

Investment Tracker

Contents

Introduction.....	1
Requirements	1
Macros.....	1
License	2
Getting Started	2
Example 1.....	3
Example 2.....	6
Summary Page.....	9
All Accounts Register.....	10
Backups.....	10
Passwords	10
Problem Solver	11
Tech Support.....	11

Introduction

Investment Tracker is an Excel Spreadsheet for analyzing the performance of financial investments such as stocks, bonds, mutual funds and other investment products. It keeps track of the share prices, number of shares, cash, money market funds, etc. in your brokerage or retirement accounts. It also gives you a quick and accurate view of the current and historical annual rates of return for individual securities and entire accounts.

Investment Tracker is designed specifically for analyzing investments. It will not balance checkbooks or do other financial tasks.

It will not download data automatically from a brokerage firm or bank. Share prices, number of shares, cash balances, etc. must be entered manually from monthly statements or from your broker's website. However, *Investment Tracker* is designed to require the minimum amount of data entry necessary to get accurate and clear results.

Requirements

Investment Tracker is not a stand-alone program. It requires that you have Microsoft® Excel 2003, or later, installed on your computer.

Macros

Macros are bits of computer code embedded in Excel worksheets which perform functions that Excel cannot do by itself. *Investment Tracker* uses macros to perform most of its work. However, macros, like other computer programs, *can* harbor computer viruses, spyware, etc. For that reason, Excel has security features which can be set to block macros from running. (*Investment Tracker* **does not** contain viruses, spyware, adware or any other hidden programs! If you are unsure, use your anti-virus and anti-spyware software to scan InvestmentTracker.xls before beginning.)

To use *Investment Tracker*, the macro security in Excel must be set to medium or low. Excel will not allow the necessary macros to run at higher settings. At the medium setting, Excel will ask you whether to enable macros; you must select the “Enable Macros” option to use *Investment Tracker*.

To allow macros to run:

1. On the **Tools** menu, click **Options**.
2. Click the **Security** tab.
3. Click the **Macro Security** button.
4. Click the **Security Level** tab, and then select **Medium** (or **Low**).
5. Click **OK** twice.

License

This software is offered “as is,” without a warranty of any kind. If you use it for more than 90 days, you are requested to contribute what you think this software is worth to a charitable organization of your choice. Registration is not required.

Getting Started

When you first open *InvestmentTracker.xls*, you will see the Summary Page (Fig. 1):

