BullCharts

TradeSim for back-testing

Case Study example
MA Cross-over

October 2016

Disclaimer

The information herein is for general education only.

Any information presented or discussed is only opinion, and is NOT ADVICE, and it should NOT be acted upon.

The particular financial needs of any individual have not been taken into consideration. One should always seek professional advice before entering into financial or other arrangements.

Session Purpose

Session Purpose:

- Briefly introduce TradeSim
  (see a separate presentation for introduction
  and details of what it is and how it works)

- Walk through a case study sample of testing
  an example trading strategy in TradeSim.

Assumptions

The following assumptions apply to the case study within these slides:

- That BullCharts is installed.

- That you know the basics of creating and running a BullCharts scan.

- That TradeSim is installed and registered.

- That you already have a trading strategy.

Our Trading Strategy

In this case study we will utilise the following trading strategy:

- Use Moving Average cross-overs, 5 and 21.

- Buy signal:- When MA(C,S,5) crosses Above the MA(C,S,21)

- Sell signal:- When MA(C,S,5) crosses Below the MA(C,S,21)

- Universe of stocks — XTL index (top 20)

See sample price chart on next slide...

C = Close
S = Simple

Sample chart

Process overview

BullCharts

1. Create "**TradeSim scan**" in BullCharts

2. Run the TradeSim scan

9. Modify the scan

Watch BullCharts and wait for scan to complete

TradeSim

TradeSim program will start (if not running)

Trade **Database Report Log** will list messages

Trade Database (lists possible trades)

3. Review **Database Report Log**

4. "**Open Trade Database**"

5. Review the Message Log, and Trade **Database Manager**

6. Review **Trade Parameters**

8. Review simulation results

7. "**Start Simulation**"
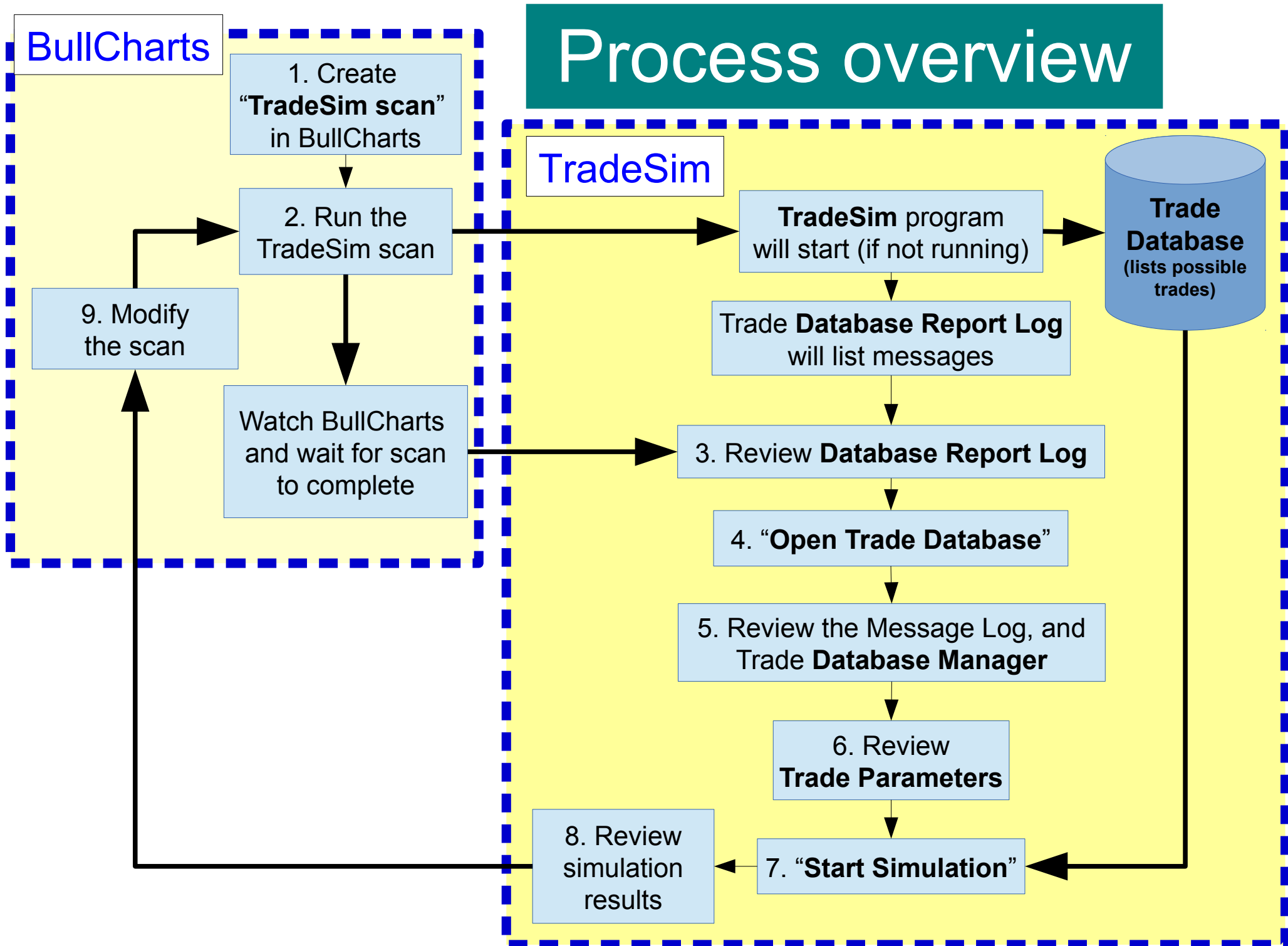
Overview of the steps

1. In BullCharts:

 (a)   Open BullScan Manager

 (b)   Select "New Scan" (of type "TradeSim")

 (c)   On the "Trade Systems" tab, click on
        "New..." to create a new "system"

 (d)   Enter the entry, exit, and stops details
        (from your trading strategy)

 (e)   Enter your scan watchlist details (eg. XTL).

