on a multiple of the difference between two CMS rates. The sellers of these securities are creating them to hedge other risks internally or to take advantage of other contracts and often the risk profile can be very attractive to investors.

Q. CAN YOU GIVE ME AN EXAMPLE OF A RISK PROFILE FOR A CMS-BASED SECURITY?

A. Recently we offered a Certificate of Deposit from a major banking institution. It was FDIC insured so that there was essentially no risk in receiving the principal back on your investment if held to maturity. The interest rate was 11.00% for the first year and then was based annually on 10 times the difference between the 2 year and 30 year CMS rate. The CD was payable quarterly.

On the Federal Reserve Statistical Release below, that rate at the time of this writing for the 2 year 3.43%, and the 30 year 5.00%. (*See Federal Reserve Release below boxed line items.*) To calculate the current rate, it would be $5.00\% - 3.43\% = 1.57\% * 10 = 15.70\%$. Today, if this CD was not called, and it was the quarterly fix date for the interest payment, you would be receiving 15.70% divided by four (because it is a quarterly payment) or 3.925% in cash.

Over the past 14 years, the average difference between the 2 year CMS Rate and the 30 year CMS Rate has been 1.24%. Therefore you would have earned 12.40% ($1.24\% * 10$) on the CD we have described. (*Past performance does not indicate future results.*)

Q. ARE THESE CMS-BASED SECURITIES CALLABLE?

A. Generally the answer is yes and usually after the initial interest period. The initial fixed coupon is usually quite high and if the security is called at that time is still a good investment.

Q. WHO ARE SOME OF THE ISSUERS OF THESE SECURITIES?

A. They are some of the world's largest banks, investment banks, and corporations. Please contact one of our representatives for specific names.

Q. WHAT CAN I EXPECT IF I SELL A CMS-RELATED NOTE PRIOR TO MATURITY?

A. If the CMS rates are similar to today and there has been no credit change of the issuer, you can expect to receive near par for your CD or bond. If the rates are flat or inverted then you may receive a substantial discount and it would be wise to wait for the CMS rates to normalize before selling your security.

Federal Reserve Statistical Release



H.15

Selected Interest Rates (Daily)

The weekly release is posted on Monday. Daily updates of the weekly release are posted Tuesday through Friday on this site. If Monday is a holiday, the weekly release will be posted on Tuesday after the holiday and the daily update will not be posted on that Tuesday.

FEDERAL RESERVE STATISTICAL RELEASE

H.15 DAILY UPDATE: WEB RELEASE ONLY

SELECTED INTEREST RATES

For use at 4:15 p.m. Eastern Time

Yields in percent per annum	July 9, 2008	
Instruments	2008 Jul 7	2008 Jul 8
Federal funds (effective) 1 2 3	1.99	1.97
Commercial Paper 3 4 5		
Nonfinancial		
1-month	2.13	2.16
2-month	2.18	2.15
3-month	n.a.	n.a.
Financial		
1-month	2.34	2.34
2-month	2.52	2.57
3-month	2.68	2.67
CDs (secondary market) 3 6		
1-month	2.47	2.48
3-month	2.78	2.78
6-month	3.15	3.10
Eurodollar deposits (London) 3 7		
1-month	2.65	2.65
3-month	3.00	3.00
6-month	3.30	3.25
Bank prime loan 2 3 8	5.00	5.00
Discount window primary credit 2 9	2.25	2.25
U.S. government securities		
Treasury bills (secondary market) 3 4		
4-week	1.77	1.83
3-month	1.84	1.83
6-month	2.05	2.04
1-year	2.19	2.19
Treasury constant maturities		
Nominal 10		
1-month	1.80	1.86
3-month	1.87	1.86
6-month	2.10	2.09
1-year	2.26	2.26
2-year	2.47	2.47
3-year	2.78	2.78
5-year	3.23	3.19
7-year	3.53	3.49
10-year	3.95	3.91
20-year	4.55	4.51
30-year	4.51	4.46
Inflation indexed 11		

5-year	0.60	0.67
7-year	1.06	1.08
10-year	1.43	1.45
20-year	1.99	1.98
Inflation-indexed long-term average 12	1.99	1.98
Interest rate swaps 13		
1-year	3.11	3.04
2-year	3.53	3.43
3-year	3.89	3.79
4-year	4.13	4.02
5-year	4.29	4.18
7-year	4.53	4.43
10-year	4.76	4.66
30-year	5.07	5.00
Corporate bonds		
Moody's seasoned		
Aaa 14	5.57	5.52
Baa	7.05	7.02
State & local bonds 15		
Conventional mortgages 16		

n.a. Not available.