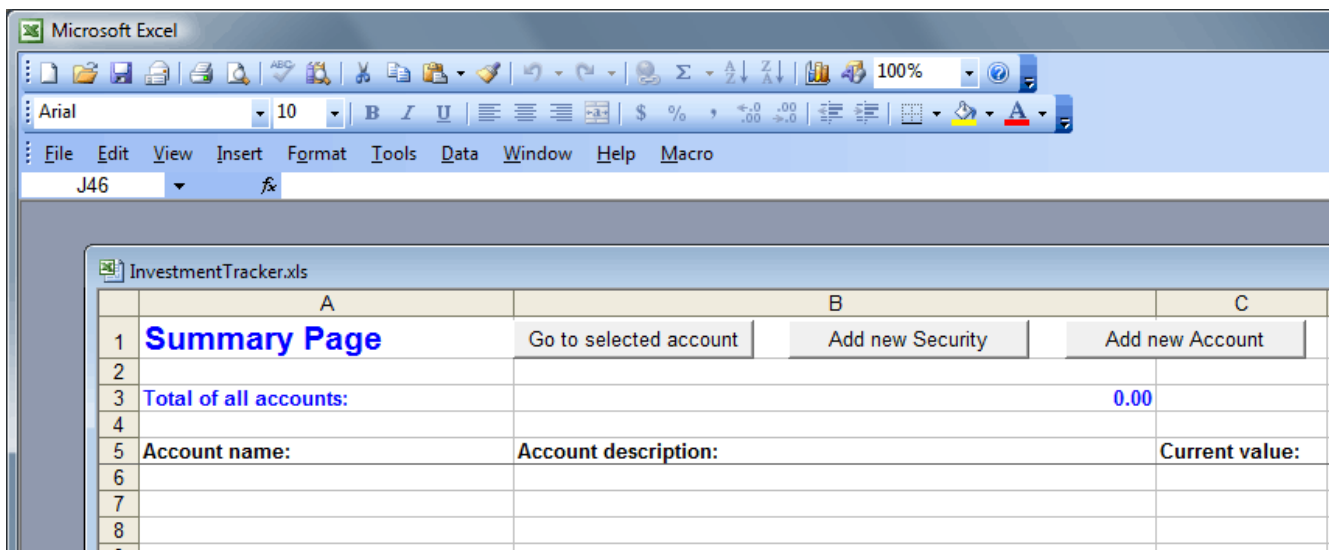


Fig. 1

Accounts: All investment products are organized into *accounts*. You will probably want to make your accounts in *Investment Tracker* correspond to your brokerage accounts, but you could just as well organize it a different way.

Accounts may contain stocks, bonds, mutual funds, money market funds, cash, CD's or other investment products.

Securities: In *Investment Tracker*, a security is a single investment that can be characterized by a share price. Stocks, bonds and mutual funds generally fall in this category. If you have

an account containing several securities, you can track the performance of each security individually and also track the performance of the account as a whole.

How to organize accounts: The plan should be to organize accounts in a way that requires the least amount of data entry to obtain the desired result. Investment accounts usually contain stocks, bonds, mutual funds and other securities which are characterized by a share price. Depending on the level of detail you want to see, you can:

1. Lump all securities in the account together and just track the performance of the account as a whole, or
2. Track the performance of some of the securities individually and lump everything else together to see the performance of the account as a whole, or
3. Track all the securities individually and also track the account as a whole.

The examples below will help you decide how to set up your accounts.

Example 1

Suppose you have an account, for example an Individual Retirement Account (IRA), which contains several stocks and mutual funds. If you only care how the account as a whole is performing, there is no need to keep track of the individual stocks and mutual funds. You can just enter the total value of the account every month (or as often as you choose), and *Investment Tracker* will automatically calculate the rate of return.

Step 1: Click the **Add New Account** button at the top of the **Summary Page** to create a new account. The dialog box shown in Fig. 2 will appear. Give the account an abbreviated name, Ted's IRA in this example, and click **OK**.

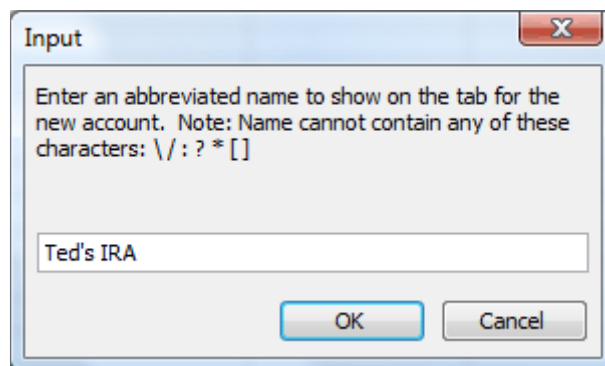


Fig. 2

Step 2: The green areas on the account register (Fig. 3) show where you can type to enter data. The other cells are locked to prevent accidentally changing the data. Give the account an **Account name** and **Account description** of your choice.

