Quarter 4, 2006, Volume 21, No. 4

CMS BondEdge Municipal Analytics Web Seminar a Success!

The recent CMS BondEdge Web seminar: Municipal Analytics in BondEdge®, which focused on the enhanced municipal capabilities in BondEdge, was our most successful online event to date – over 115 portfolio managers and other fixed income professionals logged on to the presentation. Louis J. Gehring, Senior Vice President and BondEdge Product Manager, reviewed key components of the enhanced capabilities, and then presented several case study examples followed by an online Q&A session.

All attendees were given post-seminar access to the Web seminar recording and PowerPoint® presentation. If you were unable to attend the event and are interested in requesting online access, please click here or contact CMS BondEdge Marketing at (877) 850-2900 or via email at be.marketing@interactivedata.com.

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CMS BondEdge to Present at Municipal Bonds Conference

CMS BondEdge will participate in the World Research Group's Municipal Bonds Fall Summit to be held in New York City on Wednesday, November 29.

During the conference, Louis J. Gehring, Senior Vice President and BondEdge Product Manager, will speak on a 1-hour panel discussion, "Performance Attribution Analysis and Tools for Municipal Bond Funds," from 11:00 AM-12:00 PM EST, which will include such topic subsets as factors in achieving and measuring returns and methodologies for performing factor-based and returns-based analysis. CMS BondEdge will also exhibit and serve as Silver Sponsor for the event.

*For more information about the event or to register, please contact Christopher Torres at **(646) 723-8039** or via email at christopher.torres@worldrg.com and mention CMS BondEdge.*

*For more information about municipal analytics in BondEdge, please contact Lisa Herbert, Director of Marketing, at **(310) 479-9715** or via email at lisa.herbert@interactivedata.com.*

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3rd Quarter 2006 Fixed Income Markets Review: *Market Flash*

3rd quarter fixed income performance was dominated by an action that did not occur – the Federal Reserve voted to leave short term rates unchanged at its August meeting, ending a run of 17 consecutive rate increases. The U.S. Treasury curve rallied during the first half of the quarter as this news was anticipated, and then gained momentum after the August Fed meeting.

The above is a partial reprint of our quarterly capital markets report, "Market Flash". ***To view this report in its entirety, please click here.***

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BondEdge News

BondEdge Version 5.50 - *Coming Soon!*
Release Date: November 30, 2006

BondEdge Version 5.50 is scheduled for release on November 30, 2006. Here is a preview of the enhancements planned for this release:

TBA CUSIPs & Dollar Rolls – TBA Mortgage CUSIPs will be added to the BondEdge database, with the ability to capture Dollar Roll strategies by defining a portfolio-specific "earned reinvestment rate" associated with TBA positions (click here for related article).

New Simulation Tools – We are introducing a redesigned Specified Scenario simulation for projecting a portfolio's total return under various yield curve and/or spread shifts, along with a significant upgrade to the portfolio versus benchmark, Probability-Weighted Return simulation. Scenarios can be shared between the two analyses, eliminating the need to rebuild the same scenario twice. Both simulations will offer the ability to input shifts to the Treasury and Muni yield curves, using duration-matched or maturity-matched logic, along with spread changes for corporate bonds using a matrix based on quality ratings and either primary sector, industry, or even at the specific issuer level. For example, you could simulate the impact of a change in interest rates (curve flattening, steepening, etc.), along with a widening of corporate spreads on all but the highest quality bonds, with a more pronounced widening in selected industries, while specifying exceptions to these trends for particular issuers. Changes to municipal credit spreads could be specified type, i.e., G.O., Revenue, Pre-Refunded, ETM and Insured. For MBS, the simulations offer the flexibility to input spread changes by collateral type or by tranche type for CMOs. Based on these new features, a number of clients have expressed an interest in running hundreds of Specified Scenario simulations to use in constructing a VaR analysis. *If you are interested in how this is done, please contact your CMS BondEdge Representative.*

Adjustable Rate Home Equity Loan Prepay Model – As ABS issuance continues to grow and Home Equity Loan deals have become the largest component of the ABS universe, we continue to make improvements in our ABS offering. In version 5.50, we are releasing a new prepayment model for deals backed by Adjustable Rate Home Equity Loans (click here for related article).

