TRS-80®

Model 100 Portable Computer

INVESTMENT ANALYSIS

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INVESTMENT ANALYSIS



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INTRODUCTION

The Investment Analysis package consists of three separate programs:

- Fixed Income Security Evaluator (FISE™) calculates information that is useful when buying or selling fixed income securities.
- \bullet Commission Calculator (COMM $^{\text{\tiny M}})$ calculates commission charges for stock and option transactions.
- Option Strategy Evaluator (OSE™) calculates the results
 of option transactions involving various combinations of
 put and call purchases and sales.

If you have not read your *Model 100 Portable Computer Owner's Manual*, do so before using your Investment Analysis package.

Equipment Requirements

To use the Investment Analysis package, you need the following equipment:

- TRS-80 Model 100 Computer with at least 16K memory (Radio Shack Catalog number 26-3824)
- Cassette tape recorder, such as the Radio Shack CCR-81 (Catalog number 26-1208)

Optional equipment includes:

- Dot Matrix Printer, such as the Radio Shack DMP-200 (Catalog number 26-1254), or a Daisy Wheel Printer, such as the Radio Shack DWP-410 (Catalog number 26-1250)
- Radio Shack CGP-115 Color Graphics Printer (Catalog number 26-1192)

Loading and Saving Programs

For information on loading and saving your programs, refer to "Quick Reference for Applications" included with this package.

To load and run a program from cassette tape without saving it in the Model 100's memory, complete the load instructions, type RUN, and then press (ENTER).

To run a program saved in your Model 100's memory, access the program from the Model 100 Main Menu by moving the cursor with the space bar or arrow keys to highlight the program name. Then press (ENTER) to activate the program.

FISE — THE FIXED INCOME SECURITY EVALUATOR

Introduction

The Fixed Income Security Evaluator calculates and displays various information common to fixed income securities. By entering specific data values, you can determine such variables as price, yield to maturity, accrued interest, current yield, and so on.

Operating Instructions

After you access the FISE program, the following copyright message appears on the display:

Fixed Income Security Evaluator - FISE Copyright 1982 The Electronic Broker, Inc. All Rights Reserved Patent Pending

After a few moments, the FISE Main Menu appears:

Calc CTax CFr9

New M100

The functions listed on the FISE Main Menu are described briefly:

Calc

- calculates variables such as price, yield, and accrued interest.

CTax

- changes the default settings for the income tax rate and capital gains tax rate.

CFrq — changes the payment frequency for any security.

New — erases all previously entered data.

M100 — returns the program to the Model 100 Main Menu.

Choose one of the above options from the Main Menu by pressing the corresponding function key on the keyboard below the display.

Entering Data

Calculation Option

Select the Calculation Option by pressing F1 at the FISE Main Menu. The Security Type Menu appears showing the types of fixed income securities you can access.

Bond GutB MunN 360N 365N TsyB Rtr n

Note: When Rtrn appears on the menu, select it to return to the previous menu.

Bond — municipal, corporate, and government agency bonds which pay interest periodically and are based on a 30-day month and 360-day year.

GvtB — government treasury bonds which pay interest periodically and are based on actual days per month and year.

MunN — municipal notes which pay interest at maturity and are based on a 30-day month and 360-day year.

36ØN — notes which pay interest at maturity and are based on actual days per month and 360 days per year.

365N — notes which pay interest at maturity and are based on actual days per month and 365 days per year.

TsyB — treasury bills and discounted securities which pay no interest and are based on actual days per month and 365 days per year.

Select a security type by pressing the corresponding function key on the keyboard. The security type you chose appears in the upper left corner, and the Calculable Variable Menu is displayed on the bottom of the screen. (Only the variables applicable to the specific security type you chose appear on the menu.) The variables are described below:

Pric — Price; the dollars and cents price per \$100 of face value.

YMat — Yield to Maturity; the percent return on a security held to maturity, adjusted for coupon income, accrued interest expense, and price premium or discount from par.

Accr — Accrued Interest; interest earned per \$100 of face value since the last coupon date. Issue date is used if the current payment period is the first payment period. The Fixed Income Security Evaluator automatically determines if the first coupon period is long, short, or regular.

CYld — Current Yield; the annual interest income divided by the price.

YaTx — Yield after Tax; yield to maturity adjusted for income taxes on coupon income and on short term capital gains or losses and capital gains taxes on long term capital gains or losses.

YtCl — Yield to Call; the percent return on a security held to call date adjusted for coupon income, accrued interest expense, and premium or discount from call price.

DayD — Difference between dates; number of days between two dates according to the security type calendar.

DRat — Discount Rate; annualized percentage rate of difference between par and price.

Select a variable for calculation, and press the appropriate function key. The data entry screen for the security type you choose appears with the calculable variable displayed at the top:

Bond or GvtB:

M/C/A Bond [or Gov't Bond]
Issue Date Settlement
Maturity Coupon
Price Yield Mat
Call Date Call Price
Accr'd Int Curr Yld
Yield-Tax Yield Call

MunN, 36\(\text{N} \) or 365N:

Muni Note Cor 360 Note or 365 Notel
Issue Date Settlement
Maturity Coupon
Price Yield Mat

Accr'd Int Curr Yld
Yield-Tax Days Diff

TsyB:

	Settlement
Maturity	Disc Rate
Price	Yield Mat
	Days Diff

The cursor moves to the first data entry item needed to calculate the variable, and the current value of the variable (or \emptyset) is displayed. (If the data item is "Issue Date," the last value entered or the pre-programmed default date of 1 \emptyset 163 is shown.) The name of the calculable variable you chose appears on the top line of the display, and the name of the data item you are currently entering appears in the right corner of the top line.

The following is a description of the data entry items and their formats:

Data Entry Item	Entry Format	Description
Issue Date	MMDDYY	Date of original issue
Settlement	MMDDYY	Date ownership transfers
Maturity	MMDDYY	Date that face value is due
Coupon	pp.ppppp	Annual rate of interest stated on security
Price	ddd.ccccc	Dollars and cents per \$100 of face value
Yield Mat	pp.ppppp	Yield to maturity or yield to call
Call Date	MMDDYY	Date on which issuer can redeem security

Call Price ddd.cccc

Dollars and cents per \$100 of face value which issuer must pay upon a call redemption

D. Rate pp.ppppp

Discount rate which is the annualized percentage of the difference between the face value and the price

You can enter your data in two possible ways:

- To leave the displayed value unchanged, press (ENTER).

 The cursor moves to the next required data item.
- To change the displayed value, type the new information and press (ENTER). To correct any mistakes before pressing (ENTER), use the (DEL BKSP) key.

If you find that you have entered a value incorrectly, you can return to the first data item by pressing B (uppercase) (for Beginning).

If you need to return to the FISE Main Menu while entering data items, press (M) (uppercase).

When entering data values, please note the following:

- For Bond and GvtB security types, make sure the Issue Date is set to 10163 (pre-programmed, default date) if it is unknown or if the settlement date is more than two pay periods from the issue date.
- When you enter either the Price or Yield to Maturity, the program calculates the Current Yield. If you enter α Ø for Price and α valid Yield to Maturity for the Yield, the Current Yield routine calculates the Price in addition to the Current Yield. However, if you enter α valid Price, the Yield is ignored.
- If you enter a valid Yield when calculating Price for Treasury Bills, the program calculates Discount Rate in addition to Price. If you enter a Ø for Yield, you must enter a valid Discount Rate. The program calculates both the Price and the Yield.

• If you enter a valid Price when calculating Yield for Treasury Bills, the program calculates Discount Rate in addition to Yield. If you enter Ø for Price, you must enter a valid Discount Rate. The program calculates both Price and Yield.

After you enter all necessary values, Calculatins appears in the upper right corner of the display. When the calculation is complete, the answer appears in the appropriate spot on the data entry screen. The FISE Main Menu returns to the bottom of the display screen.

Note: If you are calculating a Yield to Maturity or Yield to Call for a Bond with several coupons between the settlement and maturity, the interim results of the calculation appear in the upper right corner of the screen.