Overview (cont.)

2. Run the scan, noting:

- TradeSim program will start, and

- Will accumulate messages in the Trade Database Report log (access any time using the flashing icon in Windows System Tray).

Overview (cont.)

3. After scan completion:

  (a)   Peruse the Database Report Log

  (b)   "Open the (TradeSim) Trade Database"

  (c)   Peruse the Message Log file

  (d)   Peruse the "Trade Database Manager" entries

  (e)   Review the "Trade Parameters", and adjust.

Overview (cont.)

4. Start Simulation

  (a)   Click on "Start Simulation" button

  (b)   Review the results.

Overview (cont.)

5. Within the TradeSim screen
   after the simulation, peruse the following:

 (a)   Message Log

 (b)   Trade Log

 (c)   Trade Simulation Report

 (d)   Charts (many):

   – Equity charts ($, %);

   – Weekly, Monthly, Yearly — Profit, Return

   – Drawdown

   – Winning, Losing trades, etc...

If possible (in a live presentation)
work through the real case study.

If not, then
the following slides are for
perusal outside of a live presentation.

The details — Create Scan

1. In BullCharts:

(a) Open BullScan Manager

(b) Select "New TradeSim Scan" and enter:
Name, Category, Author, Notes *
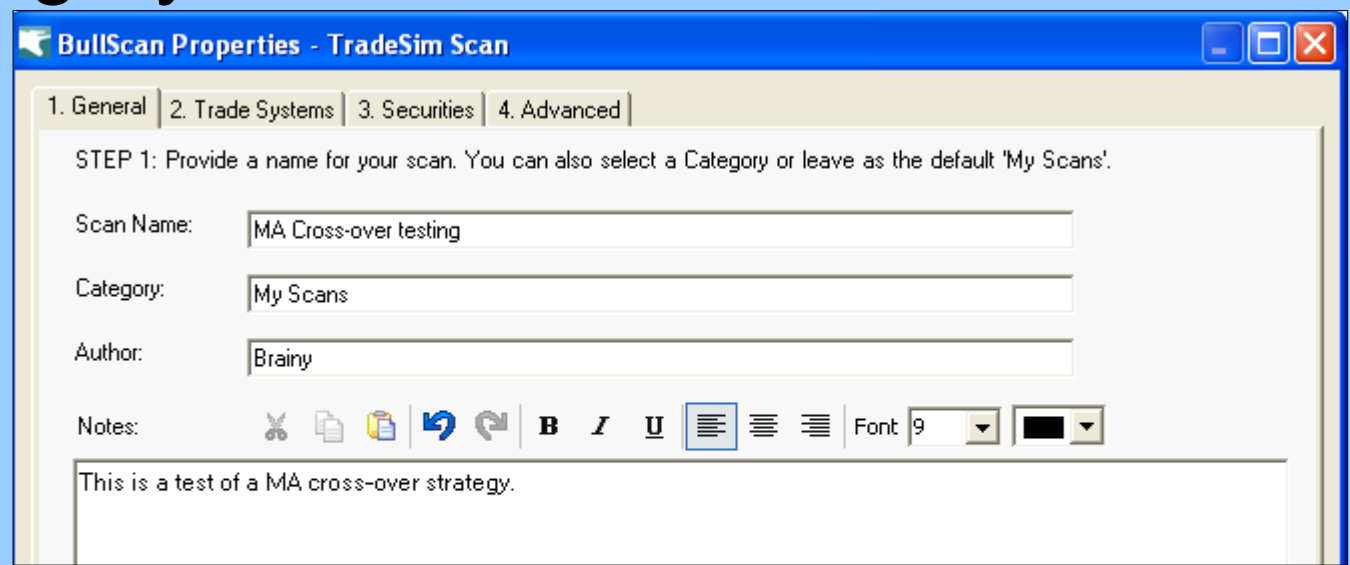
* About now, TradeSim will start in the b/ground, if it is registered.