Municipal Portfolio Management Tools – Many private wealth managers are now using the reports and analytics in BondEdge to provide a higher level of service to their clients. We're expanding the tools in BondEdge that are designed specifically for portfolios containing tax-exempt municipal securities as well as taxable bonds. In this release we have added more descriptive information for municipal securities, such as

underlying ratings for insured bonds, more information about credit enhancement and other data. An expanded Contribution to Duration report will show the portfolio's duration exposure by Muni type, and we are revising the second and third muni sectors to be consistent with those used by the major muni index providers. The custom report writer will have a new features that computes the % of the portfolio that is taxable, % tax-exempt (Federal, State or both), the % with Credit Enhancement, and other key criteria. The Contribution to Duration report in Compare will display exposures at the secondary sector (G.O., REV, Insured, Pre-Ref., ETM) level for Munis so that you can easily see your contributions to the portfolio's duration by these categories. Finally, we're adding recently pre-refunded municipal bonds to the Portfolio Alerts report to help you track the impact of these actions on your portfolios.

We are finalizing an agreement with Lehman Brothers that will allow us to construct their Municipal Bond indices using constituent-level data. Certain Lehman Muni indices will be made available in BondEdge analyses over the coming months, including Returns-based Performance Attribution reports. *If you are interested in subscribing to the Lehman Muni indices, please contact your CMS BondEdge Representative.*

Compare's Contribution to Duration Report: Exposure Subtotals – To meet the needs of clients who prefer to aggregate their portfolio exposures at different levels, we are adding new subtotals to the Compare "Contribution to Duration" report that summarize a portfolio's holdings and contribution to duration into the super-categories of "Government", "Credit" and "Securitized", with further breakdowns within those headings, as follows:

Government (U.S.)	**——— Credit ———**		**Securitized**
Treasury	*Corporate*	*Non-Corporate*	*Pass-thru*
Agency	Industrial	Sovereign	*ARM*
	Finance	Supranational	*CMO*
	Utility	Foreign Agency	*ABS*
		Other Govt.	*CMBS*

This new section is an addition to the existing report and allows you to see combined exposures for Treasury and Agencies, to separate Foreign Agencies from U.S. Government agencies, and to see your total exposure to MBS/ABS/CMBS holdings.

Performance Attribution with Custom-weighted Indices – You will be able to use custom-blended indices (e.g., 30% of Index 1, 50% of Index 2, 20% of Index 3) in Factors-based Performance Attribution (PART) analyses.

If you have any questions about these upcoming features or are interested in obtaining the pre-release of version 5.50 as soon as it is available, please contact your CMS BondEdge Representative.

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The New CMS BondEdge Adjustable Rate Home Equity Loan Prepayment Model

Introduction

Prior to 2002, adjustable rate home equity loans (ARM HELs) accounted for approximately 32% of the HEL issuance, but since that time, the proportion of ARM HELs has risen to 70%. In response to this dramatic issuance trend, BondEdge version 5.50 will employ a new CMS BondEdge Adjustable HEL prepayment model. This article provides an overview of the model and demonstrates some results.

Model Overview

The prepayment projections from the new CMS BondEdge Adjustable HEL prepayment model are based on five major components: the first reset date, turnover, interest rate-driven prepayments, defaults and credit curing.

Adjustable rate loans typically start with a low teaser rate and then reset much higher rates (becoming "fully indexed" over time). As the first reset date approaches, prepayment speeds increase dramatically due to the impending changes in the loan characteristics. The new model recognizes the time to the first reset and the reset margin and calculates a first reset prepayment speed that reflects the accelerated prepayment behavior of borrowers.

Prepayments due to turnover are caused by events such as relocation, marriage, divorce, destruction of the house, etc. For HEL collateral, the baseline turnover speed is much higher than that of Agency collateral. A key element influencing HEL turnover is the rate of home price appreciation. If home prices increase dramatically, borrowers' loan-to-value (LTV) ratios will fall to a level that qualifies them for loans with more attractive rates. In the new Adjustable HEL prepayment model, home price appreciation is measured by utilizing the Home Pricing Index (HPI). Based on historical data, a 12% annualized increase in the HPI causes turnover rates to approximately double.

Interest rate-driven prepayments are largely caused by interest rate savings. A measure of the percentage savings available to a borrower is found by comparing the difference between the present values of the cash flows based on the current loan to that of a new fixed-rate loan with a potentially more favorable rate. However, when the yield curve is steep, ARM borrowers are more likely to refinance down the curve to another ARM. The new Adjustable HEL prepayment model uses both the percentage savings available and the difference in the 1-year and 10-year Treasury yields to best reflect the incentives for ARM-to-ARM and ARM-to-fixed refinancing. Refinancing costs and penalties are also taken into account in the calculation.

