Robust Strategies for Futures Markets

By **Urban Jäkle**

Bologna-Forli 13 October 2006

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LombardCorporate.com Investment Advice

Speakers presentation

Urban Jäkle, 36 years

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professional tradestation
programmer and trader

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You will find everything shown on:
http://jaekle.lombardreport.com/

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Overview

1. **Introduction:**

   Why futures? Why systematic trading?

2. **Entry**

   2.1. Short term conditions

   2.2. Long-term filters

3. **Dynamic of Exits**

4. **Which markets to trade how?**

   4.1. Stock index futures

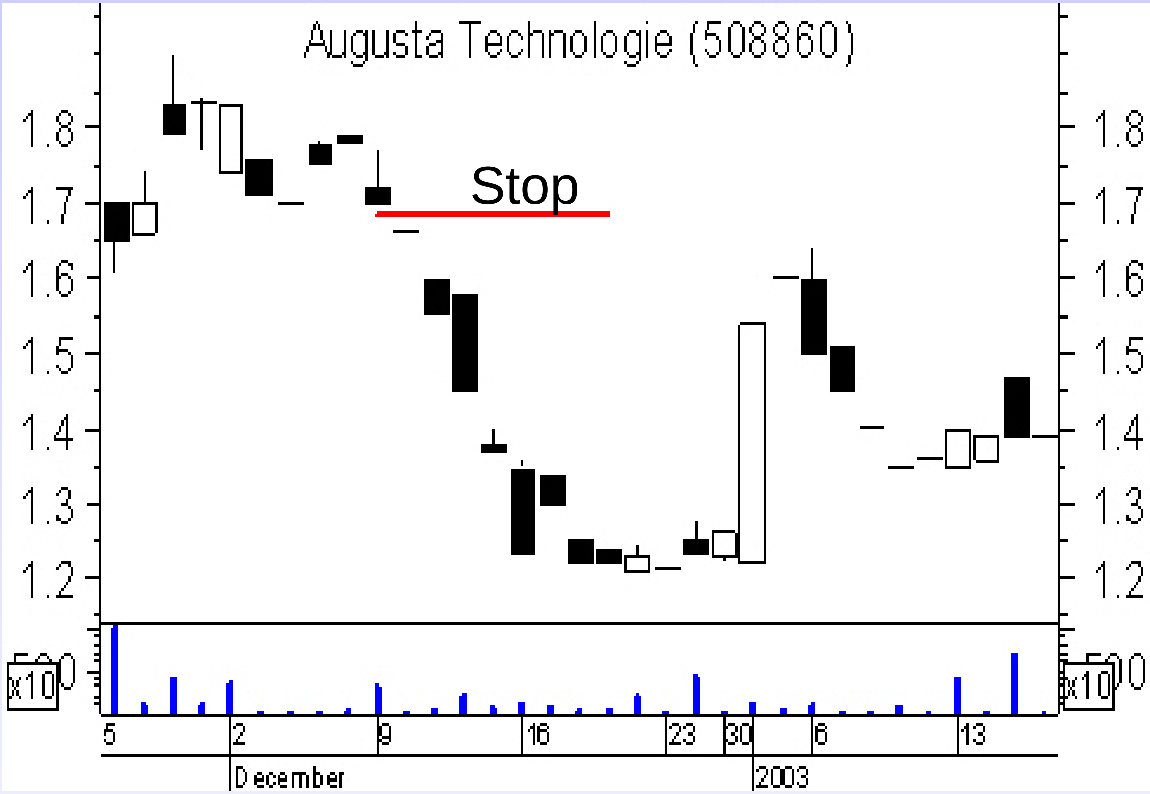
   4.2. Currency-Futures

5. **Building System Portfolios**

6. **Summary**

1.1. Why futures?

- Liquidity



- Cheap and Fast: low commissions for big and fast movements

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1.2 Why systematic?