To see specific examples of these transactions, refer to the FISE Examples in the Examples Section.

Change Tax Rate Option

The Fixed Income Security Evaluator presets the income tax rate at 50% and the capital gains tax rate at 20%. To change one or both of these rates, select the CTax option on the FISE Main Menu by pressing (F2).

The following Change Tax Rate screen appears:

Change Tax Rates For :

Inc. Tax

Income Tax Rate

50

Capital Gains Tax Rate

Enter the new income tax rate and press **ENTER**. If you wish to leave the value unchanged and proceed to the Capital Gains Tax Rate, press **ENTER**. The display changes to the following:

Change-Tax Rates For : Cap Tax

Income Tax Rate 50

Capital Gains Tax Rate 20

Enter a new capital gains tax rate and press (ENTER) or press (ENTER) to bypass it. The display returns to the FISE Main Menu.

Note: FISE does not treat interest on tax exempt securities as tax free unless you set the Income Tax Rate to \emptyset (or to the rate applicable for the local taxing jurisdiction).

Change Payment Frequency Option

Select the CFrq option on the FISE Main Menu by pressing (F3). This option lets you change the payment frequency for any security. (All payment frequencies are preset to 2.) After pressing (F3), the Security Type Menu appears:

Bond GotB MunN 360N 365N TsyB Rt rn

Choose a security type by pressing the corresponding function key. A new screen appears, displaying the security type you chose and its current payment frequency. The cursor is positioned to accept a new frequency rate. For example, if you select [F] for Bond, the following screen appears:

Change frequency for: M/C/A Bond

Current Frequency 2

Enter New Frequency 2

To leave the rate unchanged, press **ENTER**). To change the frequency, type any whole value between 1 and 12, and press **ENTER**). The FISE Main Menu reappears after you press **ENTER**).

By pressing (F8) at the FISE Main Menu, you can return to the Model 100 Main Menu, but all data is erased. If you want to retain the data you entered, turn off the computer after accessing the FISE Main Menu.

Introduction

The Commission Calculator calculates commissions for stock and option transactions, based on the New York Stock Exchange and Chicago Board of Options Exchange minimum rates, which were in effect until May, 1975.

On May 1, 1975, the Security and Exchange Commission abolished the fixed commission schedule, and commissions charged by New York Stock Exchange member brokerage firms became negotiable. Since that time most firms have altered their commission schedules. Nevertheless, the generally accepted benchmark for measuring commissions is the pre May, 1975 New York Stock Exchange minimum rates.

The COMM program calculates the commission based on the tables in Appendix B and compares it to a preprogrammed maximum commission charge per share or option. COMM then multiplies the lower of the two figures by a surcharge and displays the results on the Model 100 screen. (To change variables, such as the surcharge and minimum commission per transaction, refer to Table 2 in Appendix B.)

Note: Certain factors that bear on the profitability of transactions are not included in these programs (for example, margin account costs and close out commissions). You may want to factor these extra costs/returns into your final results.

Operating Instructions

After you access the COMM program, the following copyright message appears on the display:

Commission Calculator - COMM
Copyright 1982
The Electronic Broker, Inc.
All Rights Reserved Patent Pending

In a few moments, the screen clears again and the COMM Main Menu appears:

BStk SStk BOpt SOpt

New M100

The selections on the Main Menu are:

BStk — buy stock

SStk — sell stock

BOpt — buy option

SOpt — sell option

New — erase all previously entered data

M100 — return to the Model 100 Main Menu

Choose a selection from the COMM Main Menu, and press the corresponding function key on the keyboard. If you choose F1, F2, F3, or F4, a data entry screen appears. For example, if you press F1 to select the Buy Stock routine, the following screen is displayed:

Stock	Buy		
Quantity			Accum Qty
Price/shr		Wt Avg Pro	
Red Comm		Cents/shr	
Disc Comm			Cents/shr
Amt Disc			% Disc
SEC Fee			Net Monies
NTrd ATrd	%Dis	CDis	Calc New Rtrn

The first line on the display indicates the selection you made at the COMM Main Menu — Stock or Option / Buy or Sell. Below is a description of the data entry items listed on the screen:

*Quantity — total number of shares of stock or the number of 100 share option contracts.

Accum Qty — accumulated total of all new and added quantities of a specific stock or option contract.

*Price/shr — execution price of each share or single option per individual transaction.

Wt Avg Prc — weighted average price per share or option based on the Accum Qty.

Reg Comm — calculated total commission before discounts.

Cents/shr — whole cents per share or option before discounts.

Disc Comm — total commission after discounts.

Cents/shr — whole cents per share of stock or single option after discounts. (Also used to specify the commission per share or single option.)

Amt Disc — dollar difference between the regular commission and the discounted commission.

% Disc — percentage difference between the regular commission and the discounted commission.

SEC Fee — Securities Exchange Commission fee when selling a stock or option.

Net Monies — net cost to buy or net proceeds from selling the current transaction after the discounted commission and SEC fee.

The bottom line of the screen displays the Data Entry Transaction Menu. Choose one or more of these transactions to enter your commission data:

NTrd — access New Trade to enter a quantity and price for a new stock calculation.

ATrd — access Additional Trade to enter an additional quantity and price for the transaction currently shown on the display screen. The quantity is added to the Accum Qty total, and the price is used to adjust the Wt Avg Prc.

 select this function after entering a quantity and price to indicate a percentage discount rate from the regular commission. Cents per share is set to Ø and recalculated.

CDis — select this function after entering a quantity and price to indicate a cents per share charge for each share or single option. Discount Percent is set to Ø and recalculated.

Calc — choose this function when you are ready to calculate the information displayed on the data entry screen.

New — erases all previously entered data and returns to the COMM Main Menu.

Rtrn — choose this function to return to the COMM Main Menu with all data intact.

Entering Data

%Dis

To enter a commission transaction for calculation, make a selection from the COMM Main Menu and when the data entry screen appears, press (F1) to enter a new trade. The cursor moves to the Quantity data item. Enter the number of shares of stock or option contracts and press (ENTER). The cursor then moves to the Price/shr area. Enter the price

^{* —} required data entry input.

and press (ENTER). The cursor moves to the lower right corner of the screen, indicating that no more data items are required. If you have no additional information to enter, press (F5) to calculate the commission rate. When your Model 100 finishes calculating the entered information, all results appear on the screen.

By using the Data Entry Transaction Menu on the bottom of the screen, you can enter additional data. For example, to enter a commission discount rate after entering the quantity and price, press (F3). The cursor moves to the %Disc area. Enter the discount rate and press (ENTER). The cursor moves to the lower right corner of the display. You can then press (F5) to calculate your commission information.

When entering data for calculation, remember these special notes:

- Enter option quantities on a per contract basis. The Commission Calculator assumes that one contract is 100 single options unless you change variable OS in line 80 of the program. (Refer to Table 2 in Appendix B for specific instructions.)
- \bullet Enter fractions in decimal form. For example, enter the fraction 1/8 as .125.
- Press (M) (uppercase) to return to the COMM Main Menu during the data entry process.

To see specific examples of various COMM transactions, refer to the COMM Examples in the Examples Section.

By pressing F8 at the COMM Main Menu, you can return to the Model 100 Main Menu, but all data is erased. If you want to retain the data you entered, turn off the computer after accessing the COMM Main Menu.

Introduction

The Option Strategy Evaluator calculates the results of various option transactions involving combinations of various put and call purchases and sales.

The results of these calculations appear in a variety of table formats on the Model 100 display screen. You can also print results in graph form by using any 80-character per line printer. You can use the Radio Shack CGP-115 four pen printer/plotter to create color graphs.

The Option Strategy Evaluator does not make investment decisions. It illustrates the results of transactions assuming expiration date valuation of the options at various market values for the underlying security.

Operating Instructions

After you access the OSE program, the following copyright message appears:

Option Stratesy Evaluator - OSE Copyright 1982 The Electronic Broker, Inc. All Rights Reserved Patent Pending The screen clears in a few moments, and the OSE Main Menu appears:

Call Put Strd Selc New M100

The categories on the OSE Main Menu are:

Call — Call option strategies.