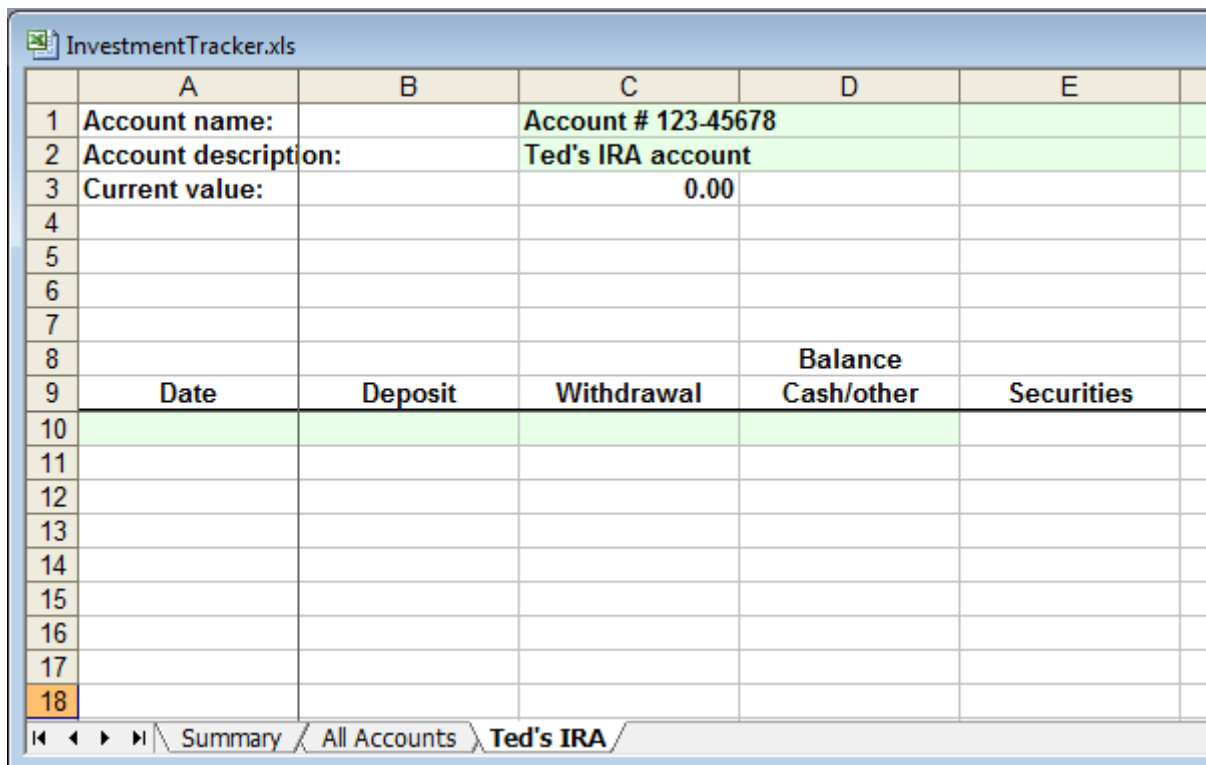
The abbreviated account name you entered shows as a **tab** on the **Sheet Tab Bar** at the bottom of the window.

- To select the account or security you want to work with: Click its tab or right click on the arrow region at the left of the Sheet Tab Bar for a menu.
- To scroll through the tabs: use the arrows at the left of the Sheet Tab Bar.
- To delete an account: Right click on its tab, then select **Delete**.

- To reorganize tabs: Drag the tab where you want it or right click on the tab for options.

Step 3: Enter the initial data for **Ted's IRA** in row 10 of the account register (Fig. 4).

- Enter the date in the **Date** column. There are 4 ways to enter a date:
 - Just type it in.
 - Right click on the cell and choose **Select Date** for the pop-up calendar.
 - Right click on the cell and choose **Repeat Date** to insert the date you last selected.
 - Right click on a cell immediately below a cell containing a date and choose **End of Next Month** to insert the last day of the following month.
- Whether you start tracking the account at its inception or at some later point in its history, enter your total investment (the cost basis) as a deposit in the **Deposit** column. (Assume 5,000.00 in this case.)
- Enter the total account value on that date in the **Balance Cash/other** column (also 5,000.00 in this case.)



The screenshot shows a spreadsheet titled "InvestmentTracker.xls" with columns A through E. The data is as follows:

	A	B	C	D	E
1	Account name:		Account # 123-45678		
2	Account description:		Ted's IRA account		
3	Current value:		0.00		
4					
5					
6					
7					
8				Balance	
9	Date	Deposit	Withdrawal	Cash/other	Securities
10					
11					
12					
13					
14					
15					
16					
17					
18					

The spreadsheet also shows a tab bar at the bottom with three tabs: "Summary", "All Accounts", and "Ted's IRA". The "Ted's IRA" tab is currently selected.

Fig. 3

Step 4: Each time you get a statement (or as often as you like):

- Enter any deposits and withdrawals you have made since the last entry. Record only funds you have put in or taken out of the account. Do not include fees, commissions, dividends, interest, etc. unless you actually deposited or withdrew that amount from the account. Then, the calculated rate of return will be your net after expenses, which is what you really care about.
- Since you are not tracking any individual securities in the account, enter the total account value or total asset value in the **Balance Cash/other** column any time it changes.