- Reproducible rules
- Regular application
- Automation
- Risk- and Money-management

Goal:

- **Minimize Emotions**

Needs: confidence

2. Entries

1. Daily pattern identification

2. Long Term Filters

3. Intraday trade management
   (breakout, false-breakout, reverse)

→ Exits

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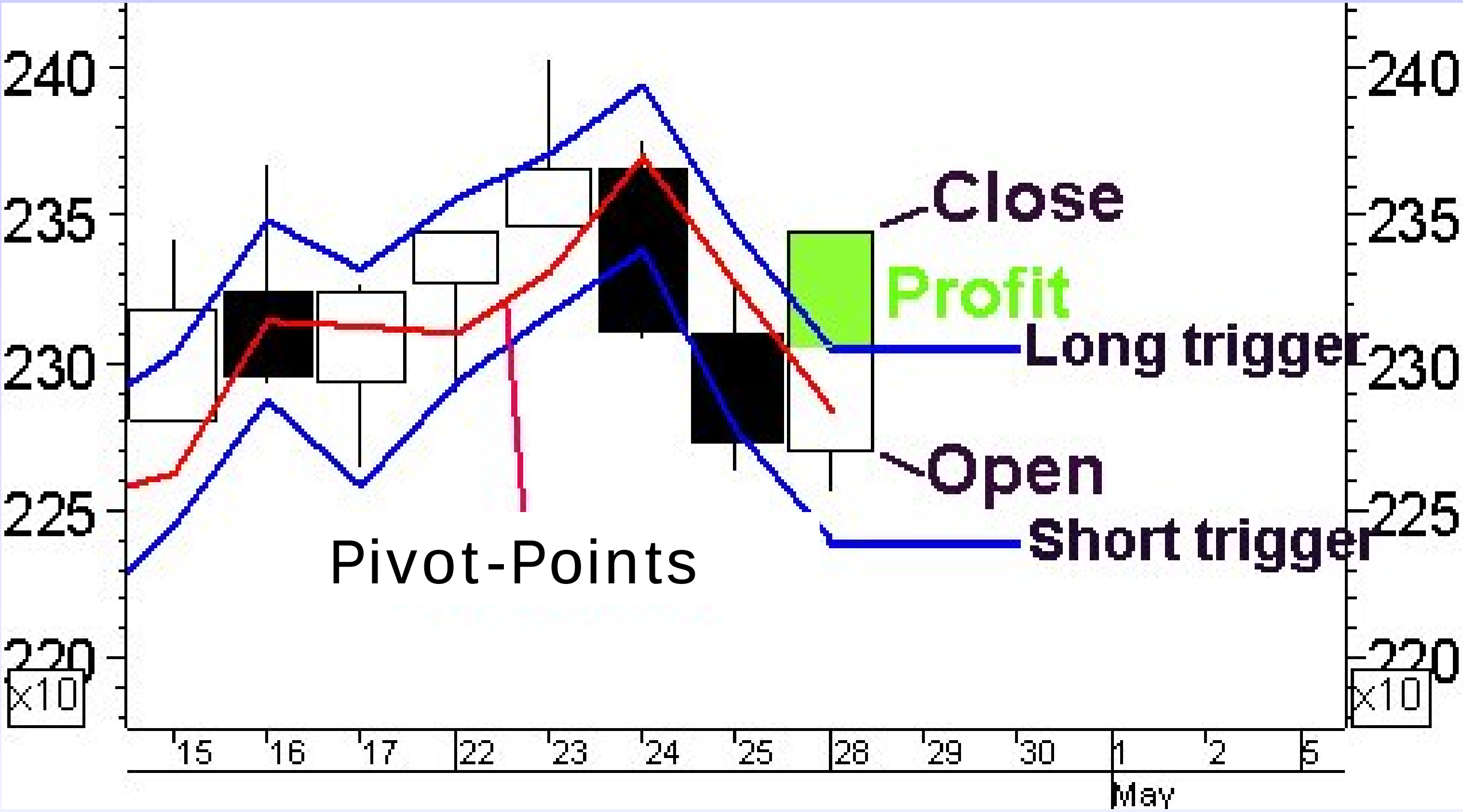
2.1 Entries: Daily pattern identification



Finding big moves…

…before they happen!!!