Footnotes

1. The daily effective federal funds rate is a weighted average of rates on brokered trades.
2. Weekly figures are averages of 7 calendar days ending on Wednesday of the current week; monthly figures include each calendar day in the month.
3. Annualized using a 360-day year or bank interest.
4. On a discount basis.
5. Interest rates interpolated from data on certain commercial paper trades settled by The Depository Trust Company. The trades represent sales of commercial paper by dealers or direct issuers to investors (that is, the offer side). The 1-, 2-, and 3-month rates are equivalent to the 30-, 60-, and 90-day dates reported on the Board's Commercial Paper Web page (www.federalreserve.gov/releases/cp/).
6. An average of dealer bid rates on nationally traded certificates of deposit.
7. Bid rates for Eurodollar deposits collected around 9:30 a.m. Eastern time.
8. Rate posted by a majority of top 25 (by assets in domestic offices) insured U.S.-chartered commercial banks. Prime is one of several base rates used by banks to price short-term business loans.
9. The rate charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program, which became effective January 9, 2003. This rate replaces that for adjustment credit, which was discontinued after January 8, 2003. For further information, see: www.federalreserve.gov/boarddocs/press/bcreg/2002/200210312/default.htm. The rate reported is that for the Federal Reserve Bank of New York. Historical series for the rate on adjustment credit as well as the rate on primary credit are available at www.federalreserve.gov/releases/h15/data.htm.
10. Yields on actively traded non-inflation-indexed issues adjusted to constant maturities. The 30-year Treasury constant maturity series was discontinued on February 18, 2002, and reintroduced on February 9, 2006. From February 18, 2002, to February 9, 2006, the U.S. Treasury published a factor for adjusting the daily nominal 20-year constant maturity in order to estimate a 30-year nominal rate. The historical adjustment factor can be found at www.treas.gov/offices/domestic-finance/debt-management/interest-rate/ltcompositeindex_historical.shtml. Source: U.S. Treasury.

11. Yields on Treasury inflation protected securities (TIPS) adjusted to constant maturities. Source: U.S. Treasury. Additional information on both nominal and inflation-indexed yields may be found at www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html.
12. Based on the unweighted average bid yields for all TIPS with remaining terms to maturity of more than 10 years.
13. International Swaps and Derivatives Association (ISDA(R)) mid-market par swap rates. Rates are for a Fixed Rate Payer in return for receiving three month LIBOR, and are based on rates collected at 11:00 a.m. Eastern time by Garban Intercapital plc and published on Reuters Page ISDAFIX(R)1. ISDAFIX is a registered service mark of ISDA. Source: Reuters Limited.
14. Moody's Aaa rates through December 6, 2001, are averages of Aaa utility and Aaa industrial bond rates. As of December 7, 2001, these rates are averages of Aaa industrial bonds only.
15. Bond Buyer Index, general obligation, 20 years to maturity, mixed quality; Thursday quotations.
16. Contract interest rates on commitments for fixed-rate first mortgages. Source: FHLMC.

Note: Weekly and monthly figures on this release, as well as annual figures available on the Board's historical H.15 web site (see below), are averages of business days unless otherwise noted.

Current and historical H.15 data are available on the Federal Reserve Board's web site (www.federalreserve.gov/). For information about individual copies or subscriptions, contact Publications Services at the Federal Reserve Board (phone 202-452-3244, fax 202-728-5886). For paid electronic access to current and historical data, call STAT-USA at 1-800-782-8872 or 202-482-1986.

Description of the Treasury Nominal and Inflation-Indexed Constant Maturity Series
Yields on Treasury nominal securities at "constant maturity" are interpolated by the U.S. Treasury from the daily yield curve for non-inflation-indexed Treasury securities. This curve, which relates the yield on a security to its time to maturity, is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of quotations obtained by the Federal Reserve Bank of New York. The constant maturity yield values are read from the yield curve at fixed maturities, currently 1, 3, and 6 months and 1, 2, 3, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10-year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity. Similarly, yields on inflation-indexed securities at "constant maturity" are interpolated from the daily yield curve for Treasury inflation protected securities in the over-the-counter market. The inflation-indexed constant maturity yields are read from this yield curve at fixed maturities, currently 5, 7, 10, and 20 years.