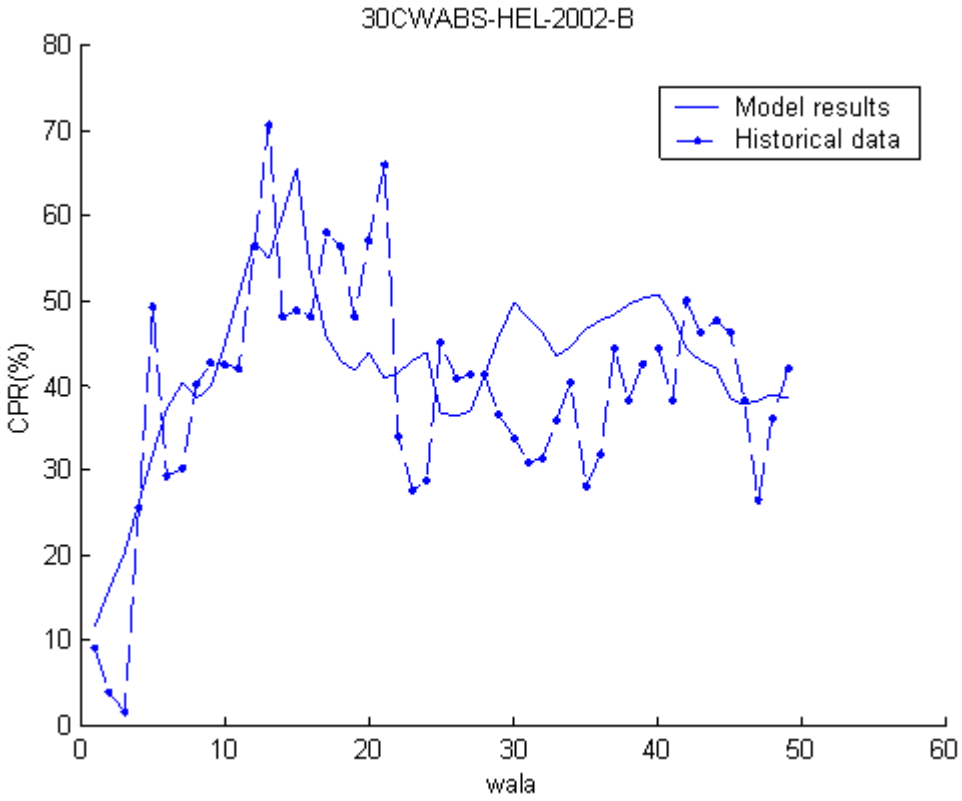
The default component of HEL prepayments does not follow a standard default curve. This is due to the fact that HEL borrowers tend to have lower credit scores than Agency borrowers. Therefore, there is a greater risk of default with HELs. In addition, if a borrower's credit improves, he/she will tend to refinance into a loan with a better rate. This introduces a negative selection effect on the pool so that the overall quality of the pool does not improve over time as Agency mortgage pools do. In this new model, the defaults reach a level of 4.5% CPR in the 42nd month before falling off gradually to maturity.

Prepayments due to credit curing occur as borrowers improve their credit score or LTV ratios. Even without any external interest rate incentives, HEL borrowers with improving credit curing can prepay up to 25% CPR faster.

Other factors considered in the model include the hybrid loan type, aging, burnout, margin adjustment and seasonality. In particular, loans that adjust more frequently tend to prepay faster. Also, as with fixed rate mortgages, HELs exhibit aging and burnout; however, the aging process is somewhat accelerated and burnout is less pronounced for HEL verses Agency collaterals. Finally, an ARM borrower pays a margin over some reference index rate (e.g., 1-year CMT). Higher margins are indicative of lower credit quality and this is used to adjust the interest rate driven refinancing projected by the model.

Model Results

Unlike the Agency collateral market, there are no generic ARM HELs. Consequently, it is difficult to study prepayment histories as the population of loans is unstable over time. However, for illustrative purposes, we examine the historical and projected prepayments for the ARM backed HEL deal CWABS-HEL-2002-B given in the chart below. The new model captures the key prepayment characteristics of the collateral successfully. In general, the new model produces faster prepayment speeds than the old model, which in turn shortens the average life of the collateral and the associated tranches.



The new ARM HEL prepayment model is included with BondEdge version 5.50, available beginning November 30, 2006.

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TBAs and Dollar Rolls in BondEdge

With BondEdge version 5.50, we will introduce TBA CUSIPs into the BondEdge database, along with the ability to model "dollar roll" strategies for portfolios holding TBAs.