The details

(c) On the "Trade Systems" tab, click on "New..." to create a new "system"

(d) In the "Trade System Editor" dialogue there are four tabs to enter the entry, exit, and stops details from your strategy

(e) The "General" tab can be used to enter "Start Date" and "End Date".
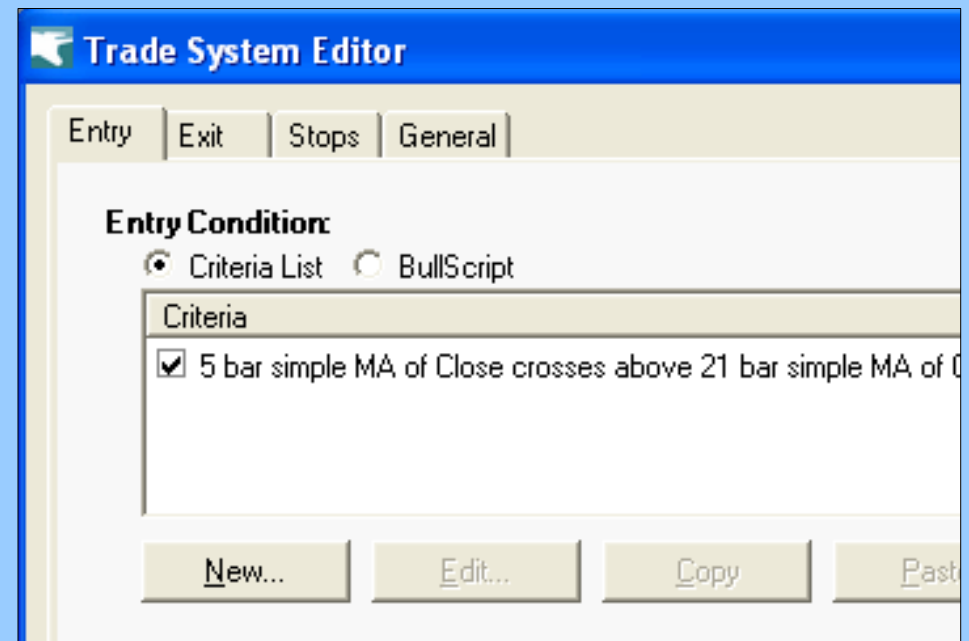
The details

(f) Enter your scan watchlist details as normal
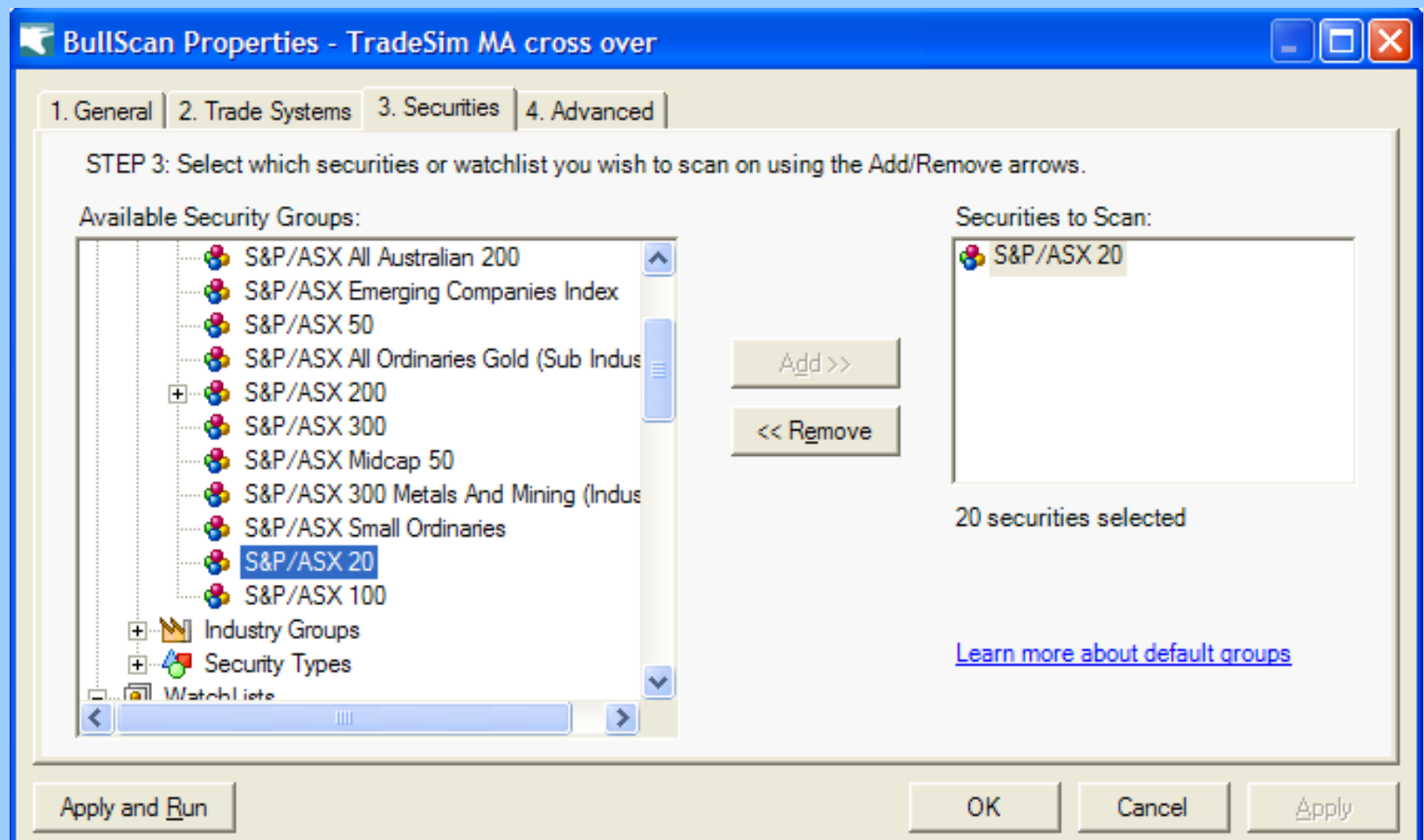
The details — Run Scan

(g) Run the TradeSim scan.