The spreadsheet will automatically calculate your **Total Investment**, (unrealized) **Total Return**, and (unrealized) **Gain/Loss**.

Once you have accumulated 3 months of data, the **Annual Rate of Return**, averaged over 3 months, will be calculated. The **Annual Rate of Return** averaged over 6 months, 1 year, 2 years, 3 years and 5 years are also calculated.

The screenshot shows a spreadsheet titled 'InvestmentTracker.xls'. The top section contains account information: Account name: Account # 123-45678, Account description: Ted's IRA account, and Current value: 6,624.00. Below this is a table with columns for Date, Deposit, Withdrawal, Balance Cash/other, Securities, Total value, Total investment, Total return, Gain / loss, and Annual Rate of Return (% - compounded annually) for 3 months, 6 months, 1 year, 2 years, 3 years, and 5 years. The data rows show transactions from 12/31/2007 to 1/31/2009, with deposits and withdrawals, and corresponding balance and return calculations.

Fig. 4 (Change the magnification on the reader is this is hard to read.)

The return calculations are performed using the Modified-Dietz Method:

$$R_{MD} = \frac{EMV - BMV - CF}{BMV + \sum_{i=1}^n (W_i \times CF_i)}$$

where:

EMV = ending market value

BMV = beginning market value

CF = the net cash flow for the period (total deposits – total withdrawals)

$$W_i = \frac{CD - D_i}{CD}$$

CF_i = the i^{th} cash flow (+ for a deposit; - for a withdrawal)

CD = the number of calendar days in the period

D_i = The day in the period on which the cash flow (CF_i) occurred

The period of the Modified-Dietz calculation, CD , is normally not exactly a year, so the Annual rate of return, assuming annual compounding, is calculated and displayed in the spreadsheet with this formula:

$$R_{Annual} = (1 + R_{MD})^{\frac{365}{CD}} - 1$$

where:

R_{Annual} = the annual rate of return for the period, assuming annual compounding

Example 2

Suppose you have an investment account which contains:

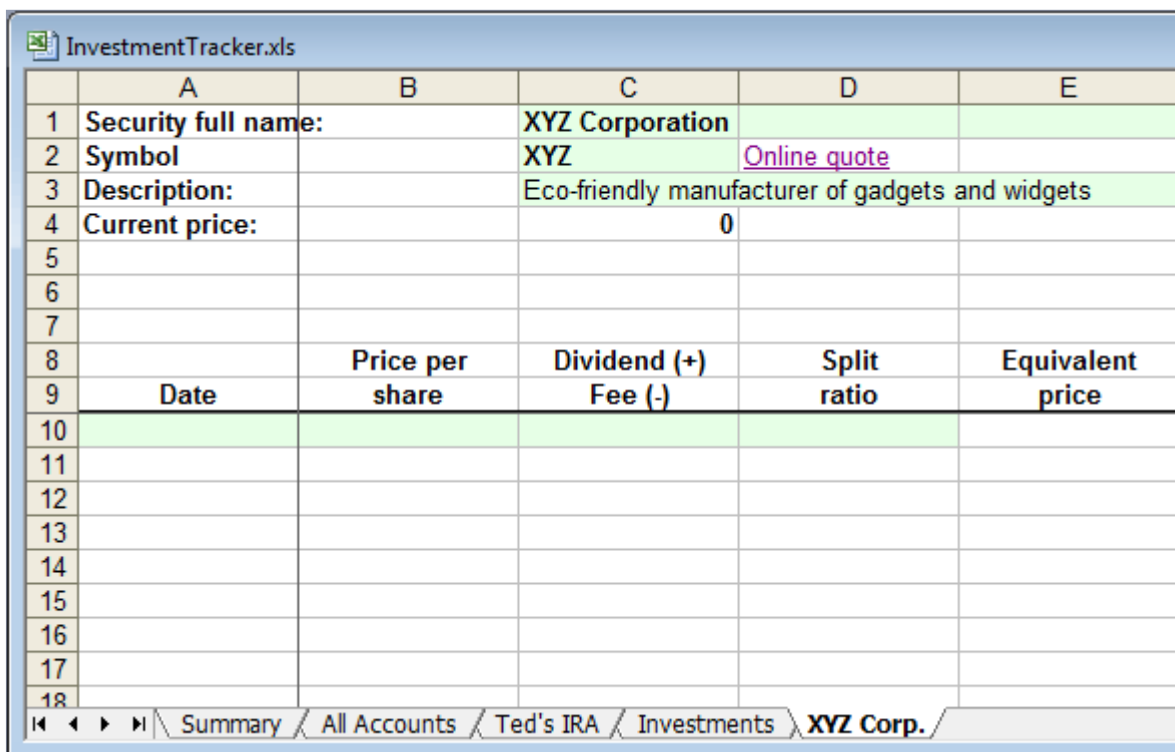
- 200 shares of XYZ Corp.
- 50 shares of PQR Mutual Fund
- \$200.00 in a money market fund
- \$25.00 in cash