TBA CUSIPs are 8 characters long and use the following convention:

Position 1-2:	Product code (single family, etc.); 01 = single family (most common)
Position 3:	Issuer (N=GNMA, F=FNMA, R=FHLMC)
Position 4-6:	Coupon rate; 6th position = 0 for *x.00%*, = 2 for *x.50%*
Position 7:	Maturity years; 4 = 15-year, 6 = 30-year
Position 8:	Delivery month; digits 1-9 = Jan-Sept, then A, B, C for Oct-Dec

Note that this means the same TBA CUSIP gets reused every year (e.g., the TBA for FNMA 6.50%, 30-year pools for October Settlement is 01F0626A, this year, next year, and every year).

By buying TBAs, a portfolio's exposure to the MBS market is increased without requiring an immediate outflow of funds to purchase actual securities. As the prices of the underlying MBS that are deliverable under the TBA contract fluctuate with changes in interest rates, the price of the TBA, which represents a future obligation to buy those MBS, also fluctuates. In this way, TBAs are like futures contracts – the portfolio's market value is unchanged when the TBA position is established, but its sensitivity to MBS has increased.

Dollar Rolls – If the investor chooses to roll the position, he effectively sells back to the dealer the pools that would have been delivered and receives cash from the dealer. That cash, which is typically invested in short-term, high quality investments, would in theory be used to purchase similar pools from the dealer on the next TBA Settlement Date unless the position is rolled again (which commonly occurs). When executing this "dollar roll" strategy, the investor gives up the coupon income and principal paydowns on the pools he would have received had he not rolled the TBA position forward to the next month, but instead earns income on the short-term investments. Also, there is a difference in price between the pools for current delivery and the next month's TBA price, which is lower. By deferring the purchase and rolling the TBA forward, the investor benefits from this so-called "drop".

Here are some of the BondEdge-specific aspects of incorporating TBAs and including a dollar roll strategy into a portfolio:

TBAs' Market Value – Although TBA positions do not, strictly speaking, impact the market value of a portfolio (because the payment required to purchase the deliverable pools does not occur until Settlement), many accounting systems represent TBA positions using a long position in an MBS pool and an offsetting (short) position in cash that matures on the TBA Settlement Date. Even prior to the addition of TBA CUSIPs to the BondEdge database, clients often used this approach to model TBAs in their portfolios using generic pass-throughs to represent the TBA's characteristics, and offsetting the market value of the generic MBS with a short position in a cash instrument that matures on the TBA Settlement Date. The TBA CUSIPs in BondEdge will also increase the market value of the portfolio so that an offsetting cash position can still be used. Clients can choose one of two ways to achieve the economic impact of holding TBAs and executing dollar roll strategies in their portfolios, depending upon their accounting system and preferences:

a. *The portfolio holdings also include the cash/short-term securities that are held against the future obligation to purchase the pools when the TBA settles.* In this case, the portfolio must include a short cash position to achieve a neutral impact on the portfolio's market value from the TBA CUSIP(s). Since the TBA CUSIPs in BondEdge will not generate any coupon (or principal) payments prior to the Settlement Date, clients should not use a coupon-bearing cash instrument, such as the standard cash CUSIP, 000000CM, to create the offsetting (short) entry, as this would create negative coupon cash flows when netted against the TBAs. We suggest using the 0%-coupon cash CUSIP, 000000CA, with a negative par value equal to the market value of the TBAs (assuming the short cash instrument is priced at par).

b. *The portfolio holdings do <u>not</u> include the cash or short-term securities that are held against the future obligation to purchase the pools under the TBA contract.* In this case, the short position to offset the TBA holdings' market value is not necessary because, by not including the short-term securities position, the "short-term securities/negative cash offset" position has already effectively been replicated. (To see this, note that in (a), there was a long position in short-term securities and a short cash position, while in (b), there is no long position, so no short position is needed). In this case there are no short-term securities generating interest income during the pre-TBA Settlement period. Instead, a new "TBA Reinvestment Rate" input screen can be used to specify the incremental income that should be credited to the portfolio, based on the market value of the portfolio's TBA holdings, in Simulations, PART, PFM and Cashflow Testing.

TBAs in Simulations, PART, PFM and Cashflow Testing – In Instantaneous simulations, TBA positions will never settle (the Settlement Date is never reached), and the portfolio will continue to hold the same TBA contract at the horizon date of the simulation. If approach (a) is used, the offsetting short-term holdings and offsetting (negative par) cash positions will also still be in the portfolio at the horizon date. If approach (b) is used, the TBA Reinvestment Rate will be reflected in the Income Return for the entire simulation period. In Aged simulations, the TBA position will start to generate coupon income and principal paydowns after the Settlement Date – in other words, it is assumed that pools were delivered. In reality, this would have required the portfolio manager to sell securities to raise cash to pay for the pools, but BondEdge does not sell any securities in a simulation. If approach (a) was used, the short-term investments will generate income until they mature; thereafter, the par value of those securities will earn reinvestment income through the simulation horizon date. Similarly, prior to the maturity date the income for the offsetting (short) position in the 0% coupon 000000CA CUSIP will be negative (due to amortization toward par). After it matures, its par value will generate negative reinvestment income, so the net income effect from these two positions will be zero (or close to zero). If approach (b) was used, the TBA Reinvestment Rate only generates income up to the Settlement Date; beyond that date, the simulation assumes the pools were delivered and thus are

generating coupon income.