BUT, NOTE:
The scan will create a
Trade Database file
of the same name as
the scan (.trb), and it will
automatically over-write any
existing Trade Database file.
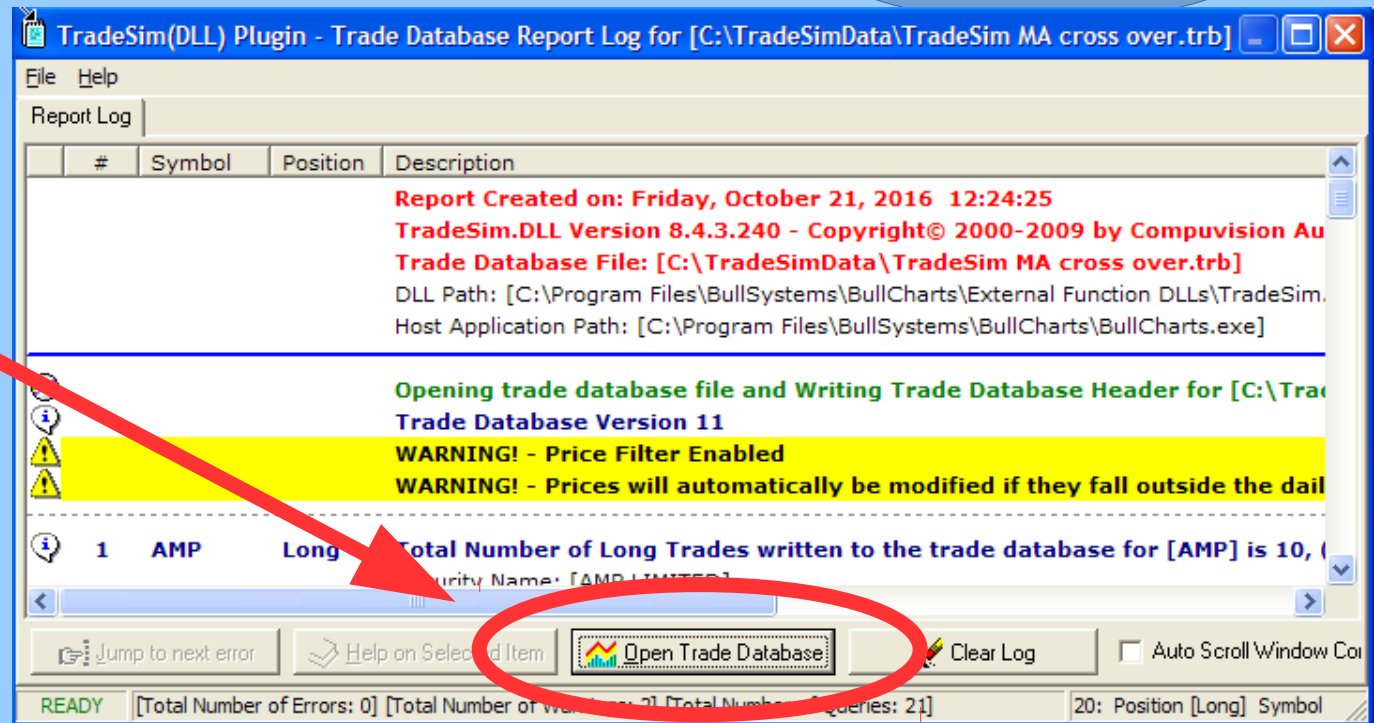
We have NOT yet run a "simulation".
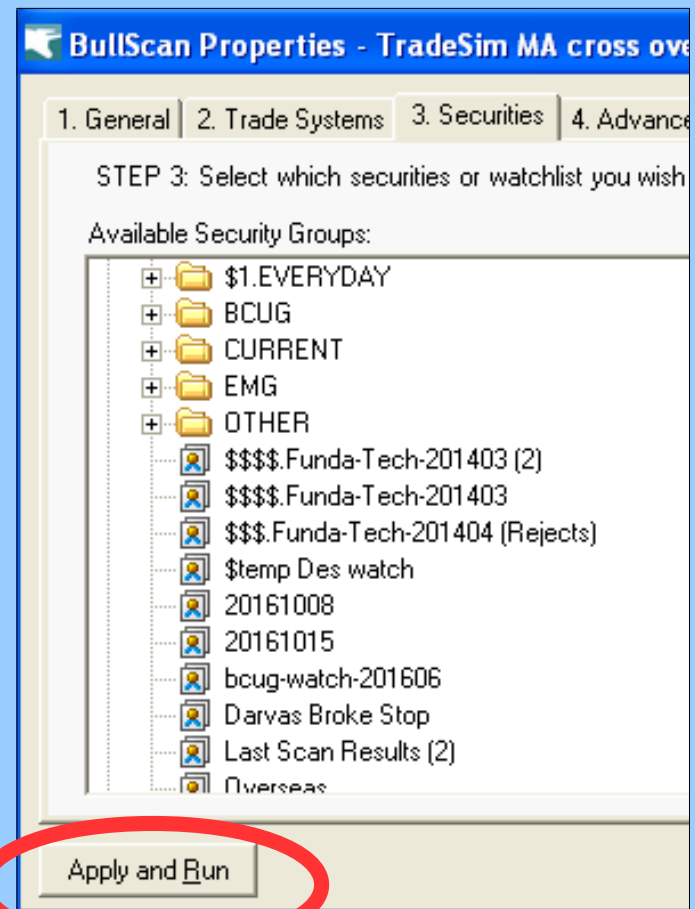
Open TradeSim

TradeSim opens and adds potential trades to the Trade Database file.