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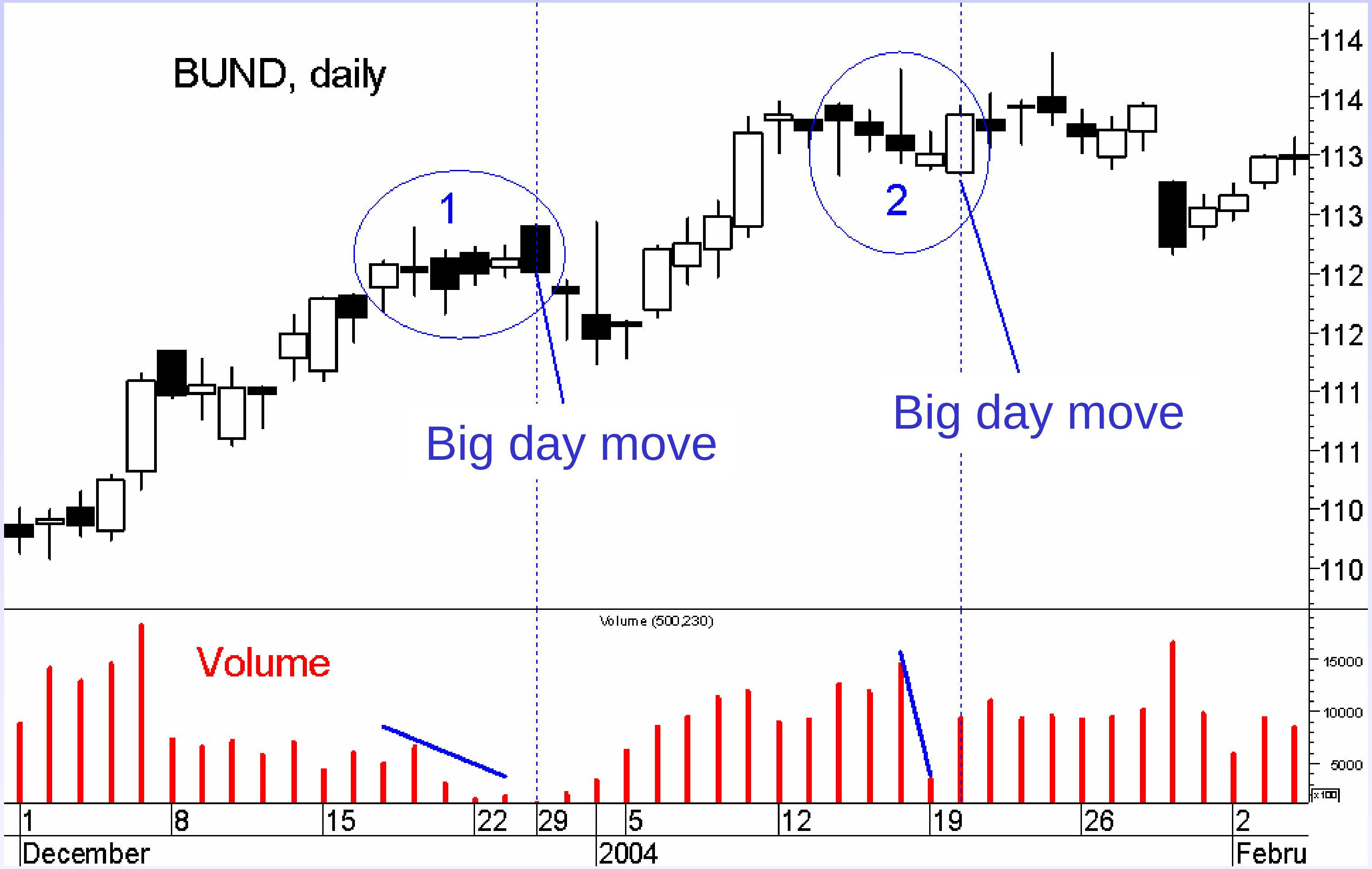
2.1 Entries: Pattern Research