We welcome your feedback on this new functionality. If you have any questions about using TBAs in BondEdge, please contact the Client Services Group or your CMS BondEdge Consultant.

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Liability-Driven Investment (LDI)

One of the hottest new topics in pension management today is "Liability-Driven Investment", or LDI. In this article, we briefly review what is meant by LDI and why it is generating so much attention. We also describe how BondEdge can assist investment managers who wish to offer an LDI strategy, and for pension plan sponsors who may wish to analyze different approaches to LDI for their fixed income assets.

As is widely known, the combination of falling interest rates and declining equity values during the first part of this decade took many U.S. pension funds from the surplus status they enjoyed throughout the 1990's to an under-funded position. The decline in rates increased the present value of pension liabilities, while the decline in equity values reduced the value of plan assets (compounded by the fact that many plans had increased their equity allocations during the '90's). Furthermore, U.S. accounting regulations are becoming more demanding with respect to the recognition of pension plan deficits on the sponsor's balance sheet (regulations in the U.K. have already moved in this direction), so there is growing interest in reducing the volatility of a plan's funding status. LDI strategies are designed to do just that – to link the duration of a pension plan's investments to the duration of its liabilities, thereby reducing the risk of the mismatches that have arisen in recent years.

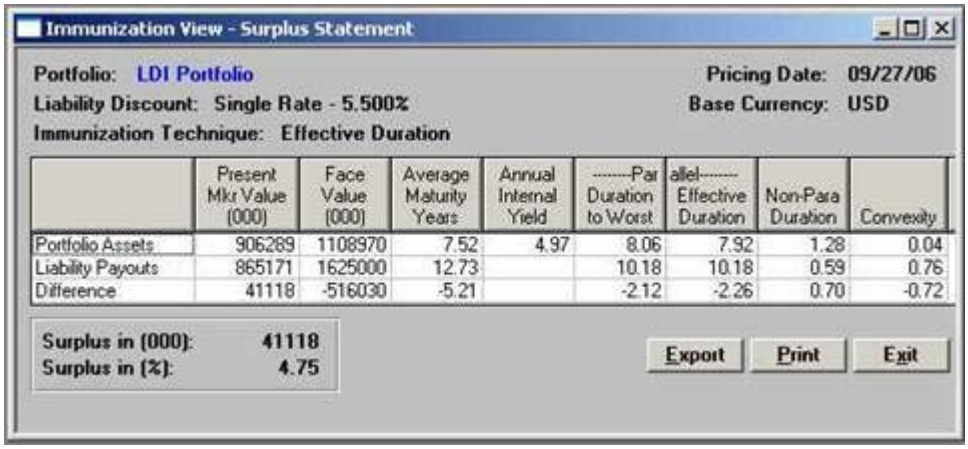
LDI recognizes that making a pension plan's investment decisions based only on maximizing return for a given level of return volatility does not incorporate the plan's liabilities into the investment decision process. Pension liabilities are "bond-like", in that they represent a series of relatively predictable, promised future cash flows, but the fixed income component of a plan's assets is typically benchmarked against one or more market indices with durations that have no relationship to the duration of the plan's liabilities – the duration of a bond index is typically 5 years or less, which may be 20+ years shorter than the duration of a plan's liabilities. An LDI strategy explicitly incorporates the duration of the liabilities into the investment strategy, which can be accomplished in different ways.

A simple LDI strategy might be to completely immunize the plan's liabilities with fixed income securities – in other words, invest the plan's assets in a bond portfolio with a duration equal to the duration of the liabilities – so that as interest rates fluctuate, changes in the values of the plan's assets and liabilities would offset each other. However, with yields still quite low this would likely be a costly approach as it would limit the plan's investment options and therefore would reduce its flexibility to invest in assets with a higher return potential. Furthermore, since pension liabilities are often extremely long-lived, with durations exceeding that of most available fixed income investments, this may not be practical. Also, this approach would mean abandoning the advantages of an objective, market-based return benchmark. Finally, if pension plans "en masse" started selling short maturity bonds in favor of long-maturity bonds, it could create a supply/ demand imbalance that would depress long-term yields, thereby increasing the duration of pension liabilities, requiring even greater purchases of long-maturity bonds, and so on.