Peruse the Database Report Log file.

Open Trade Database

Trade Database
(lists possible trades)

The TradeSim windows

TradeSim opens, with several windows:

- Trade Database Manager

- Message Log

- Trade Parameters
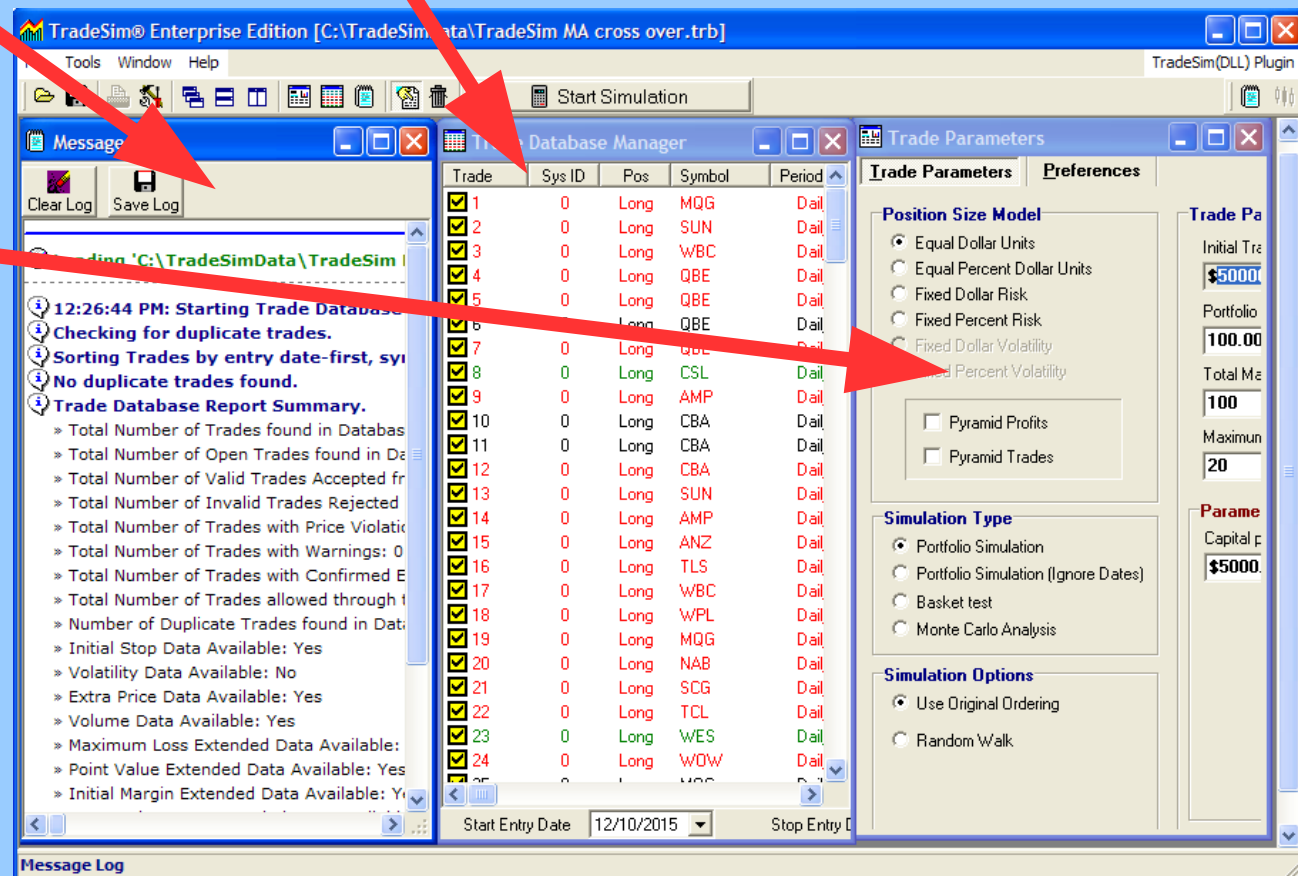
Next steps

- Review the Message Log file

- View the Trade Database Manager screen

  - Consider un-ticking some entries to exclude from simulation.

