

WINFIN
A Collection of Financial Programs For Windows

DESCRIPTION

This program is a collection of 12 financial analysis programs:

Mortgage

You select any one of 5 variables to solve and enter values for the other 4. The 5 variables are:

1. Amount of Loan
2. Interest Rate on Loan
3. Payment
4. Number of Payments
5. Ballon Payment

You simply click on the variable to solve and enter values for the other 4 variables. Using conventional banking practice, values are rounded to the nearest penny. The payment is rounded up. Thus if the payment is to be solved for, and it is computed as 598.431, the program produces 598.44 for the payment. In an actual amortization of the loan, the last payment is almost never equal to the rest of the payments. In addition to the regular payments, there can be a ballon payment at the end of the mortgage.

Other values must be entered, they cannot be solved for. These are:

Number of Payments Per Year - 12 for monthly payments, 4 for quarterly payments.

Points - These are percentage points paid for the loan.

Service Charge - Dollar amount of fees the bank charges

The APR Rate is computed and shown. This is key to evaluating different loan terms. Thus a 8% loan with 4 points may not be as good a deal as a 9% loan with 0% points.

The Total Finance Charge is shown and includes all the interest paid in your payments, the amount paid in points and the service charge. Use this value along with the APR in evaluating different loan terms.

Amortization of the loan can be made to the screen, printer or a comma delimited file for TEXT import to a spreadsheet.

Installment Loan

This is similar to Mortgage above. This difference is that when the rate is entered, you can select APR or Add On. The program will compute both the APR and Add On rates. Many installment loans quote the Add On Rate which is considerably smaller then the true rate paid in terms of the APR.

Bonds

This module allows you to enter either the price of the bond or the % Yield To Maturity and then calculates the other. The Simple and Effective (Compound) rates are also computed. Thus comparisons with other types of investments can be made. The total cost of the bond is also shown and includes accrued interest and fees paid to the broker. These fees are included in computing the Simple and Effective Rates for the investment. The next coupon date and number of coupons is also shown.

Be sure to enter the maturity value and price in points. Thus a bond with a face value of \$1,000 and selling for \$980.00 has a maturity value of 100 and a price of 98.00.

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T-Bills

This module is similar to Bonds. The difference is that rather than entering the %YTM, you enter the %Discount. Price is entered the same way, as points. You can select to enter the life of the T-Bill as number of days or enter the actual dates of purchase and maturity. Be sure to see "Data Entry Notes" below regarding entering these dates.

The Price and Discount Rate are computed along with the Equivalent Bond Yield. Simple and compound rates and amount of interest paid are shown. These values take into account the fees paid.

Certificate of Deposit

This is similar to T-Bills above. The difference is that the quoted interest rate is simple rather than discount. Also, you can select whether 360 or 365 days per year are used in computing the quoted price or rate.

Bankers Acceptance

This is essentially the same as T-Bills. Both use discount rate. However, some BA's use a 365 day year and you can select either a 360 or 365 day year.

Black-Scholes

This is a mathematical model for the "fair value" of an option.

There are two values that must be entered that greatly affect the result. These are the Safe Rate and Volatility.

The Safe Rate is the current rate of interest paid on money where little or no risk exists of not getting your principal back. The APR Rate on T-Bills or banks can be used. This is the APR, not the Discount or a bank rate that uses a 360 day.

The Volatility is difficult to find or compute. This program can compute the implied volatility. That is, after you have entered the other variables, you can select "Calculate" in the Volatility box and other windows open up. Here you enter the actual market price for the call option and enter an estimate for the volatility. Then click on the main "Calculate" command button and the volatility is computed using the actual market price. Using this value, you can evaluate other options for the same stock or index with different strike prices and durations. In checking the values with the Wall Street Journal, I find that the call prices are quite accurate but the put prices vary considerably. This is inherent in the mathematical model.

If the stock pays dividends, then you have to enter a value for annual dividend, the number of dividends per year and the date of the next dividend.

Annuity

This is a plain vanilla annuity mathematical model. You can select Ordinary Annuity (payments at end of period) or an Annuity Due (payments at beginning of period). Known and unknown values are similar to the Mortgage module above. The difference is that no rounding of values occurs as is done by banks for mortgages.

Compound

This is the same as the Annuity module above except that there are no payments.

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Internal Rate of Return

This computes the IRR of a series of cash flows. Be sure to enter cash flow to you (money you get) as positive values, and cash flow from you (money you paid) as negative values. You must have at least one positive value and one negative value. You then enter the number of payments per year and the program will calculate the Annual Percentage and Net Present Values.

Modified Internal Rate of Return

The IRR analysis can give as many solutions as there are changes of signs in the cash flows. The MIRR was designed to offset this limitation. This is done by discounting all negative cash flows to compute a present value using a "Safe Rate", i.e. T-Bill Rate. All positive values are assumed reinvested at some assumed investment rate to compute a future value. Using these assumptions and the computed present and future values, a simple compound interest problem is solved to return the rate of interest on the cash flows.