	pct1:=0.28;	pct2:=0.6;		pct1:=0.28;	pct2:=0.6;		pct1:=0.28;	pct2:=0.6;		pct1:=0.28;	pct2:=0.6;	
	Range:=Ref(H,-1)-Ref(L,-1);			Range:=Ref(H,-1)-Ref(L,-1);			Range:=Ref(H,-1)-Ref(L,-1);			Range:=Ref(H,-1)-Ref(L,-1);		
	VolaBedingung:=Ref(ATR(1),-1)<Ref(ATR			VolaBedingung:=Ref(ATR(1),-1)<**0.7***Ref(			VolaBedingung:=Ref(ATR(1),-1)<**0.6***Ref(			VolaBedingung:=VoVuDo		
	Profit	**Trades**	Profit per Trade	**Profit**	**Trades**	Profit per Trade	**Profit**	**Trades**	Profit per Trade	**Profit**	**Trades**	Pr Tr
D_CAC40 (M	2467	1680	**1.5**	634	623	**1.0**	333	293	**1.1**	2071	600	
D_DAX	7067	1441	**4.9**	2454	528	**4.6**	1510	250	**6.0**	3804	643	
D_ESTX50	2960	653	**4.5**	1921	225	**8.5**	1041	104	**10.0**	2603	267	
D_IBEX35	7870	1251	**6.3**	3634	490	**7.4**	2577	236	**10.9**	1602	487	
D_DJIA	3272	750	**4.4**	-139	301	**-0.5**	1018	137	**7.4**	2546	330	
D_Nasdaq10	2726	815	**3.3**	1361	278	**4.9**	721	130	**5.5**	527	349	
D_Nikkei225	57300	1571	**3.6**	27800	652	**4.3**	15770	343	**4.6**	21196	631	
D_S&P500	1186	2602	**0.5**	469	1109	**0.4**	207	573	**0.4**	649	1233	
D_MIB30	42090	1078	**3.9**	18315	397	**4.6**	4324	195	**2.2**	18751	471	
D_FTSE100,	4487	2208	**2.0**	1010	817	**1.2**	267	387	**0.7**	2156	908	
D_Topix*	4104	1424	**2.9**	1868	582	**3.2**	1453	333	**4.4**	1518	513	
D_HangSen	36900	1804	**2.0**	20634	808	**2.6**	13710	438	**3.1**	15189	741	
D_JSE	5564	1375	**4.0**	2758	669	**4.1**	1696	435	**3.9**	303	507	
D_SMI	8222	1172	**7.0**	3147	508	**6.2**	2235	294	**7.6**	3142	445	
D_Bobl	23.6	1426	**1.7**	18.9	645	**2.9**	13.7	324	**4.2**	10.7	623	
D_Bund	54.3	1518	**3.6**	29.5	621	**4.8**	21.5	323	**6.7**	20.1	677	
D_Euribor	2.3	1773	**1.3**	1.62	852	**1.9**	0.5	525	**1.0**	2.55	761	
D_T-Bond	155.5	2967	**5.2**	81.6	1283	**6.4**	31.7	702	**4.5**	77.8	1328	
D_T-Note (10	68.6	2395	**2.9**	44.9	1179	**3.8**	30.9	661	**4.7**	44.4	1075	
D_JapBnd10	58.8	1431	**4.1**	38.7	629	**6.2**	17	339	**5.0**	37.8	609	
D_LongGilt8	100.5	2366	**4.2**	56.5	1008	**5.6**	32.9	539	**6.1**	54.9	1093	
D_Aus$*	27.2	1646	**1.7**	19.1	880	**2.2**	12.7	593	**2.1**	2.1	641	
D_Can$*	45.4	2891	**1.6**	31	1290	**2.4**	22.9	803	**2.9**	23.7	1345	
D_Brit. Poun	219	2997	**7.3**	167	1595	**10.5**	112	1034	**10.8**	91	1503	
D_EuroFX d	161.4	2958	**5.5**	100	1515	**6.6**	73	950	**7.7**	80.1	1386	
D_JapYen(C	45.7	2728	**1.7**	40.8	1548	**2.6**	26.6	1082	**2.5**	26.4	1306	
D_SwissFra	125.8	3070	**4.1**	73.6	1541	**4.8**	53.4	913	**5.8**	64.9	1494	
D_Light Cru	102.5	2257	**4.5**	53.2	1037	**5.1**	33.8	577	**5.9**	55	1057	
D_Natural G	15.6	1365	**1.1**	7.8	696	**1.1**	6.2	422	**1.5**	7.6	648	
D_Coffee	994	3192	**3.1**	584	1583	**3.7**	372	949	**3.9**	453	1529	
D_Copper	513	3967	**1.3**	180	1815	**1.0**	98.7	972	**1.0**	194	1550	
D_Gold	1164	3236	**3.6**	793	1752	**4.5**	548	1131	**4.8**	581	1573	
		2000	**3.42**		**921**	**4.02**		**531**	**4.66**		**885**	
ter	STC_break_gesamt(Aug05)			STC_break_gesamt(Aug05)_0.7			STC_break_gesamt(Aug05)_0.6			STC_break_gesamt(Aug05)_\		
		sehr viele Trades!			0.7-Bed bring	17.7%		0.6-Bed bring	36.2%		VoVuDo-Bed	