- Review Trade Parameters screen

- "Start Simulation"

Review simulation results

Trade Simulation Report

Trade Simulation Report

| Trade Simulation Reports | Trade Statistics |

Trade Parameters and Preferences

Trade Database Filename
C:\TradeSimData\$.Funda-___ TEST.trb

Trade Parameters

Initial Capital:	$50,000.00
Portfolio Limit:	100.00%
Maximum number of open positions:	100
Maximum allowable daily orders:	20
Automatically Use Position Size Model from database:	No
Default Position Size Model:	Equal Dollar Units
Capital per Trade ($ value):	$5,000.00
Pyramid profits:	No
Transaction cost (Trade Entry):	$0.00
Transaction cost (Trade Exit):	$0.00
Automatically use Margin Requirement from database:	No
Margin Requirement:	100.00%
Magnify Position Size(& Risk) according to Margin Req:	No
Automatically select Position Size Model from database:	No
Enable Provisional Trades:	No
Survivorship Bias Filer:	No
Margin Requirement Daily Interest Rate (Long Trades):	0.0000%
Margin Requirement Yearly Interest Rate (Long Trades):	0.0000%
Margin Requirement Daily Interest Rate (Short Trades):	0.0000%
Margin Requirement Yearly Interest Rate (Short Trades):	0.0000%

Trade Preferences

Trading Instrument:	Stocks
Break Even Trades:	Process separately
Trade Position Type:	Process all trades
Entry Order Type:	Default Order
Exit Order Type:	Default Order
Minimum Trade Size:	$0.00
Accept Partial Trades:	No
Vol___ ___ter:	Ignore Volume Information
Pyramid Trades:	No

| Trade Parameters | Detailed Report | Combined Report |

Note 2 tabs:-
– Simulation Reports
– Statistics

Note 3 tabs:-
– Trade Parameters
– Detailed Report
– Combined Report

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Trade Statistics Table

Note tabs and many columns

Trade Simulation Report

Trade Simulation Reports | Trade Statistics

Trade Statistics Table | Security Profit Distribution | Trade Profit Distribution

Sym...	Total Profit	Min Profit ($)	Avg Profit ($)	Max Pr... ($)	Min Profit (%)	Avg Profit (%)	Max Profit (%)	Number of Trades	Winning Trades	->Percent	Losing Trades
AMP	$259.42		$125.71	$388.50	-2.58%	2.60%	7.78%	2	1	50.00%	1
ANN	$869.06	-$117.45	$289.69	$534.63	-2.35%	5.81%	10.72%	3	2	66.67%	1
ANZ	-$399.23	-$399.23	-$399.23	-$399.23	-8.03%	-8.03%	-8.03%	1	0	0.00%	1
AOG	-$402.71	-$269.79	-$100.68	$179.64	-5.40%	-2.01%	3.59%	4	1	25.00%	3
API	$970.50	-$93.15	$485.25	$1,063.65	-1.86%	9.71%	21.28%	2	1	50.00%	1
APN	$133.71	-$100.24	$44.57	$180.14	-2.01%	0.89%	3.60%	3	2	66.67%	1
APO	-$135.09	-$77.33	-$67.55	-$57.76	-1.55%	-1.35%	-1.16%	2	0	0.00%	2
ARB	$46.36	-$121.88	$15.45	$216.08	-2.45%	0.31%	4.33%	3	1	33.33%	2
ASB	-$48.69	-$48.69	-$48.69	-$48.69	-0.97%	-0.97%	-0.97%	1	0	0.00%	1
AST	-$113.17	$229.20	$29.29	$193.21	-1.59%	-0.57%	3.67%	4	1	25.00%	3
ASX	$144.22					1.44%	6.50%	2	1	50.00%	1
BAL	-$253.44				-5.07%	-5.07%	-5.07%	1	0	0.00%	1