You want to track the performance of XYZ Corp. and PQR Mutual Fund individually, but not the money market fund or the cash.

Step 1: Create the account as in Steps 1 and 2 of Example 1, above, and give it the abbreviated name **Investments**.

Step 2: Click the **Summary** tab at the bottom of the worksheet; then click the **Add new Security** button. Type an abbreviated name of your choice in the dialog box. Use **XYZ Corp.** for this example.

Step 3: Enter the **Security full name**, **Symbol**, and **Description** in the green areas at the top of the securities register (Fig. 5). If the symbol name is standard, you can see current and historical prices from Yahoo! Finance by clicking **Online quote** next to the symbol.



	A	B	C	D	E
1	Security full name:		XYZ Corporation		
2	Symbol		XYZ	Online quote	
3	Description:		Eco-friendly manufacturer of gadgets and widgets		
4	Current price:		0		
5					
6					
7					
8		Price per share	Dividend (+)	Split ratio	Equivalent price
9	Date		Fee (-)		
10					
11					
12					
13					
14					
15					
16					
17					
18					

Navigation: Summary / All Accounts / Ted's IRA / Investments / XYZ Corp.

Fig. 5

Step 4: Each time you get a statement (or as often as you like), enter your data for **XYZ Corp.** in the securities register (Fig. 6). Begin in row 10 and do not leave any rows blank.

- Enter the date in the **Date** column. You do not have to use the same set of dates as you use for the account(s) containing the security. *Investment Tracker* will always use the most recent previously recorded price.

- Enter the share price in the **Price per share** column.
- Enter the per share dividends or interest paid, if any, as *positive* amounts in the **Dividend (+) Fee (-)** column.
- Enter the per share fees paid, if any, as *negative* amounts in the **Dividend (+) Fee (-)** column.
- If the stock splits, enter the ratio of new shares to old shares in the **Split ratio** column. Example: As shown in Fig. 6, XYZ Corp. declared a 2 for 1 split on 10/31/2008. You would put a 2 in the **Split ratio** column, and you would end up with twice as many shares, with each share being worth about half as much.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Security full name:		XYZ Corporation										
2	Symbol		XYZ	Online quote									
3	Description:		Eco-friendly manufacturer of gadgets and widgets										
4	Current price:		9.794										
5													
6													
7													
8													
9													
10	Date	Price per share	Dividend (+) Fee (-)	Split ratio	Equivalent price	Equivalent Dividend/Fee	Total Return	Annual Rate of Return (% - compounded annually)					
								3 months	6 months	1 year	2 years	3 years	5 years
10	12/31/2007	17.44			8.72	0	8.72	---	---	---	---	---	---
11	1/31/2008	17.75			8.875	0	8.875	---	---	---	---	---	---
12	2/29/2008	18.66	0.248		9.33	0.124	9.454	---	---	---	---	---	---
13	3/31/2008	18.98			9.49	0	9.614	47.92%	---	---	---	---	---
14	4/30/2008	18.91			9.455	0	9.579	36.29%	---	---	---	---	---
15	5/31/2008	18.41			9.205	0	9.329	-5.14%	---	---	---	---	---
16	6/30/2008	18.53			9.265	0	9.389	-9.06%	15.98%	---	---	---	---
17	7/31/2008	19.4			9.7	0	9.824	10.54%	22.60%	---	---	---	---
18	8/31/2008	17.77	1.107		8.885	0.5535	9.5625	10.31%	2.29%	---	---	---	---
19	9/30/2008	17.33			8.665	0	9.3425	-1.95%	-5.55%	---	---	---	---
20	10/31/2008	9.145		2	9.145	0	9.8225	-0.06%	5.11%	---	---	---	---
21	11/30/2008	9.58			9.58	0	10.2575	32.50%	20.83%	---	---	---	---
22	12/31/2008	9.794			9.794	0	10.4715	57.24%	24.17%	20.03%	---	---	---
23													
24													
25													