2.1 Entries: Volume decrease



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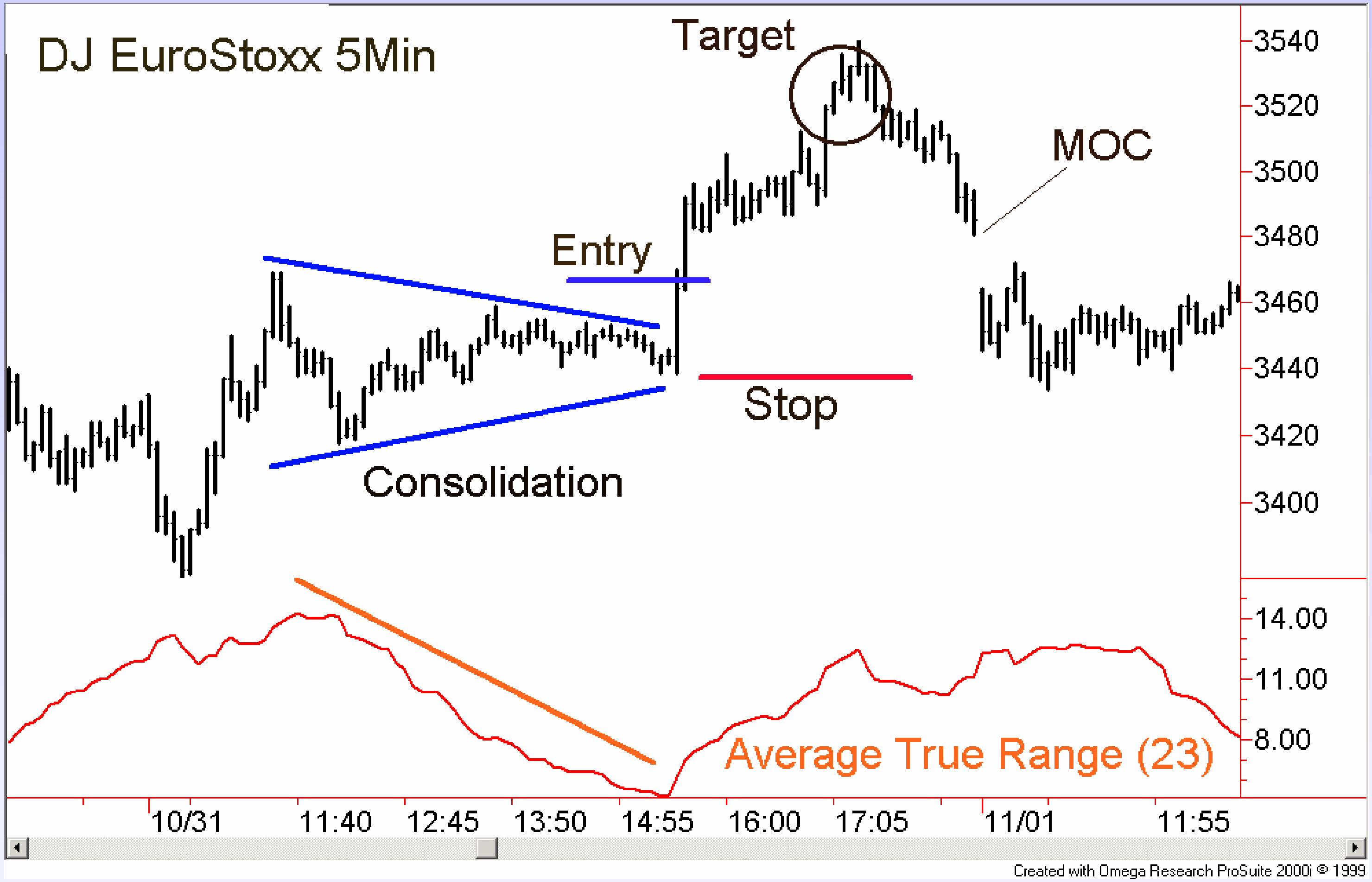
2.1 Entries: Volatility decrease