Put — Put option strategies.

Strd — Straddle; call and put options on the same stock.

Selc — Selection Menu, lists the various tables, displays, and printouts the OSE program produces. (You cannot access this function from the OSE Main Menu unless data is currently stored in memory.)

New — Erases all previously entered data.

M100 — Returns program to Model 100 Main Menu.

Choose an option category by pressing either **F1**, **F2**, or **F3**. A new menu appears listing the strategies available for the category you chose:

Call Category:

Buy Sell Bull Bear Btry SndW CodW Rtrn

Put Category:

Buy Sell Bull Bear Rtrn

Straddle Category:

Buy Sell Bull Bear Rtrn

Note: Rtrn (F8) returns you to the OSE Main Menu.

The strategies available are:

Buy — Buy

Sell — Sell

Bull — Bull Spread

Bear — Bear Spread

Btry — Butterfly Spread

SndW — Sandwich Spread

CvdW — Covered Write

Choose a strategy by pressing the corresponding function key. A Data Entry Table appears with the name of the category and strategy in the upper left corner. For example, if you choose Call ((f1)) and Buy ((f1)), the following screen appears with the values you last entered (or \emptyset):

```
Call: Buy
B/S PCS Srk ..Price.. Q .Comm.. ...Net..
Buy Cal Ø Ø.ØØØØØ 1 Ø.ØØØØØ Ø.ØØ
```

The following is a description of the table headings:

- B/S Buy or sell. (This category is set by OSE based on the strategy you select.)
- PCS Put, call or stock. (This category is set by OSE based on the strategy you select.)
- Srk Strike price. Price at which you have the right to buy or sell a share of stock. Price must be an even number equal to or greater than 10 but less than 1000. (If the strategy is a Covered Write option, OSE sets the second strike price to 0.)
- Price Dollars and cents of transaction price. Price must be a decimal number between .01 and 999.99999.
- Q Quantity must be a whole number equal to or greater than 1 but less than 10. (Each single option represents one option contract of 100 shares of the underlying stock.)
- Comm Commission in cents per single option.
 Commission must be less than .99.

Net — Net money required to buy or sell the quantity of options at the stated price adjusted for commission. This figure is calculated by OSE.

Entering Data

Choose the option category and strategy you wish to calculate, and access the data entry screen. The cursor is located in the Srk column. Enter the striking price of the option (10 to 1000). Press (ENTER), and the cursor moves to the Price column. Enter the price of the transaction (.01 to 999.99999), and press (ENTER). The © column is preset to 1. To leave it unchanged, press (ENTER). To change the quantity, enter a number between 1 and 9, and press (ENTER). When the cursor moves to the Comm column, enter the commission per single option (less than .99). When you press (ENTER), OSE calculates the net amount and displays it on the screen.

Note: Enter all fractions in decimal form.

If the strategy you chose deals with more than one option, enter all the above information for each option.

During data entry, you can move the cursor in the following ways:

- moves the cursor to the strike price of the first option in the tαble.
- moves the cursor to the strike price of the current option you are entering.
- (DEL BKSP) erases characters by moving the cursor to the left.
- (ENTER) moves the cursor to the next field after entering valid data.

To return to the OSE Main Menu while entering data, press (M).

Note: (R), (C), and (M) must be uppercase letters.

Displaying Data

After the last net amount is calculated, the Selection Menu appears on the bottom line, listing the different types of screens and printouts available:

Data Summ Tabl Grph WdPr Plot New Rtrn

Note: You can access the Selection Menu from the OSE Main Menu (F5) also, but ONLY if there is valid data to display.

To choose a screen or printout, press the corresponding function key on the keyboard. The choices are outlined below:

Data — Displays the Data Table with the most recently entered values. (Use this function after accessing the Selection Menu from the OSE Main Menu.)

Summ — Displays a transaction summary chart showing the profits or losses for each stock price ranging from an inflated stock price of 1000 to 0 by highest to lowest strike price.

Tabl — Displays a table showing stock prices, the intrinsic value of each option in the strategy, and the net profit/loss at that stock price.

Grph — Displays a graphic representation of the selected strategy on the Model 100 screen.

WdPr — Prints a detailed summary and graph of the selected strategy on a dot matrix or daisy wheel printer.

Plot — Prints a detailed summary and graph of the selected strategy on the Radio Shack CGP-115 Color Graphics Printer.

New — Returns program to the OSE Main Menu. All data is erased.

Rtrn

 Returns program to the OSE Main Menu. All data is left intact so you can reuse or alter it.

The following section explains more fully the purpose and design of each chart. Access the Data Table screen for the strategy Call: Buy, and insert the following data into the table to produce the chart examples:

Summary Chart

When you press (F2) to access the Summary Chart, the following information appears:

The Summary Chart shows your profit or loss for the stock prices based on the strike price. The first profit/loss (P/L) figure is based on an artificially high price of 1,000. The P/L for a stock price at each strike price is shown in descending strike price order until reaching \emptyset .

Table

Press (F3) to access the Table:

Call :	Виу		
StK @	50	Net	
57	7	+1.75	
56	G	+0.75	
55	5	-Ø∗25	
54	4	-1.25	
53	3	-2.25	

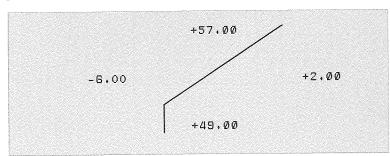
The table indicates the net profit/loss based on the expiration of the options at different stock prices. The last line of the display shows the net transaction cost.

You can scroll through the table by using the A and very keys or enter a specific stock price to view. To enter a price, press the key. The prompt Enter Stock Price appears on the bottom of the display. Enter the price you wish to view and press ENTER. The net profit/loss figure for that stock price, plus the next four lower prices, appear on the display.

To return to the Selection Menu, press the $ext{ } ext{ } ext{key}.$

Graph

To access the Graph screen, press [4]. The following display appears:

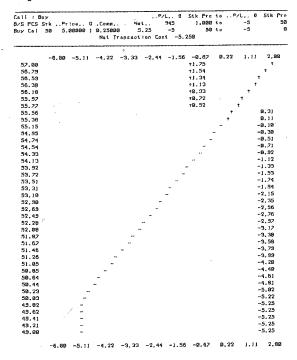


This chart is a simple representation of the chart you can print using the WdPr or Plot functions. The top and bottom figures represent the high and low stock prices, and the left and right figures indicate the greatest loss and profit margins.

To redisplay the Selection Menu, press any key.

Word Processing

Press ($\overline{\textbf{F5}}$) to print a detailed summary and graph of a selected strategy on a dot matrix or daisy wheel printer. (The printer must be capable of printing an 80 character line.) Your printout looks like this:

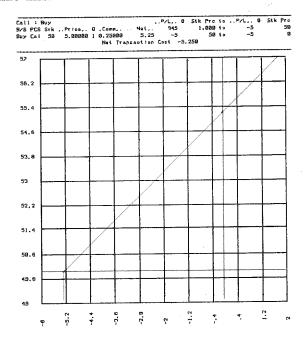


The summary section of the printout combines the information from the Data screen and the Summ screen. The graph indicates the range of stock prices (left-margin figures), the profit/loss scale (top and bottom figures), and the net profit/loss amount (right-margin figures). A plus or minus sign is printed along the graph line to indicate profit or loss.

After the chart is complete, the Selection Menu is displayed on the screen. If you wish to return to the OSE Main Menu but retain your data, press §8. To return to the OSE Main Menu but erase your data, press §7.

Plot

Press (F6) on the Selection Menu to print a detailed summary and graph on a CGP-115 Color Graphics printer. Your chart looks like this:



The summary section of the chart is identical to the summary on the WdPr chart. The graph shows a range of stock prices at the left margin and the profit/loss scale along the bottom of the chart. The Graphics Printer plots a blue vertical line at the zero profit/loss point and a blue horizontal line at the striking price of each option. Profits are plotted in green and losses in red.