A less drastic and more common LDI strategy involves the use of interest rate swaps to extend the duration of the plan's assets. In this case, the return earned by the fixed income portfolio excluding the swaps can still be evaluated against the chosen market benchmark(s), while the duration of, and return on the plan's overall asset mix can include the impact of the swaps. A core or core-plus investment manager can offer this type of LDI solution to pension plans, which allows the plan to rely on the manager's expertise to achieve a fair (market-based) return on its assets while meeting the objective of tying its investment strategy to its liabilities.

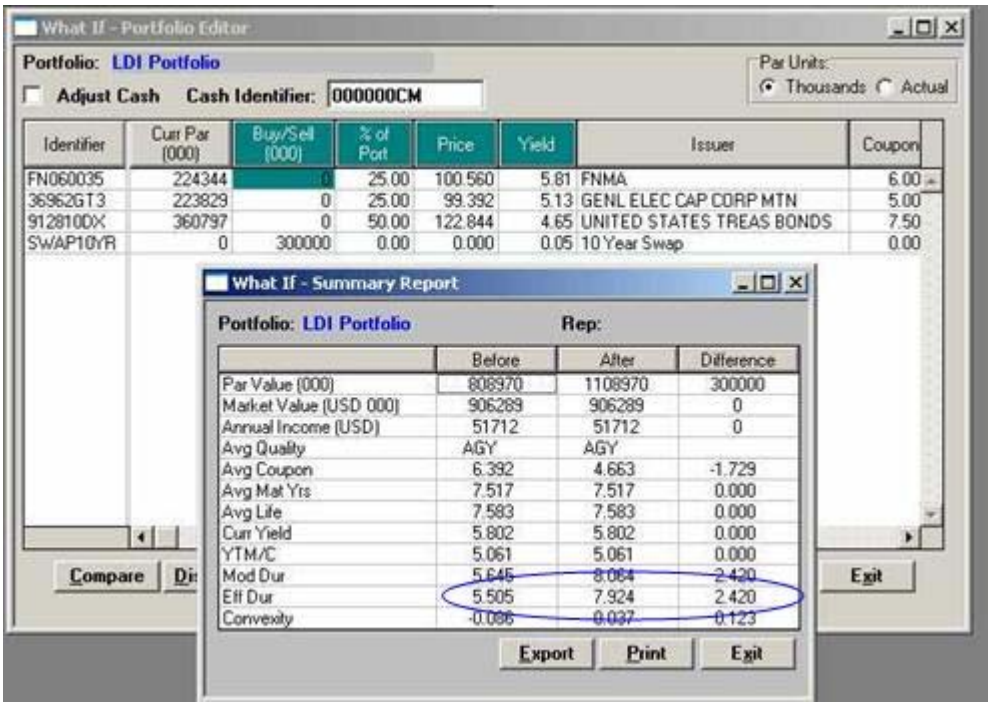
Using BondEdge to Evaluate LDI Strategies – BondEdge has an Asset/Liability module that allows portfolio managers to view the duration of an existing portfolio versus a specified series of liability payouts, or to construct an optimal portfolio to fund a set of liabilities based on user-defined criteria and one or more

"buy lists" of securities. The following Surplus Statement shows how a portfolio compares to a 20-year series of liability payouts that increase over time, based on user-specified assumptions about how to discount the liabilities:



The Asset/Liability module also shows how the surplus would vary as interest rates change.

To evaluate an LDI strategy that uses interest rate swaps, an investment manager can use the BondEdge What-If simulation to quickly see how adding one or more swaps will extend the duration of a portfolio. In this simple example, we add a 10-year swap to a simplified portfolio consisting of a 10-year U.S. Treasury (50%), a 5-year corporate bond (25%) and a recently issued, 6% MBA pass-through (25%). The What-If analysis shows how the duration of the portfolio is increased by adding the swap (note that the market value of the portfolio is unchanged, as the swap has zero value at inception):



A portfolio representing a pension plan's liability payouts can easily be constructed from 0% coupon bonds (or using the Private Placement model's principal payment schedule). This liability portfolio could then be compared to the investment portfolio, including swaps, using in-depth analyses such as the Compare Key Rate Durations report.

We will likely be hearing more about liability-driven investing as it gains more attention and popularity. If you would like to learn more about the BondEdge features described here, please contact your CMS BondEdge Representative.