Net Present Value

Enter the cash flows as described for IRR and MIRR above. Then using the annual rate of interest that you enter, the Net Present Value is computed.

DATA ENTRY NOTES

You will note that all the modules have many similarities. You select the value to solve for, enter the unknown values. Then you click on "Calculate" and the unknown is solved and displayed along with other information about the investment.

Only Positive Values should be entered. Thus the amount of loan, payment, points, interest, etc are always positive. In some cases, an option exists to select whether the value is Paid or Received. The only exceptions are for the cash flows for IRR, MIRR and NPV.

Entering Dates Always enter a date as 2 digits for the day, 2 digits for the month and either 2 or 4 digits for the year. For example June 4, 1992 is entered as 060492 or 06041992. The program will automatically enter the "/" for you. It counts your keystrokes, and after 2 it places a / for you. If only 2 digits are entered for the year, the program assumes it is the current year. You can clear the date field with a backspace.

Entering Values for Interest Don't enter a decimal, enter the percentage. Thus 9.432% is entered 9.432 not 0.09432.

Entering Points Points are a percentage multiplied by 100. Thus a bond that is selling at 95.23% of its face value is 95.23 points and you would enter 95.23. The maturity value of a bond is usually 100 which means that it will be redeemed for 100% of its face value.

Pressing Enter vs Clicking After you enter a value in a field, if you press the enter key, you will be taken to the next logical field for the next entry of a value. When you arrive at a new data entry field, the value, if any, in that field is cleared. If you do not want to clear the next field, don't press the Enter key, just use the mouse to click on the next field you wish to enter a value.

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OTHER IMPORTANT NOTES

Iteration Some solutions require looping until a solution is found. Examples are calculating a mortgage rate and the IRR. If the program cannot find a solution after looping 500 times, it quits trying and displays a message. This most likely will occur when you have entered inappropriate values for a solution.

Printing The Mortgage and Installment Loan modules have an option to produce an amortization schedule. This can be sent to screen or to the printer. You will note that if the printer is selected, an "Abort" button appears. If you click on this button, the program sends instructions to Windows Print Manager to cancel printing.

INSTALLATION

1. Copy the program file WINFIN.EXE to any directory such as your Windows directory.
2. If this disk contains the file VBRUN100.DLL, copy it to your Windows directory. If it is not on this disk, then you will to obtain a copy.

VBRUN100.DLL is needed to run any program written using MicroSoft Visual Basic. Most BBS's do not allow this file to be uploaded with a program. The reason is that it would be duplicated in 1000's of uploads. Instead, the BBS will have VBRUN100.DLL as a separate file for downloading and once downloaded, should be placed in your Windows directory. It then can be used by all other programs written in Visual Basic. MicroSoft allows the DLL to be made available at no cost for usage. It is available on CompuServe in the Advanced Windows Forum (GO WINADV) as VBRUN.ZIP. You can search in other BBS's using the key word VBRUN or similar keys.

REGISTRATION

This program is copyrighted and is not free. It is offered for trial and if you want to use it beyond 10 days, a fee of \$20.00 is required. This evaluation copy is fully functional except for printing amortization schedules and a nag screen. By registering, these limitations will be eliminated. You can register by clicking on the "Order" button on the nag screen, filling out and printing the form. All that is required is your name and address along with check for \$20.00 made out and mailed to my company:

Gjetaas, Inc
7251 Mt. Baker Hwy
Deming, WA 98244
(206) 599-2418

A keycode will be sent to you for use in the registration procedure in the program accessed by pressing the "Register" button on the nag screen.

If you wish me to send you a copy of VBRUN100.DLL along with a copy of the latest version of this program, make your check out for \$25.00. The additional \$5.00 is for the disk, mailer and handling. Be sure to specify if you wish a 3 1/2" or 5 1/4" disk.

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Your key code can be used on future versions of this program that you may download.

You may pass this program along to your friends or other BBS's. I do request that this entire .ZIP file be used, including this WINFIN.WRI file.

SUPPORT

If you have any questions, please call me at the number below. Thank you for giving this program a try.

Russell C. Anderson
(206) 599-2418

LIMITED WARRANTY AND LIMITED LIABILITY

Gjetaas, Inc and the programmer, Russell C. Anderson, do not warrant that the licensed software will meet your requirements or the operation of the software will not be interrupted or error free. It is SOLD AS IS. In no case will the liability of Gjetaas, Inc or the programmer, Russell C. Anderson, exceed the license fees paid for the right to use the licensed software, or a sum no greater than one Dollar (\$1.00), whichever is less.

REFERENCES

Stigum, Marcia, "Money Market Calculations: Yields, Break-Evens, and Arbitrage", Dow Jones Irwin

Thorndike, David, "The Thorndike Encyclopedia of Banking and Financial Tables", Warren, Gorham & Lamont

Clayton, Gary and Spivey, Christopher, "The Time Value of Money", W. B. Saunders