If your CGP-115 printer does not print when PLOT is selected, adjust the DIP switches, as indicated in the owner's manual, to reflect 80 characters and parallel printer.

Note: If you select "Plot" when your Model 100 is connected to a printer other than the CGP-115, you receive a printout of the summary but not the graph.

To return to the OSE Main Menu and retain your data, press [78]. To return to the OSE Main Menu and erase all your input, press [77]. By pressing [78] at the OSE Main Menu, you can return to the Model 100 Main Menu, but all data is erased. If you want to retain the data you entered, turn off the computer after accessing the OSE Main Menu.

To see specific examples of OSE transactions, refer to the OSE Examples in the Examples Section.

EXAMPLES

FISE Examples

This section presents examples of transactions using the Fixed Income Security Evaluator. Each example starts from the FISE Main Menu. Follow the examples in order, because some of them build on previous examples.

Calculating Yield to Maturity for a Bond

Press (F1) to select Calc

Press (F1) to select Bond

Press (F2) to select YMat

Enter the following data values:

Issue Date — (ENTER) (preset to 10163)

Settlement — 81882 (ENTER)

Maturity — 91582 ENTER

Coupon — 9.1 ENTER

Price — 99.125 (ENTER)

The Yield to Maturity is calculated and displayed on the screen:

M/C/A Bond Yield Mat Tasue Date 10163 Settlement 81882 Maturity 91582 Coupon Yield Mat 20.16328 Price 99.125 Call Date Call Price Curr Y1d Acce'd Int Yield-Tax Yield Call Calc CTax CFrq New M100

Calculating Yield after Taxes for a Bond

Calculate the Yield After Taxes using the data entered above.

Press (F1) to select Calc

Press (F1) to select Bond

Press (F5) to select $Y\alpha Tx$

Press (ENTER) for each variable to use the current data:

Settlement (81882) — ENTER

Maturity (91582) — ENTER

Coupon (9.1) — ENTER

Yield Mat (20.16328) — ENTER

The Yield After Taxes is calculated and displayed on the screen:

M/C/A Bond Yield-Tax Settlement 81882 Issue Date Maturity 91582 9.1 Coupon Yield Mat 20,16328 Price Call Date Call Price Accr'd Date Curr Yld Yield-Tax 10.08164 Yield Call Calc CTax CFr9 New M100

Note: For a municipal bond, you can use the CTax function to set the applicable tax rate.

Calculating Current Yield for a Bond

Calculate Current Yield using the same data. Notice that you set the price to \emptyset so FISE will use the Yield to Maturity to calculate Price and then Current Yield.

Press (F1) to select Calc

Press (F1) to select Bond

Press (F4) to select CYld

To use the current data, press (ENTER) for each variable except Price. Enter \emptyset for Price.

Issue Date (10163) — (ENTER)

Settlement (81882) — ENTER

Maturity (91582) — (ENTER)

Coupon (9.1) — (ENTER)

Price (99.125) — 0 (ENTER)

Yield Mat (20.16328) — (ENTER)

Current Yield is calculated and displayed on the screen:

M/C/A Bond	Curr Yld	
Issue Date10163	Settlement	81882
Maturity 91582	Coupon	9.1
Price Ø	Yield Mat	20.16328
Call Date	Call Price	
Accr'd Int	Curr Y1d	9.180327
Yield-Tax	Yield Call	
Calc CTax CFrq		New M100

Calculating Yield to Maturity for a Treasury Bill

Enter \emptyset for Price so FISE will use the Discount Rate to first calculate the Price and then the Yield to Maturity. (FISE equates Yield and Yield to Maturity for Treasury Bills.)

Press (F1) to select Calc

Press (F6) to select TsyB

Press (F2) to select YMat

Enter the following data values:

Settlement (81882) — (ENTER)

Maturity (91582) — 11583 (ENTER)

Price (99.125) — 0 (ENTER)

Disc Rate — 10 ENTER

Yield to Maturity is calculated and displayed on the screen:

Trsy Bill	Yield	Mat Settlement	91997
Maturity	11583	Disc Rate	
Price	Ø	Yield Mat	10.43478
		Days Diff	
Calc CTax	CFra		New M100

Calculating Accrued Interest for a 360-Day Note

Issue dates are very important for securities which pay interest on maturity and mature in one year or less. The result is the dollars and cents of interest per \$100 of face value due to the seller.

Press (F1) to select Calc

Press (F4) to select 360N

Press (F3) to select Accr

Enter the following data values:

Issue Date (10163) — 61582 (ENTER)

Settlement (81882) — 110182 (ENTER)

Maturity (11583) — 61583 (ENTER)

Coupon (9.1) — ENTER

The Accrued Interest is calculated and displayed on the screen:

360 Note Accr'd Int

Issue Date 61582

Settlement 110182

9.1

Maturity 61583

33 Coupon

Price

Yield Mat

Accr'd Int 3.513611 Curr Yld

Yield-Tax

Yield Call

Calo CTax CFr9

New M100

Calculating Yield to Call for a Government Treasury Bond

Press (F1) to select Calc

Press (F2) to select GvtB

Press (F6) to select YtCl

Enter the following data values:

Issue Date (61582) — 10163 (ENTER)

Settlement (110182) — 91582 ENTER

Coupon (9.1) — **8.5 ENTER**

Price (99.2222) — **98** (ENTER)

Call Date — 10183 ENTER

Call Price — 105 (ENTER)

The Yield to Call is calculated and displayed on the screen:

Gov't Bond Yield Call Issue Date 10163 Settlement 91582 Maturity Coupon 8.5 Price 98 Yield Mat

Call Date 10183 Call Price 105

Accr'd Int Curr Yld

Yield-Tax Yield Call 32,43116

Calc CTax CFrq

New M100

Calculating Yield to Maturity for a Treasury Bill

You must enter the price and set the discount rate to \emptyset .

Press (F1) to select Calc

Press (F6) to select TsyB

Press (F2) to select YMat

Enter the following data values:

Settlement (91582) — 81582 (ENTER)

Maturity (61582) — 121582 (ENTER)

Price (98) — 98.75 (ENTER)

Disc Rate (10) — 0 (ENTER)

The Yield to Maturity is calculated and displayed on the screen:

Trsy Bill Yield Mat

Settlement 81582

Maturity 121582 Disc Rate 0

Price 98.75 Yield Mat 3.735214

Days Diff

Calc CTax CFrq

New M100

Calculating Discount Rate for a Treasury Bill

Press (F1) to select Calc

Press (F6) to select TsyB

Press (F3) to select DRat

Enter the following data values:

Settlement (81582) — **22182** (ENTER)

Maturity (121582) — **52182** (ENTER)

Price (98.75) — 97.25 (ENTER)

The Discount Rate is calculated and displayed on the screen:

Trsy Bill		Disc	Rate Settlement	22182	
Maturity	52182		Disc Rate		
Price	97.25		Yield Mat		
			Days Diff		
Calc CTax	CFra			New M1	Ø

Calculating Price for a Treasury Bill

Calculate Price for Treasury Bills by entering a valid Discount Rate and setting the Yield to Maturity to \emptyset .

Press (F1) to select Calc

Press (F6) to select TsyB

Press (F1) to select Pric

Enter the following data values:

Settlement (22182) — (ENTER)

Maturity (52182) — (ENTER)

Yield to Maturity (3.785214) — 0 (ENTER)

Disc Rate (11.12359) — (ENTER)

The Price is calculated and displayed on the screen:

Trsy Bill	Price		
		Settlement	22182
Maturity	52182	Disc Rate	11.12359
Price	97.25000	Yield Mat	Ø
		Days Diff	
Calc CTax	CFra		New M100

Calculating Price for a Bond

Calculate the Price of a Bond with the Issue Date set within two payment periods of the Settlement Date.