Can re-sort — click on column header

See the User Manual (pp172-179) for discussion
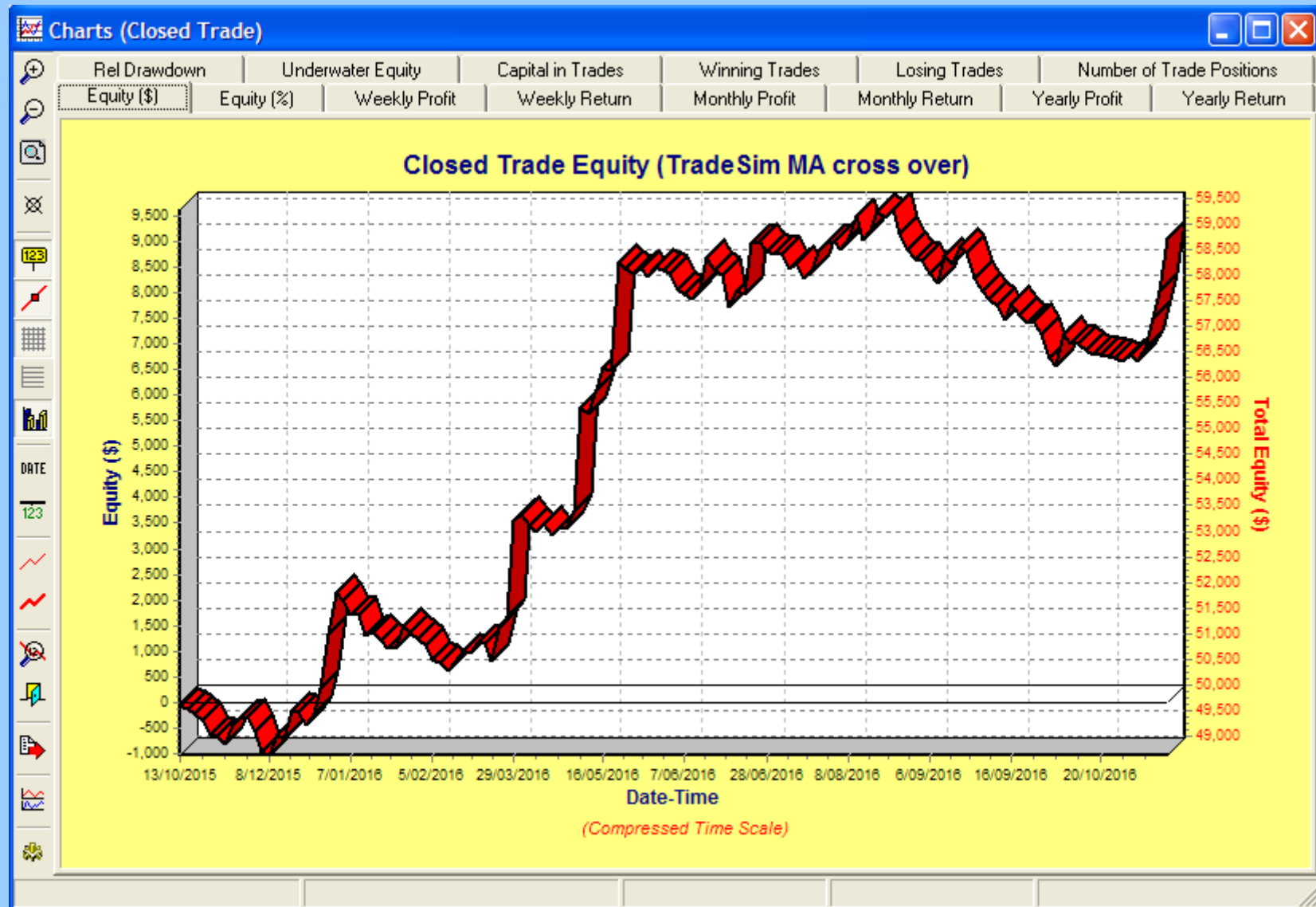
Equity for Closed Trades
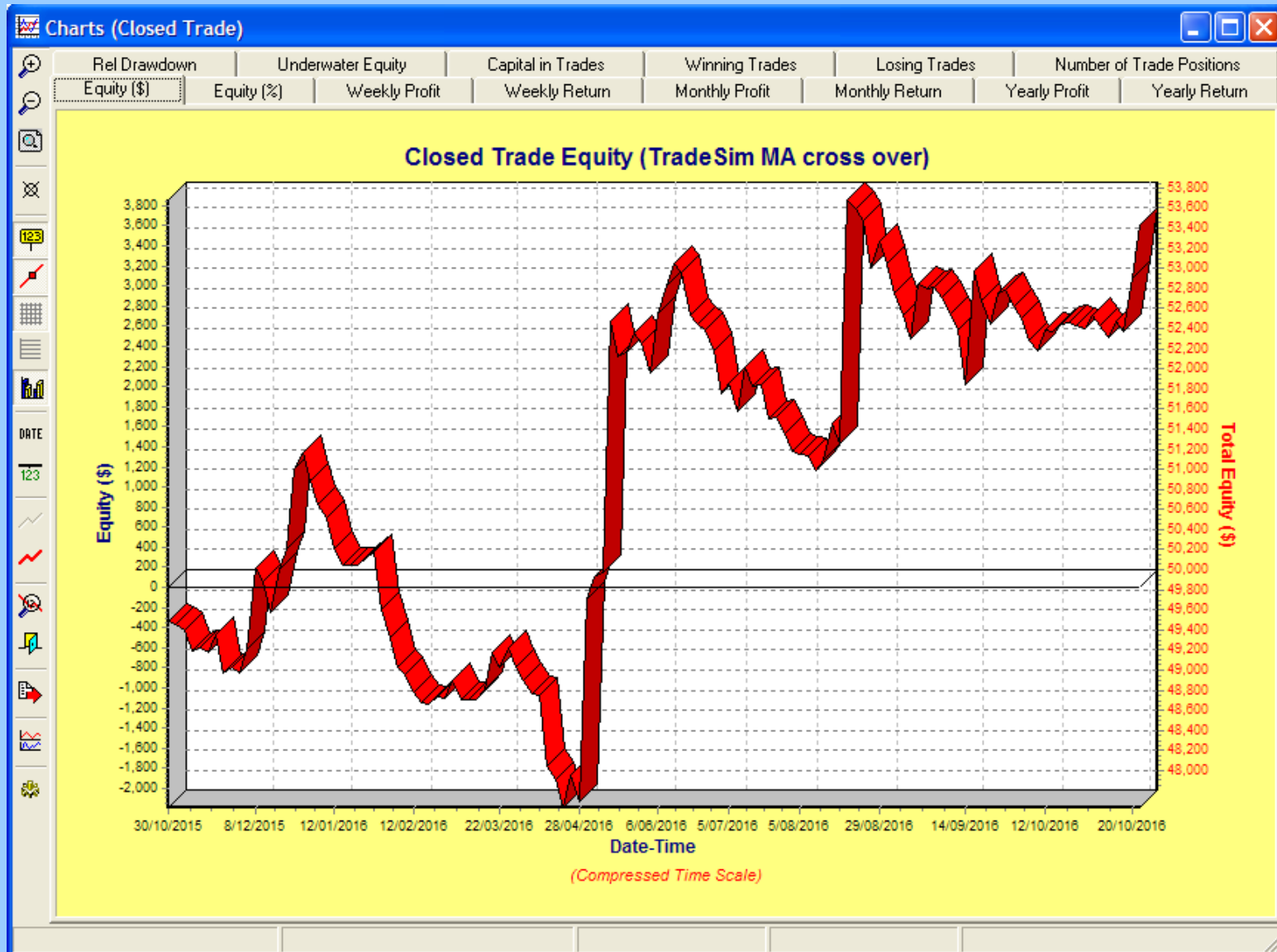
For XTL stocks
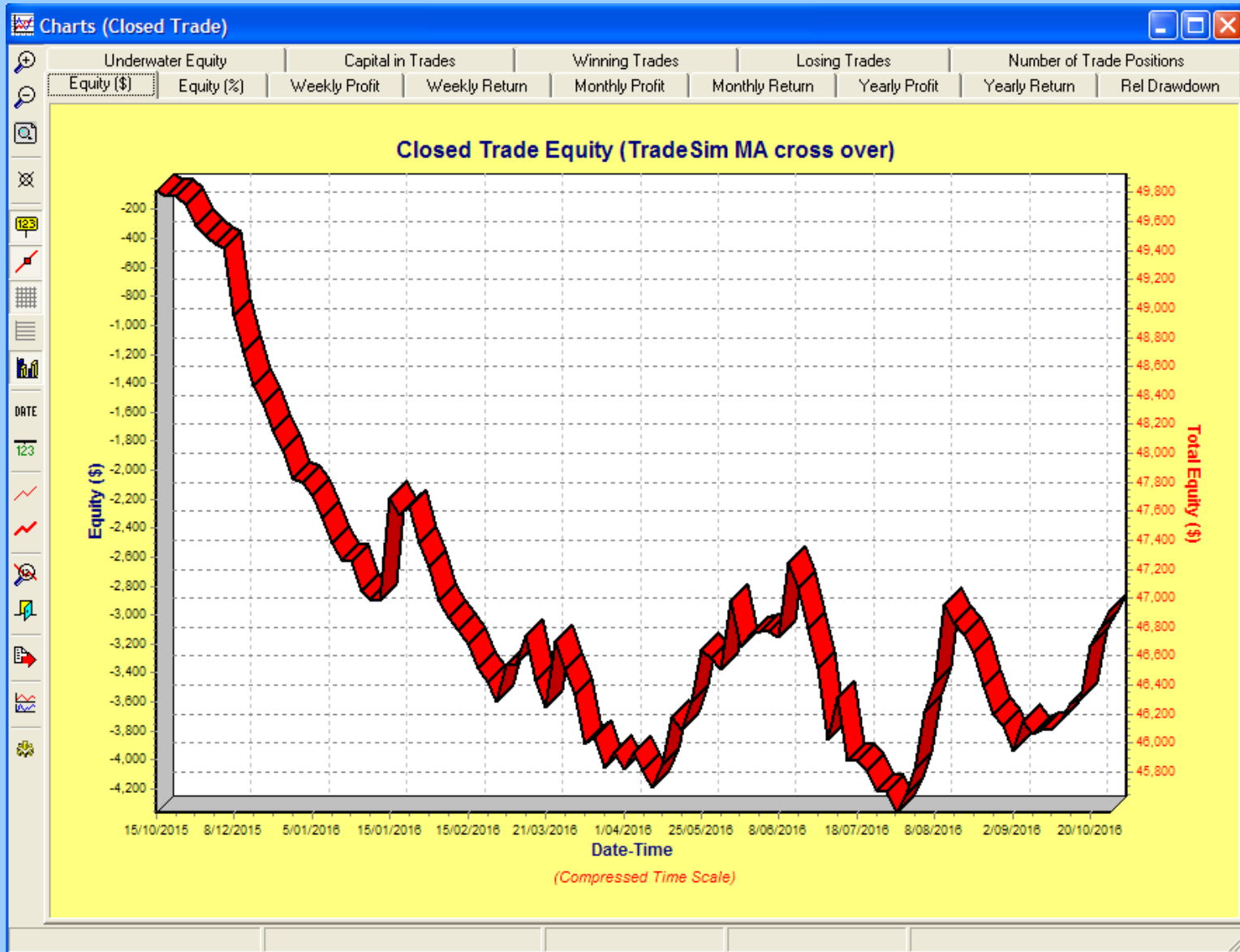
Equity for Closed Trades

For XJO stocks

Equity for Closed Trades

For XMD stocks

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A conclusion

- The selection of stock universe can make a big difference.

- There are many possibilities for tweaking the trading system, and the trade parameters.

- The choice of time window can make a difference.

Caveats

This case study is over-simplified, and it has ignored:

- Brokerage

- Testing different time periods and market conditions

- Survivorship Bias (securities that were in the target group in the past, but are no longer)

- Possible optimisation (of trade parameters)

More information?

- Tutorial guides (pdf), videos, etc.

- Robert's web site:
  www.robertbrain.com/bullcharts/

- The official web site:
  www.compuvision.com.au

- Pricing (time unlimited versions):
  Standard edition — $198
  Professional edition — $484
  Enterprise edition — $1,520

TradeSim — more help

Current version 6.7.7 (build 769)*

A number of materials are available:

- "Users Guide" (299 pages)

- Quick Start Tutorial guide (21 pages)

- Several focused docs on various topics

http://www.compuvision.com.au/Articles.htm

Note: Some documentation refers
mostly to MetaStock; but
is still relevant to BullCharts.

* as at October 2016

The End