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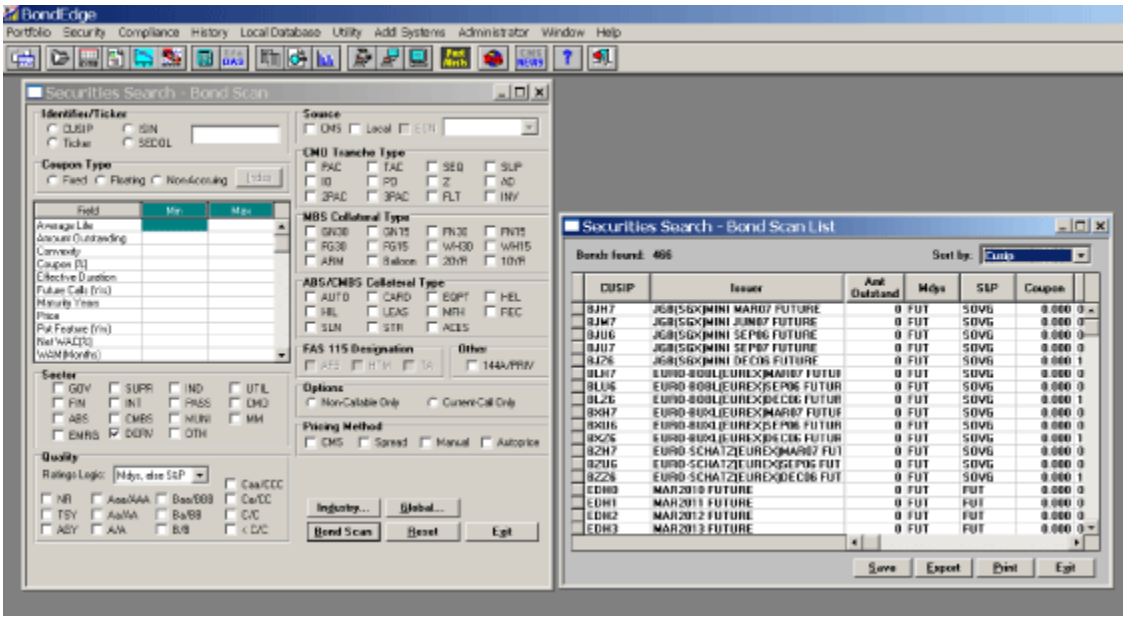
Client Services Q & A Group

Q. **What derivative securities are available in the CMS database?**

A. A list of available types is listed under CMS database coverage section in the Help screens. However, since we are constantly adding new securities, you may display the complete list along with the identifiers by doing the following:

Go to the *Securities Search – Bond Scan*,
Check the *DERV Sector* box
Click on *Bond Scan*

