

Bond Valuation using Excel

Bonds can be easily calculated using the Present Value function in Excel. This function is labeled PV and stored under the financial category. The inputs are similar to a financial calculator.

Bond Valuation Example:

Calculate the value of a 5 year bond compounded semiannually with a face value of \$1000, 5% coupon, and an 8% yield.

The image shows the 'Function Arguments' dialog box for the PV function in Excel. The dialog has a title bar 'Function Arguments' with a question mark and a close button. Inside, the 'PV' function is selected. The arguments are: Rate (4%), Nper (10), Pmt (25), Fv (1000), and Type (blank). Each argument has a small icon to its right. Below the arguments, there is a description: 'Returns the present value of an investment: the total amount that a series of future payments is worth now.' Below that, a note says: 'Rate is the interest rate per period. For example, use 6%/4 for quarterly payments at 6% APR.' At the bottom, the 'Formula result =' is shown as '(\$878.34)'. There are 'OK' and 'Cancel' buttons at the bottom right. A blue line connects the 'Rate' input to a text box on the right. Another blue line connects the 'Nper' input to a text box on the right. A third blue line connects the 'Pmt' input to a text box on the right. A fourth blue line connects the 'Fv' input to a text box on the right. A fifth blue line connects the 'Type' input to a text box on the right. A sixth blue line connects the 'Formula result' to a text box on the right.

Argument	Value	Result
Rate	4%	= 0.04
Nper	10	= 10
Pmt	25	= 25
Fv	1000	= 1000
Type		= number

Returns the present value of an investment: the total amount that a series of future payments is worth now.

Rate is the interest rate per period. For example, use 6%/4 for quarterly payments at 6% APR.

Formula result = (\$878.34)

[Help on this function](#)

OK Cancel

Rate is the yield of the bond per period. In the case of this bond it has a annual yield of 8% and a semiannual yield of 4%.

Nper is the total number of periods. This is a 5 year bond compounded semiannually, therefore there are 10 periods.

Pmt is the coupon payment per period. This bond has an annual coupon payment of 5% or \$50 and a semiannual coupon of 2.5% or \$25.

Fv is the future value or face value of the bond. This bond has a face value of \$1000.

Type is used to define the timing of the payments. If the payments are made at the beginning of the period enter 1. If the payments come at the end of the period leave blank or enter 0. Coupon payments typically come at the end of the period.

Note that the present value is negative while the payment and future values are positive. The present value is negative because this is a payment for the bond, and the future value and payments are positive because these are payments you receive.