Fig. 6 (Change the magnification on the reader is this is hard to read.)

Investment tracker will automatically calculate the **Equivalent price** and **Equivalent Dividend/Fee** referenced to the number of shares and price after all splits.

Once you have accumulated 3 months of data, the **Annual Rate of Return**, averaged over 3 months, will be calculated. The **Annual Rate of Return** averaged over 6 months, 1 year, 2 years, 3 years and 5 years are also calculated.

There are no deposits or withdrawals in this calculation, so a simpler formula can be used:

$$R_{\text{Annual}} = \left(\frac{EMV}{BMV} \right)^{\frac{365}{CD}} - 1$$

where:

R_{Annual} = the annual rate of return for the period, assuming annual compounding

EMV = ending market value

BMV = beginning market value

CD = the number of calendar days in the period

Step 5: Since you also want to include shares of PQR Mutual Fund in this account, repeat Steps 2, 3 and 4 for that security and give it an abbreviated name **PQR Fund**.

$\times .03 = 49.18$ sales commission. Your total cost was $1639.17 + 49.18 = 1688.35$, and you deposited that amount to cover the cost (cell B19).

- The money market fund paid interest of 4.00 on 9/30/2008, bringing the **Balance Cash/other** to 229.00 (cell D20).

InvestmentTracker.xls											
	A	B	C	D	E	F	G	H	I	J	K
1	Account name:		Account # 9876-5432								
2	Account description:		Miscellaneous investments								
3	Current value:		12,618.40								
4											
5											
6											
7											
8											
9	Date	Deposit	Withdrawal	Balance Cash/other	Securities	Total value	Total investment	Total return	Gain / loss	Annual Rate of Return 3 months	6 months
10	12/31/2007	10,000.00		225.00	11,442.68	11,667.68	10,000.00	11,667.68	1,667.68	---	---
11	1/31/2008				11,979.96	12,204.96	10,000.00	12,204.96	2,204.96	---	---
12	2/29/2008				12,217.07	12,442.07	10,000.00	12,442.07	2,442.07	---	---
13	3/31/2008				12,486.76	12,711.76	10,000.00	12,711.76	2,711.76	41.02%	---
14	4/30/2008				12,238.55	12,463.55	10,000.00	12,463.55	2,463.55	8.87%	---
15	5/10/2008		929.00		11,293.05	11,518.05	10,000.00	12,447.05	2,447.05	7.43%	---
16	5/31/2008				11,061.05	11,286.05	10,000.00	12,215.05	2,215.05	-7.16%	---
17	6/30/2008				11,079.05	11,304.05	10,000.00	12,233.05	2,233.05	-14.84%	10.19%
18	7/31/2008				10,973.35	11,198.35	10,000.00	12,127.35	2,127.35	-11.78%	-1.32%
19	8/31/2008	1,688.35			12,500.52	12,725.52	11,688.35	13,654.52	1,966.17	-8.47%	-7.80%
20	9/30/2008			229.00	12,372.00	12,601.00	11,688.35	13,530.00	1,841.65	-12.47%	-13.65%
21	10/31/2008				11,965.35	12,194.35	11,688.35	13,123.35	1,435.00	-20.51%	-16.73%
22	11/30/2008				11,975.52	12,204.52	11,688.35	13,133.52	1,445.17	-15.44%	-12.26%
23	12/31/2008				12,389.40	12,618.40	11,688.35	13,547.40	1,859.05	0.55%	-5.88%
24											
25											
26											
Summary / All Accounts / Ted's IRA / Investments / XYZ Corp. / PQR Fund /											