Press (F1) to select Calc

Press (F1) to select Bond

Press [f1] to select Pric

Enter the following data values:

Issue Date (1Ø163) — 10882 (ENTER)

Settlement (22182) — 42682 (ENTER)

Maturity (52182) — 121506 (ENTER)

Coupon (8.5) — 10 **ENTER**

Yield Mat (11.43813) — 9.6381 (ENTER)

The Price is calculated and displayed on the screen:

M/C/A Bond	Price			
Issue Date	10882	Settlement	42682	
Maturity	121506	Coupon	10	
Price	104.0010	Yield Mat	9.6381	
Call Date		Call Price		
Accr'd Int		Curr Y1d		
Yield-Tax		Yield Call		
Calc CTax	CFr9		New	M100

Calculating Days for a Municipal Note

Press (F1) to select Calc

Press (F3) to select MunN

Press (F6) to select DayD

Enter the following data values:

Settlement (42682) — (ENTER)

Maturity (1215Ø6) — **121582** (ENTER)

The Day Difference is calculated and displayed on the screen:

Muni Note Days Diff
Issue Date Settlement 42682
Maturity 121582 Coupon
Price Yield Mat

Accr'd Int Curr Yld
Yield-Tax Days Diff 229
Calc CTax CFr9 New M100

COMM Examples

This section presents sample transactions using the Commission Calculator. Each example starts from the COMM Main Menu. Follow the examples in order, because some of them build on previous examples.

Stock

Press (F1) to select BStk

Press (F1) to select NTrd

Enter the following data values:

Quantity — 100 ENTER

Price/shr — 25 ENTER

Press (F3) to select % Disc

Enter the % Disc:

25 (ENTER)

Press (F5) to calculate the information. After calculation, your screen looks like this:

Stock	Βυγ		
Quantity	100	Acum Qty	100
Price/shr	25	Wt Ave Pro	25
Red Comm	52,866	Cents/shr	52.866
Disc Comm	39.6495	Cents/shr	39.6495
Amt Disc	13.2165	% Disc	25
SEC Fee	Ø	Net Monies	2539.649
BStK SStK	BOPt SOP	t	New M100

Add another purchase to the above transaction:

Press (F1) to select BStk

Press F2 to select ATrd

Enter the following data values:

Quantity — 400 ENTER

Price/shr — 30 ENTER

Press (F3) to select % Disc

Enter the %Disc:

25 (ENTER)

Press (F5) to calculate the information. After calculation, your screen looks like this:

Stock	Buy		
Quantity	400	Accum Aty	100
Price/shr	30	Wt Aug Pro	25
Rea Comm	226,665	Cents/shr	45.333
Disc Comm	169,9987	Cents/shr	33.99975
Amt Disc	56.66625	% Disc	25
SEC Fee	Ø	Net Monies	14669.99
BStk SStk	BOPt SOPt		New M100

Recalculate the same transaction but set the commission to .30 per share.

Press (F1) to select BStk

Press (F4) to select CDisc

Enter the Cents/shr:

30 (ENTER)

Press (F5) to calculate the information. After calculation, the screen looks like this:

Stock	Buy		
Quantity	400	Accum Qty	500
Price/shr	30	Wt Ave Pro	29
Red Comm	226,665	Cents/shr	45.333
Disc Comm	150	Cents/shr	30
Amt Disc	76.665	% Disc	33.82304
SEC Fee	Ø	Net Monies	14650
BStk SStk	BOPt SOPt		New M100

Calculate the above transaction as a sell.

Press (F2) to select SStk

Press (F5) to select Calc

Your screen now looks like this:

Stock	Sell		
Quantity	400	Accum Oty	500
Price/shr	30	Wt Ava Pro	29
Kea Comm	226,665	Cents/shr	45.333
Disc Comm	15Ø	Cents/shr	30
Amt Disc	76.665	% Disc	33.82304
SEC Fee	.49	Net Monies	14349.51
BStK SStK	BOPt SOP	·t	New M100

Options

Options are calculated exactly like stocks with the exception of quantities. Option quantities are always entered on a per contract basis. COMM assumes that one contract is 100 single options.

Press (F3) to select BOpt

Press (F1) to select NTrd

Enter the following data values:

Quantity — 10 ENTER

Price/shr — 2.5 (ENTER)

Press (F3) to select % Disc

Enter the % Disc:

10 (ENTER)

Press (F5) to calculate the information. After calculation, your screen looks like this:

Option	Вия		
Quantity	10	Accum Qty	10
Price/shr	2.5	Wt Avg Pro	2.5
Red Comm	114.95	Cents/shr	11,495
Disc Comm	103,455	Cents/shr	10.3455
Amt Disc	11.495	% Disc	10
SFC Fee	Ø	Net Monies	2603.455
BStk SStk	BOPt SOP	t	New M100

Calculate the above transaction as a sell.

Press (F4) to select SOpt Press (F5) to select Calc

The screen now looks like this:

Option	Sell		
Quantity	10	Accum Qty	10
Price/shr	2.5	Wt Ave Pro	2.5
Rea comm	114.95	Cents/shr	11.495
Disc Comm	103,455	Cents/shr	10.3455
Amt Disc	11.495	% Disc	10
SEC Fee	.09	Net Monies	2396.455
BStk SStk	BOPt SOP	t	New M100

OSE Examples

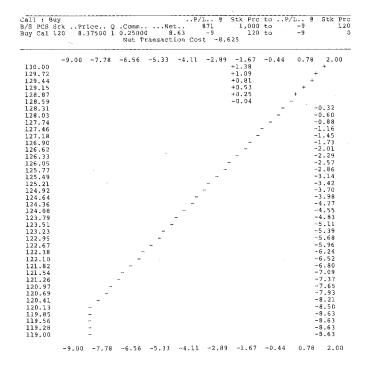
This section gives a brief example and explanation of each of the strategies OSE can evaluate. Each example begins at the OSE Main Menu.

Note: Maximum profit, maximum risk, and transaction cost summaries are relevant for l:l quantities only.

Strategy Type — Call : Buy

Press 🛐 to select Call

Press (F1) to select Buy



After calculation and printing, press $\P 8$ to return to the OSE Main Menu.

Maximum Profit potential is unlimited. The higher the stock rises the higher the value of the option.

Maximum Risk is the net cost of the option purchased.

Transaction Cost is the cost of the option purchased plus commission (net cost).

Call options are bought in anticipation of the stock price rising. If the stock is at or below the striking price on expiration, the option expires worthless.

Strategy Type — Call : Sell

Press $\boxed{\mathbf{F1}}$ to select a Call

Press (F2) to select α Sell

Call : Sell			P/L@				
B/S PCS Srk	Price Q	.CommNet	-7,845	1,000		75	120
Sel Cal 120				120	to	75	0
001 001 100	3,3,333	Net Transaction	Proceeds	75.125			
~61	8.00-540.89-	463.78-386.67-309	3.56-232.4	4~155.33 -	78.22	-1.11	76.00
197.00	_						7.88
195.00	_					-59	9.88
193.00						-58	1.88
191.00	_					~56	3.88
189.00	_					-54	5.88
187.00	_	_				-52	7.88
	_					-50	9.88
185.00		-					1.88
183.00		-				-42	1.00

-618.00-540.89-463.78-386.67-309.56-232.44-155.33 -78.22 -1.11 76.00

After calculation and printing, press (F8) to return to the OSE Main Menu.

Maximum Profit potential is realized if the stock is at or below the strike price.

 $\mbox{\it Maximum}$ Risk is unlimited. The higher the stock rises the greater the loss.

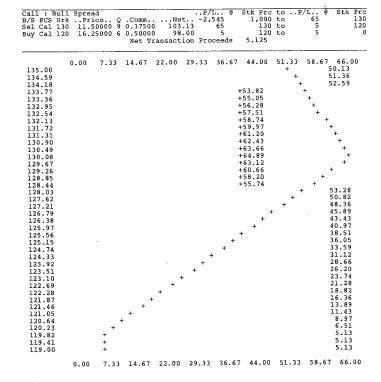
Transaction Proceeds are the net proceeds from the sale of the call.

