

BOND CALCULATOR: THE VIRTUAL BOND ADVISOR IN TELEKURS iD

In 2008 Telekurs iD launched the Bond Calculator, an intelligent tool for specialists and anyone else wanting to track the bond market on a daily basis.

The Bond Calculator of Telekurs iD offers a full array of supplemental information in a clearly organised display for all kinds of bonds. It also enables experts and other interested parties to use specific simulations to determine how a bond could react to significant market factors. A few simple examples from day-to-day practice will illustrate this:

Case 1: Interest rates on a roller coaster

As an investor you have decided to purchase a solid bond. It promises an annual coupon of 4 1/4 % and will be repaid at par in 2017. You felt that you would be on the safe side with a government bond. However, the “hard” market factors count as well. The key interest rates, for instance, have a significant influence on the price performance of bonds. They are an important indicator not just for homeowners, but also for the well-being of the bond markets. The risk the investor takes is that the price of a bond will fall if the key interest rate rises. The following rule of thumb can thus be adopted:

When the key interest rate rises → bond prices fall.
When the key interest rate falls → bond prices rise.

What other factors should be considered with regard to interest risks?

- If the bond’s repayment date lies far in the future – 2017 in our example – it will react more sensitively to changes in the key interest rate.
- Bonds react more sensitively to the market if they feature a low interest rate.

4.25 EIDG 17 E97 SWX			
Bond Liquidity & Spreads		Bond Simulator	
Bond Calculator			
LVal	111.1	TRA	14.22.54
P-Val	110.88	TRA	11.01.08
Bond Basic Data			
Interest Rate	4.25 % Fixed		
Payment Frequency	1 per year		
Last Bond Rating	AAA Fitch		
Accrued Interest	2.585417 %		
Correction Factor	1.0		
Flat Code			
Day Count Conv.	30 /360		
Yield and Price Calculator		Total Return Calculator	
Bond Price and Yield			
Name	Maturity	Next Call	
Actual Date	14.01.08		
Redemption Date	05.06.17		
Redemption	100		
Calc. Price	101.905887		
Calc. Yield	4.00		
Last Yield (LVal)	2.882302		

If the key interest rate rises to 4 %, the price of the bond will fall by 8.2 % below the current market value. Is it worth selling the bond from this perspective?

Case 2: Bonanza instead of the blues

In the example described above, should you choose to sell the bond today you might have to expect a minor loss, because the calculated price is now below market value. In calculating the yield, however, other factors must still be taken into account. This is also a job that the Bond Calculator can do for you:

Selling the bond at this juncture would definitely not be recommended. Like equity investors, people investing in bonds need patience and stamina too.

4.25 EIDG 17 E97 SWX CHF Countries & central governments					
Bond Calculator		Bond Liquidity & Spreads		Bond Simulator	
LVal	111.1	TRA	14.22.54	Bid	110.92 14.01.08
P-Val	110.88	TRA	11.01.08	Ask	111.37 14.01.08
Bond Basic Data			Bond Life Data		
Interest Rate	4.25 % Fixed		Issue Total Life	20 Years	
Payment Frequency	1 per year		Issue Rem. Life	9.39726 Years	
Last Bond Rating	AAA Fitch		Next Coupon R. Life	0.386301 Years	
Accrued Interest	2.585417 %		Issue Dated Date	05.06.97	
Correction Factor	1.0		First Interest Paym.	05.06.98	
Flat Code			Next Payment Date	05.06.08	
Day Count Conv.	30 /360		Maturity Date	05.06.17	
Yield and Price Calculator		Total Return Calculator		Total Price Calculator	
Bond Total Return					
Invested From	01.01.08	Price on Date From	122.21 %		
Invested To	14.01.08	Accrued Int. From	2.431944 %		
Investment Period	2.035614 Years	Price on Date To	111.1 %		
Payment Number	2	Accrued Interest To	2.585417 %		
Payment Amount	8.5 %	Coupon Reinvested	8.821878 %		
Risk-free Rate	2.89167 % per year	Total on Date To	122.507294 %		
Risk-free Return	5.974499 %	Total Return (Differ)	-2.13465 %		
Reset Calculate					

Case 3: No buyers in sight

In the previous calculation example, you had assumed that it would be relatively easy to re-sell your bond on the market. This, however, is precisely the drawback of the bond market: not every investment on offer finds a willing buyer right away. This is also called liquidity risk. Here is the rule of thumb:

The greater the spread between the buy and sell offers, the greater the liquidity risk.

Current Market Bid/Ask and Market Bid/Ask Spreads			
Name	Market	Value	Size
Bid (Market Bid)	SWX	110.92	1'000'000
Ask (Market Ask)	SWX	111.37	1'000'000
Spread Bid/Ask	SWX	+0.14%	
Monthly Spread Bid/Ask	SWX	0.1766	

Previous Day, Average Daily and Previous Month Volumes			
Name	Market	Value	Val.Style
Prev. Day Vol. On/Off	SWX	107'500'000	
Prev. M. Av. Vol. On	SWX	4'455'925	
Prev. Month Vol. On/Off	SWX	100'940'000	

In this case, there is no liquidity risk, since the spread is quite small. The trading volume also shows that these bonds are in great demand.

Current Market Bid/Ask and Market Bid/Ask Spreads			
Name	Market	Value	Size
Bid (Market Bid)	ELI	63.3	24'000
Ask (Market Ask)	ELI	78	22'267
Spread Bid/Ask	ELI	+20.81%	
Monthly Spread Bid/Ask	ELI		

Previous Day, Average Daily and Previous Month Volumes			
Name	Market	Value	Val.Style
Prev. Day Vol. On	ELI	269	
Prev. M. Av. Vol. On	ELI	2'428	
Prev. Month Vol. On	ELI	9'712	

Buyers and sellers are evidently not finding one another here. Note the low trading volume (size).

Contact

Austria +43 1 532 45 71 0
 Belgium +32 2 7900-500
 France +33 1 55 35 11 55
 Germany +49 69 717 00-0
 Ireland +353 1 477 3146
 Italy +39 02 76 45 631
 Japan +81 3 3808 22 71

Luxembourg +352 261 16-1
 Netherlands +31 20 3012 888
 Singapore/ +65 6338 3808
 Hong Kong
 UK +44 20 7550 5000
 USA +1 203 353 8100

Telekurs Financial Information Ltd.
 Hardturmstrasse 201, P.O. Box
 CH-8021 Zurich
 Phone +41 44 279 51 11
 Fax +41 44 279 51 12
 e-mail: sales.tkf@telekurs.com
 www.telekurs-financial.com