Fig. 8a

Summary Page										
Rate of Return (% - compounded annually)					XYZ Corp. Shares		PQR Fund Shares			
6 months	1 year	2 years	3 years	5 years	Shares	Value	Shares	Value		
---	---	---	---	---	200	3,488.00	50	7,954.68		
---	---	---	---	---		3,550.00		8,429.96		
---	---	---	---	---		3,732.00		8,485.07		
---	---	---	---	---		3,796.00		8,690.76		
---	---	---	---	---		3,782.00		8,456.55		
---	---	---	---	---	150	2,836.50		8,456.55		
---	---	---	---	---		2,761.50		8,299.55		
---	---	---	---	---		2,779.50		8,299.55		
10.19%	---	---	---	---		2,910.00		8,063.35		
-1.32%	---	---	---	---		2,665.50	60	9,835.02		
-7.80%	---	---	---	---		2,599.50		9,772.50		
-13.65%	---	---	---	---		1,371.75		10,593.60		
-16.73%	---	---	---	---		1,437.00		10,538.52		
-12.26%	---	---	---	---		1,469.10		10,920.30		
-5.88%	1.64%	---	---	---						

Fig. 8b

Summary Page

If you click the **Summary** tab to go to the **Summary Page**, you will see that all the accounts are summarized and the total value of the aggregate of all accounts is shown. You can't make any changes on this page.

To rapidly switch to one of the account registers, click on its name in the **Account name:** column, then click the **Go to selected account** button.

All Accounts Register

If you click the **All Accounts** tab, you will see historical data and rate of return for the aggregate of all accounts in the *Investment tracker* workbook. You can't make any changes on this page.

Backups

Unfortunately, computer systems, computer software and computer users are not perfect. Sooner or later something will happen to destroy or corrupt your financial data. It may be a sudden power failure, a power surge, a hard drive failure, a system "crash," a virus or an operator error.

Investment Tracker provides a convenient way to make backup copies of your workbook so you won't have to start from "scratch" if something goes wrong.

You can specify a backup path in any of these forms:

- A removable disk or drive (Example E:\MyInvestments.xls)
- A folder on a drive (Example: D:\BackupFiles\InvestmentTracker.xls)
- A network folder (Example: \\TedsComputer\Public\Backups\FinancialStuff.xls)

To activate the backup feature, enter the complete backup path in cell E3 of the **Summary Page**. You will then be prompted to make a backup each time you exit the *Investment Tracker* workbook.

TIP: The drive or folder you specify must already exist and must not be read-only. Also, you must have the proper permission to write to network folders.

TIP: To get the path right, first find it in Windows Explorer or My Computer; then copy it from the address bar at top.

Passwords

You can require a password to open the *Investment Tracker* workbook and/or a password to modify it. To set a password for your *Investment Tracker* workbook:

1. On the **File** menu, click **Save As**.
2. On the **Tools** menu, click **General Options**.
3. In the **Password to open** or **Password to modify box**, double-click the asterisks (if any).
4. Type the new password.
5. When prompted, retype the new password, and then click **OK**.
6. Click **Save**.
7. If prompted, click **Yes** to replace the existing workbook.

Caution: Write down your password and keep it in a safe place! Excel does not provide any means to recover forgotten passwords. If you forget your password, you may have to purchase specialized software or hire a consultant to recover your financial data.

To remove password protection:

1. On the **File** menu, click **Save As**.
2. On the **Tools** menu, click **General Options**.

3. In the **Password to open** or **Password to modify box**, double-click the asterisks and then press the **Delete** key.
4. Click **OK**.
5. Click **Save**.
6. If prompted, click **Yes** to replace the existing workbook.

Problem Solver

Excel has several “quirks” which may affect *Investment Tracker*.

- If you copy and paste data into the *Investment Tracker* workbook, be sure to **paste as unformatted data only**. Pasting formatted data (the default) may cause errors in the calculations. To paste as unformatted data, select **Paste Special** from the **Edit menu**. Depending on which submenu appears, select either **Text** or **Values** and click **OK**.
- If Excel stops responding or stops performing calculations: Save the *Investment Tracker* workbook and exit Excel. Then reopen Excel and reopen the workbook.

Tech Support

Very limited tech support is available only through our Website at:

<http://www.twopaths.com/Software/index.htm>