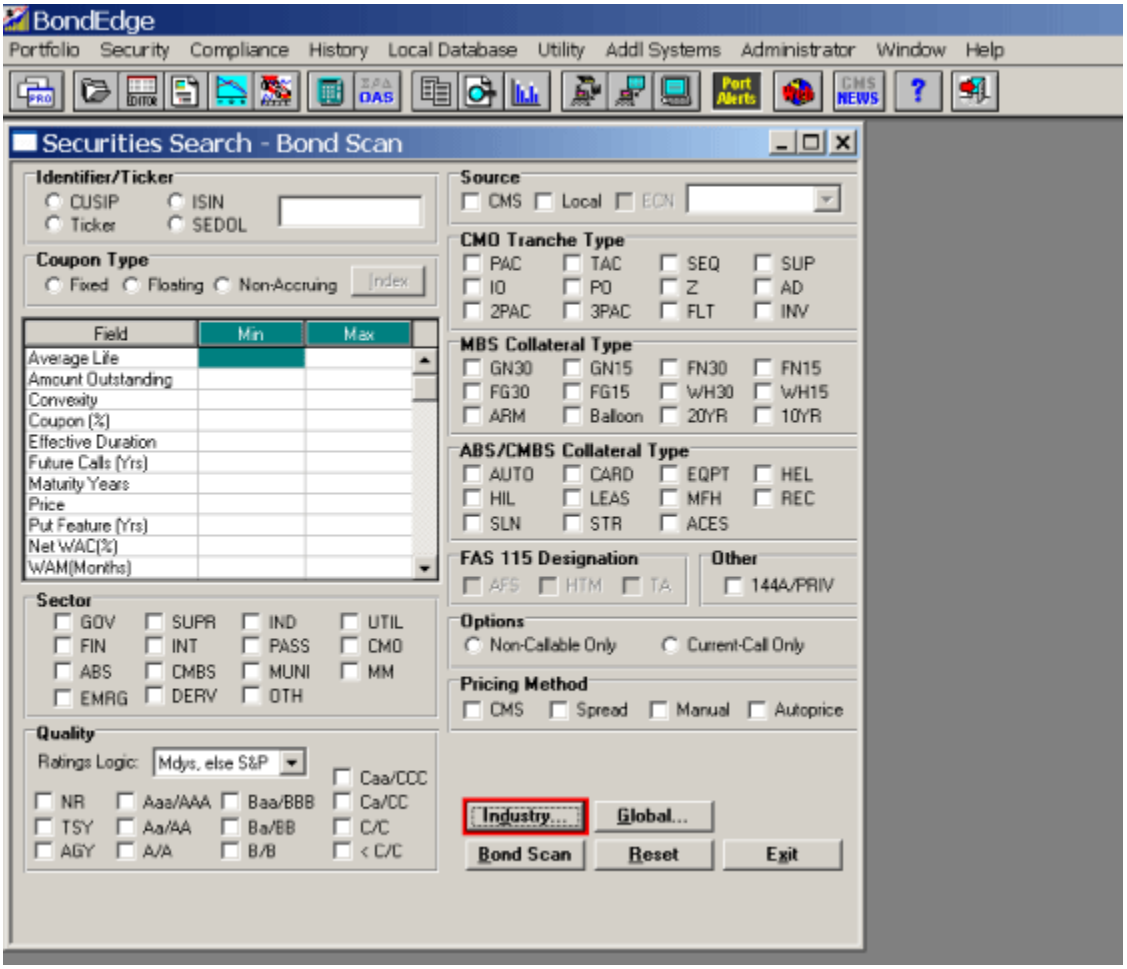


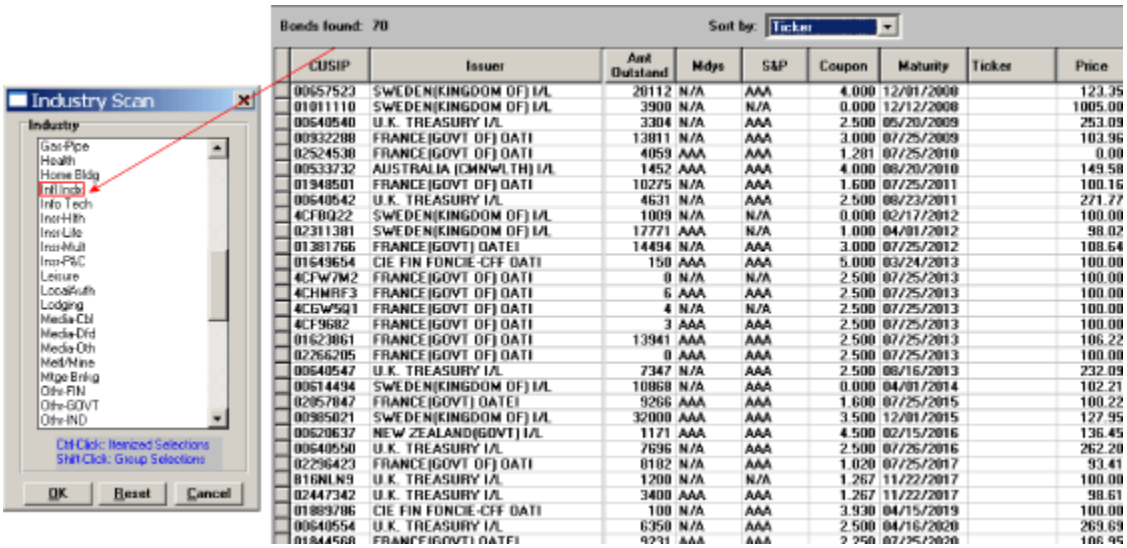
In addition to the exchange-traded derivatives available in the CMS database, the following OTC derivatives models are also available: Interest Rate Swaps (U.S., U.K., Euro, Australia and Canada), Interest Rate Caps/Floors, Swaptions, OTC Options, and Currency FRAs.

Q. **Are Inflation Linked Bonds available in the CMS database?**

A. Though the local Inflation-Linked Securities model has been available in BondEdge for a number of years, several Inflation Linked securities were added to the CMS database as of BondEdge version 5.4x. U.S. TIPS are available to all clients, and a number of non-US$ linkers (including Australia, Euro, Canada and the U.K.) are included for clients that subscribe to the Multi-Currency module. The relevant CPI values are updated for all linkers supported in the database. You may display the complete list of inflation-indexed securities by doing the following:

Go to the *Securities Search – Bond Scan*,
Click on *Industry*
Highlight *Infl Indx*
Click on *Bond Scan*





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