Calls are sold when you expect a stock to be at or below the striking price of the option. Profits are realized when the option expires worthless.

Strategy Type — Call : Bull Spread

Press $\boxed{\mathbf{F1}}$ to select a Call

Press (F3) to select α Bull



Press (F8) to return to the OSE Main Menu.

Maximum Profit potential is realized when the underlying stock is at the higher striking price.

Maximum Risk is realized when the underlying stock is at or below the lower striking price.

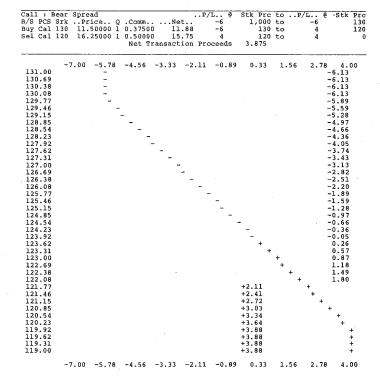
Transaction Cost is the net cost of the option purchased less the net proceeds of the option sold.

A Bull Spread is initiated when you expect the price of a stock to rise. The option sold limits the potential profit but increases your leverage. The most profitable price for a Bull Spread is the higher strike. At that price, the option sold expires worthless and the option bought is worth the spread difference.

Strategy Type — Call: Bear Spread

Press (F1) to select a Call

Press F4 to select a Bear Spread



Press (F8) to return to the OSE Main Menu

Maximum Profit potential is realized when the underlying stock is at the lower striking price.

Maximum Risk is realized when the stock is at or above the higher striking price.

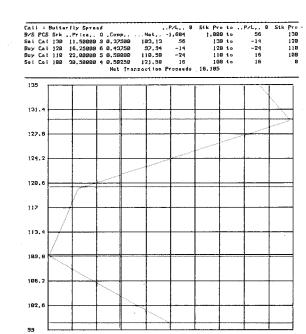
Transaction Proceeds are the net proceeds of the sale of the lower striking price call less the net cost of the higher striking price call.

A Bear Spread is initiated when you expect a stock to fall to the striking price of the option sold. The proceeds of the option sold less the cost of the option bought are the potential profit. The option bought limits the potential for loss should the stock rise. The most profitable price for a Bear Spread is the lower strike price. At that price both options expire worthless.

Strategy Type — Call : Butterfly Spread

Press (F1) to select a Call

Press (F5) to select α Btry



Press (F8) to return to the OSE Main Menu

Maximum Profit potential is attained when the stock is at or above the higher strike price OR at or below the lower strike price depending on the quantities bought and sold.

Maximum Risk is the net cost of the transaction.

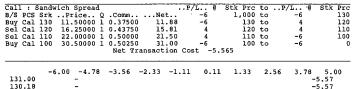
Transaction Cost is the net proceeds from the sale of the highest and lowest striking price options less the cost of the middle striking price options.

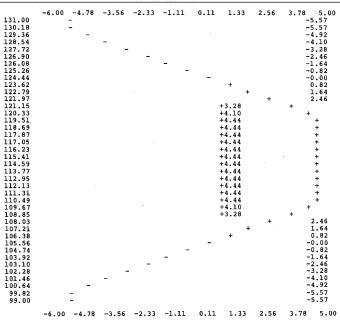
A call butterfly spread is extremely flexible because of the various quantities of options which can be bought and sold.

Strategy Type — Call : Sandwich Spread

Press $\overline{\textbf{F1}}$ to select Call

Press (F6) to select SndW





Press (F8) to return to the OSE Main Menu.

Maximum Profit potential is realized when the stock is between the middle striking prices.

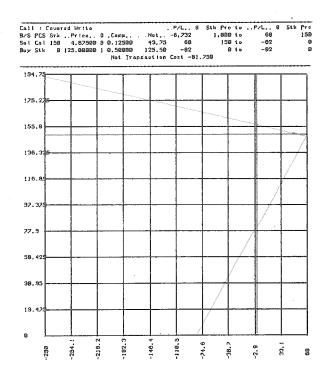
Maximum Risk is realized if the stock is above the highest striking price or below the lowest striking price depending on the quantities of options bought and sold.

Transaction Proceeds or Costs are the net proceeds of the middle two striking price options less the net costs of the highest and lowest strike price options.

A call sandwich spread is extremely flexible because of the various quantities of options which can be bought or sold.

Strategy Type — Call : Covered Write

Press (F1) to select Call
Press (F7) to select CvdW



Press 🔞 to return to the OSE Main Menu

Maximum Profit potential is realized with the stock at the call option striking price.

Maximum Risk is realized if the stock declines in price to \emptyset .

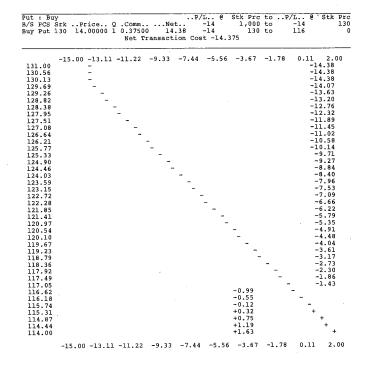
Transaction Cost is the cost of purchasing the stock less the proceeds of the option sold.

A covered call write is used to increase cash flow and reduce the risk of owning a stock.

Strategy Type — Put : Buy

Press (F2) to select Put

Press (F1) to select Buy



Press (F8) to return to the OSE Main Menu

Maximum Profit potential is realized if the stock drops to a price of \emptyset .

Maximum Risk is the net cost of the put option.

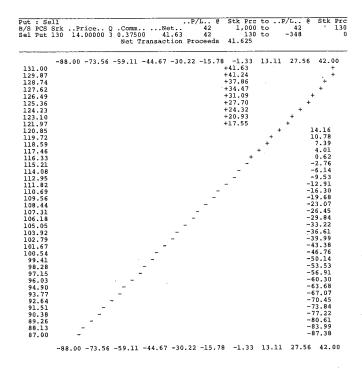
Transaction Cost is the cost of the option plus the commission.

Puts are bought as an alternative to shorting stock. They become more valuable as the stock falls in price below the striking prices.

Strategy Type — Put : Sell

Press (F2) to select Put

Press (F2) to select Sell



Press (F8) to return to the OSE Main Menu.

Maximum Profit potential is realized if the stock is at or above the strike price.

Maximum Risk is realized if the stock falls in price to \emptyset .

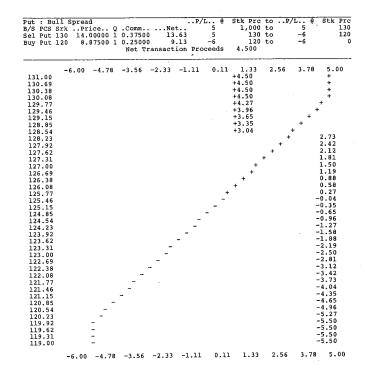
Transaction Proceeds are the net proceeds from the sale of the put.

Puts are sold when you expect a stock to be at or above the striking price. Profits are realized when the option expires worthless.

Strategy Type — Put : Bull Spread

Press (F2) to select Put

Press (F3) to select Bull



Press $\P8$ to return to the OSE Main Menu.

Maximum Profit potential is realized when the stock is at the higher of the striking prices.

Maximum Risk is realized if the stock is at the lower striking price.

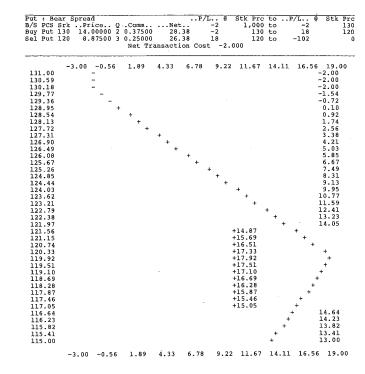
Transaction Proceeds are the proceeds of the high striking price less the cost of the low strike.

This strategy is used when you expect a stock to rise in price. If the stock is above the higher striking price, both options expire worthless.

Strategy Type — Put : Bear Spread

Press (F2) to select Put

Press (F4) to select Bear



Press (F3) to return to the OSE Main Menu.

Maximum Profit potential is realized when the underlying stock is at the lower striking price.

Maximum Risk is realized when the stock is at the higher striking price.

Transaction Proceeds are the proceeds from the sale of the lower striking price put less the cost of the higher striking price put.

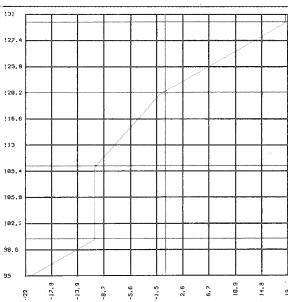
A Bear Spread is initiated when you expect a stock to fall to the striking price of the option sold. The option sold limits the potential profit but increases the leverage. The most profitable price for a Bear Spread is the lower strike price. At that price, the put bought is worth the spread difference and the put sold expires worthless.

Strategy Type — Put : Butterfly Spread

Press (F2) to select Put

Press (F5) to select Btry

Put	: 8:	ittar	rily Sprea	d			.P/L. 1	Ø	Stk Pro	to	P/L	@ 51	k Pre
5/S	PCS	Srk	Price	Ω	.Comm,.	Nat,	19		1,000	10	19		130
Se i	Cal	130	14.00000	2	8.37500	27.53	19		139	10	1		129
Buy	Cal	120	8,87500	1	0.25000	9,13	-1		120	10	-11		110
Buy	٤٥١	110	5.37500	1	0.18750	5.56	-11		118	10	-11		100
Sei	Cal	100	3,90666	2	0.12500	5,88	-17		199	10	-211		6
					Net Tra	nsaction	Proceeds	s	18.813				



Press 🔞 to return to the OSE Main Menu.

Maximum Profit potential is attained when the stock is at the higher strike price or at the lower strike price.

Maximum Risk is at or between the two middle strike prices.

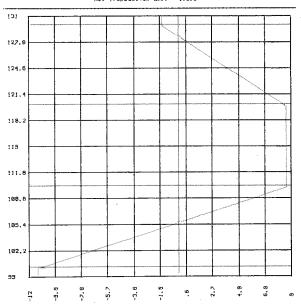
Transaction Proceeds or Costs are the net of the proceeds of the sale of the highest and lowest striking price options less the net cost of buying the two middle striking price options.

A put butterfly spread is extremely flexible because of the various quantities of options which can be bought or sold.

Strategy Type — Put : Sandwich Spread

Press (F2) to select Put Press (F6) to select SndW

Put : Sandwich Spread		P/L., @	Sik Pro to	P/L., 6	Stk Pre
B/S PCS Stk Price	C Comp	Net1	1,000 to	-1	130
Buy Cal 130 14.00000	1 0.37500	14.38 -1	130 10	9	129
Sel Cal 129 8.87509	1 0.25000	8.63 .9	120 to	9	110
Sel Cal 110 5,37500	2 9.18759	10.56 9	110 to	-11	199
Buy Cal 100 3,00000	2 0,12500	6.13 -11	100 to	-11	Ø
	Nat Trons	action Cost -1.	313		



Press (F8) to return to the OSE Main Menu.

Maximum Profit potential is realized when the underlying stock is between the two middle striking prices.

Maximum Risk is realized if the stock is at the highest striking price or the lowest striking price.

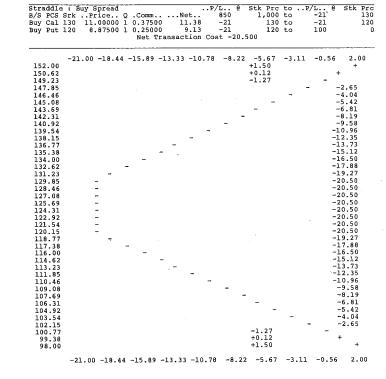
Transaction Cost is the proceeds of the middle two striking price options less the cost of the highest and lowest strike price options.

A put sandwich spread is extremely flexible because of the various quantities of options which can be bought and sold.

Strategy Type — Straddle : Buy Spread

Press (F3) to select Strd

Press (F1) to select Buy



Press 🔞 to return to the OSE Main Menu.

Maximum Profit potential is unlimited. The higher the stock moves, the greater the profit on the call. The lower the stock drops, the greater the profit on the put.

Maximum Risk is the cost of the options purchased.

Transaction Cost is the net cost of the options purchased.

A Straddle Buy is initiated when the underlying stock is expected to move widely up or down.

Strategy Type — Straddle : Sell Spread

Press (F3) to select Strd

Press (F2) to select Sell

135.85 128.62 121.38

5.69 -1.54 -8.77

Enter Srk, Price, Q, and Comm as shown on the following printout:

C+== 221.		ell Sprea	5			5 /r	0	Oth In Day		/-	-	0 011	
				C		P/L	6	Stk Pro				е этк	Pro
Sel Cal		Price 11.00000			Net 54.63			1,000) to		34		130
Sel Put		8.87500			79.63	134					34		120
ser Put	120	0.8/500	9) to	-9	46		0
				Net Tra	nsaction	Proceed	15 1	.34.250					
	%~10	90.00-953	. 8	9-817.78-	-681.67-5	45.56-40	9.4	14-273.	33-1	37.22	-1.	.11 13	5.00
266.00												45.75	
258.77						_						509.60	
251.54						-					-2	473.44	
244.31						-					- 4	437.29	
237.08							_					401.13	
229.85								-			-3	364.98	
222.62								-			-3	328.83	
215.38								-			-2	292.67	
208.15								_			-2	256.52	
200.92									_		-2	220.37	
193.69									-		-]	L84.21	
186.46										_	-3	L48.06	
179.23										_	-1	L11.90	

19.69 -48.52 - 113.60
15.23 - -178.67
18.00 - -243.75
10.77 - -308.83
13.54 - -373.90
19.08 - -438.98
19.08 - -504.06
11.85 - -569.13
14.62 - -569.13
14.62 - -764.37
2.92 - -829.45
2.92 - -829.45

-3.44 +32.71

%+134.25 %+134.25 +81.63

> -959.60 -1024.67 -1089.75

%-1090.00-953.89-817.78-681.67-545.56-409.44-273.33-137.22 -1.11 135.00

Press F8 to return to the OSE Main Menu.

Maximum profit potential is the net proceeds of the options sold.

Maximum Risk potential is unlimited. The higher the stock moves, the greater the loss on the call. The lower the stock drops, the greater the loss on the put.

Transaction Proceeds are the net proceeds of the options sold.

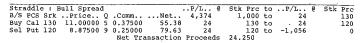
A Straddle Sell is initiated when the underlying stock is expected to move narrowly between or around the striking prices.

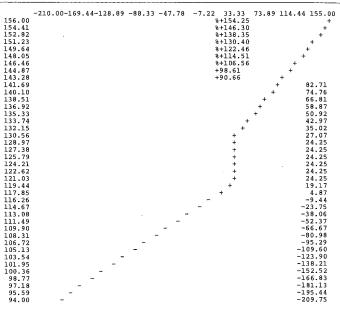
Strategy Type — Straddle : Bull Spread

Press (F3) to select Strd

Press (F3) to select Bull

Enter Srk, Price, Q, and Comm as shown on the following printout:





 $-210.00 - 169.44 - 128.89 \ -88.33 \ -47.78 \ -7.22 \ 33.33 \ 73.89 \ 114.44 \ 155.00$

Press 🔞 to return to the OSE Main Menu.

Maximum Profit is unlimited. The higher the stock goes the greater the profit.

Maximum Risk potential is realized as the stock approaches \emptyset . The lower the stock drops, the greater the loss on the put.

Transaction Proceeds or Cost is the net proceeds of the put sold less the cost of the call bought.

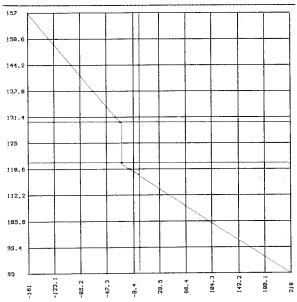
A Straddle Bull combination is initiated as an alternative to buying the stock. Generally much greater leverage can be created using this strategy.

Strategy Type — Straddle : Bear Spread

Press (F3) to select Strd

Press (F4) to select Bear

Straddle : Bear Spread	P/L,. 8	Stk Pre to	P/L,. 0	5tk Pro
B/S PCS Stk . Price Q .Comm.	Nat., -4,376	1,000 to	-26	139
Sel Cal 130 11,00000 5 2,3750	Ø 54.6326	130 to	-26	129
Buy Cal 120 8,87500 9 9,2500	Ø 89.13 -26	129 to	1,055	0
Net 7	ransaction Cost -25.	500		



Press 🔞 to return to the OSE Main Menu.

Maximum profit is realized as the stock approaches \emptyset . The lower the stock drops, the greater the profit on the put.

Maximum Risk potential is unlimited. The higher the stock goes, the greater the loss on the call.

Transaction Proceeds or Cost is the net proceeds of the call sold less the cost of the put bought.

A Straddle Bear combination is initiated as an alternative to shorting the stock. Generally much greater leverage can be created using this strategy.

APPENDIX A — FISE TABLES

Table 1 — The Fixed Income Security Evaluator

FISE Name	Security Type	Calendar Type	Рау Туре
Bond	Municipal Bond Corporate Bond Government Agency Bond	30 / 360	Periodic
GvtB	Government Bond	Actual / 365	Periodic
MunN	Municipal Note	30 / 360	Maturity
360N	Actual / 360 Note	Actual / 360	Maturity
365N	Actual / 365 Note	Actual / 365	Maturity
TsyB	Treasury Bills	Actual / 365	Discount

Table 2a — Entry Data for Calculable Variables Security Types: Bond, GvtB

Calculable Variable	B 111	Entry Data
Label	Description	
Pric	Price to Maturity	Issue Date (1) Settlement Date Maturity Date Coupon Yield to Maturity
Pric	Price to Call	Issue Date Settlement Date Call Date Coupon Yield to Call
YMat	Yield to Maturity	Issue Date Settlement Date Maturity Date Coupon Price
Accr	Accrued Interest (2)	Issue Date Settlement Date Maturity Date Coupon
CYld	Current Yield	Issue Date Settlement Date Maturity Date Coupon Price or Yield
YαТх	Yield after Tax (3)	Settlement Date Maturity Date Coupon Yield

YtCl Yield to Call Issue Date
Settlement Date
Coupon
Price
Call Date
Call Price

Notes:

- (1) Issue date should be set to $\emptyset1\emptyset163$ if it is unknown or irrelevant. It is irrelevant if the settlement date is more than two pay periods from the issue date.
- (2) When calculating accrued interest for an odd coupon, the program assumes a short payment period if the issue date is more than half the pay period from what would be the first coupon payment, otherwise it assumes a long pay period.
- (3) Long term capital gains are assumed for securities held more than one year. If you own a security for exactly 366 calendar days and one of those days is February 29th, enter a maturity date one day less than the actual maturity date for proper holding period calculation.

Table 2b — Entry Data for Calculable Variables Security Types: MunN, 360N, 365N

Calculable Variable Label Pric	Description Price Given	Entry Data Issue Date Settlement Date Maturity Date Coupon Yield
YMat	Yield to Maturity	Issue Date Settlement Date Maturity Date Coupon Price
Accr	Accrued Interest	Issue Date Settlement Date Maturity Date Coupon
CYld	Current Yield	Issue Date Settlement Date Maturity Date Coupon Price or Yield
YαTx	Yield after Tax (3)	Settlement Date Maturity Date Coupon Yield
DαyD	Days Between Date (4)	Settlement Date Maturity Date

Notes:

(3) Long term capital gains are assumed for securities held for more than one year. If you own a security for exactly 366 calendar days and one of those days is February 29th, enter a maturity date one less than

- the actual maturity date for proper holding period calculation.
- (4) Days between dates are for the given calendar type specific to the security selected. For example, days for Municipal Notes are calculated on a 3Ø/36Ø calendar. For 365 Day Notes days are calculated on an actual/365 day calendar.

Table 2c — Entry Data for Calculable Variables Security Types: TsyB

Calculable Variable	e Description	Entry Data
Pric	Price	Settlement Date Maturity Date Yield or Discount Rate
ΥΜατ	Yield to Maturity	Settlement Date Maturity Date Price or Discount Rate
DRat	Discount Rate (5)	Settlement Date Maturity Date Price
DayD	Days Between Do	rte Settlement Date Maturity Date

Notes:

(5) Discount Rate is the percent discount at which the bond is being offered.

APPENDIX B — COMM TABLES

Table 1 — Pre May, 1975 NYSE & CBOE Rates (Subject to Notes)

Stocks selling below \$1:

Principal ot:	Commission is:	•
\$ 0-999	8.4% of principal	
\$ 1,000 - 9,999	5.0% of principal +	\$ 34.00
\$ 10,000 & above	4.0% of principal $+$	\$134.00

Options selling below \$1:

Commission is:

6.0% of principal + \$ 2.00 an option

Stocks and Options selling above \$1:

Single Round Lots & Single Options Contracts

Principal of:	Commission is:
\$ 100 - 799.99	2.0% of principal $+$ \$ 6.40
\$ 800 - 2,499.99	1.3% of principal $+$ \$12.00
\$ 2,500 & above	0.9% of principal $+$ \$22.00

Multiple Round Lots — Stocks

Principal of:	Commission is:
\$ 100 - 2,499.99	1.3% of principal $+$ \$ $12.00 + X$
\$ 2,500 - 19,999.99	0.9% of principal + \$ 22.00 + X
\$20,000 - 29,999.99	0.6% of principal + $$82.00 + X$
\$30,000 & above	0.4% of principal + \$142.00 + X

Multiple Options

Principal of:	Commission is:
\$ 100 - 2,499.99	1.3% of principal + \$ $12.00 + X$
\$ 2,500 - 19,999.99	0.9% of principal + \$ 22.00 + X
\$20,000 & above	0.6% of principal + $$82.00 + X$

X = \$6.00 per round lot of stock or per option for first ten round lots or options.

X = \$4.00 per round lot of stock or per option for remainder above ten round lots or options.

Notes:

- \bullet Transactions including odd lots are reduced by \$2.00.
- The commission charge on multiple round lots may not exceed the Single Round Lot commission multiplied by the number of round lots.
- If the principal amount of the transaction exceeds \$300,000 the commission on the portion of the principal above \$300,000 is automatically discounted 50%.
- The results of the above table are increased by the following percentages. They represent the last adjustments made by the NYSE and the CBOE.

	\$0.00 to \$5,000	Above \$5,000
Stocks —	18.8%	24.2%
Options —	10.0%	15.0%

Table 2 — Changing Commission Calculator Variables

You can change the surcharge, minimum commission per transaction, and other variables at any time to make the COMM program specific to the commission formula used by any firm whose commissions are based on the May, 1975 formula. (Refer to your Model 100 Owner's Manual for specific instructions on how to change program lines.) The variables you can customize, found in line 80 of the program, are listed below. The numbers in the brackets are the values used by The Commission Calculator program as delivered.

Line 80:

MN(0)	= minimum commission per option transaction [25]
MN(1)	$= \underset{transaction}{\text{minimum commission per stock}} \\ $
SR(0)	= surcharge on options with principal value of \$5000 and below [1]
SR(1)	= surcharge on stocks with principal value of \$5000 and below [1]
SR(2)	= surcharge on options with principal value above \$5000 [1]
SR(3)	= surcharge on stocks with principal value above \$5000 [1]
X(0)	= "X" figure in the rate table for the first ten round lots of stock or first ten option contracts [6]
X(1)	= "X" figure in the rate table for more than ten round lots of stock or ten options [4]
OS	= number of shares per option contract [100]

Cat. No. 26-3824