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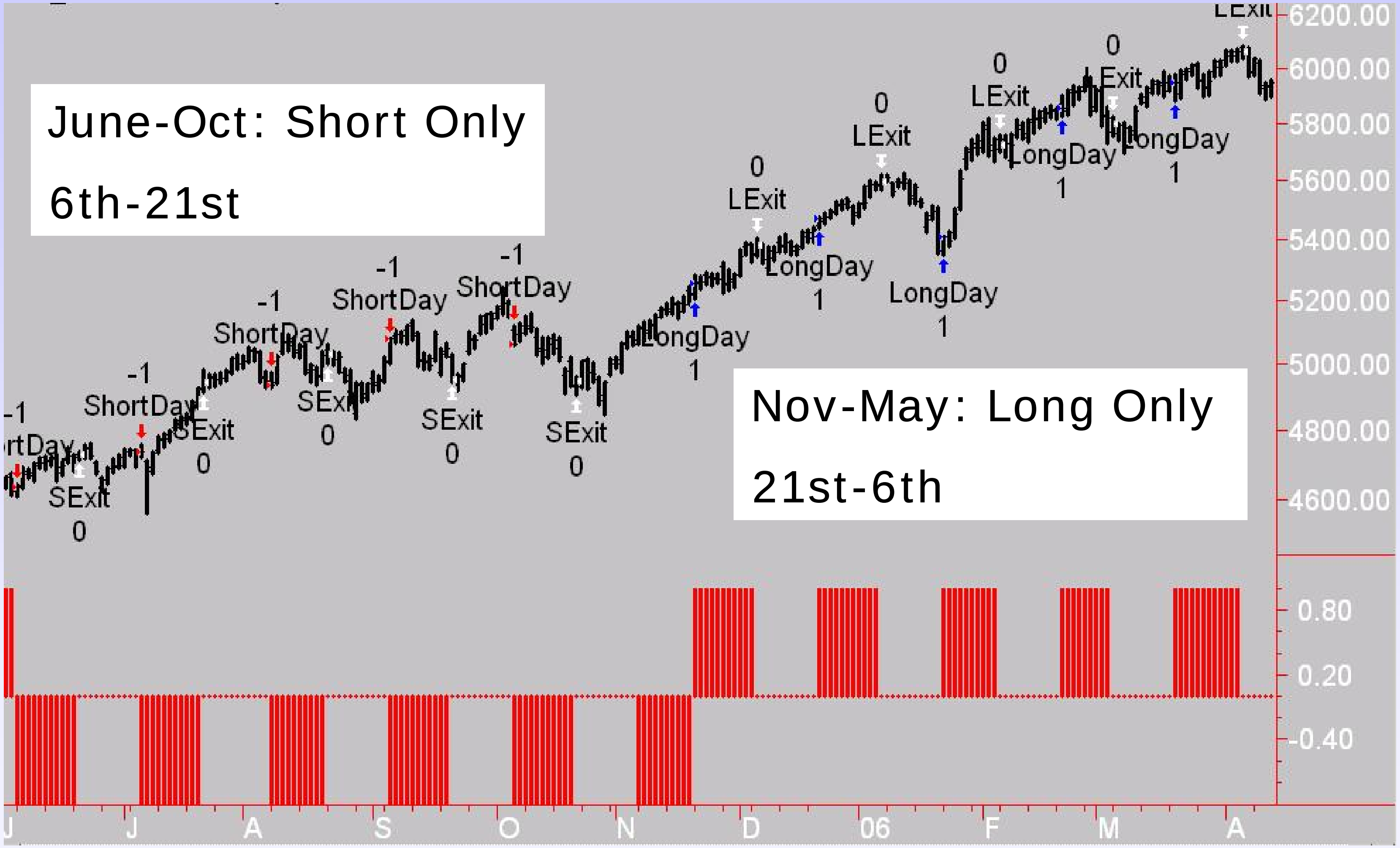
2.1 Entries: Daily pattern identification

Preconditions for break-out:

- Patterns: Inside Day,Narrow Range Day, Dojis etc.
- Volume decrease
- Volatility decrease

2.2 Entries: Long-term filters: Seasons



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2.2 Entries: Long-term filters: Seasons

S&P500, daily 1991-2006

Total Net: 832 Pts.

Max DD: 259 Pts.

Avg. Trade: 5.2 Pts.

Time in market: 52%

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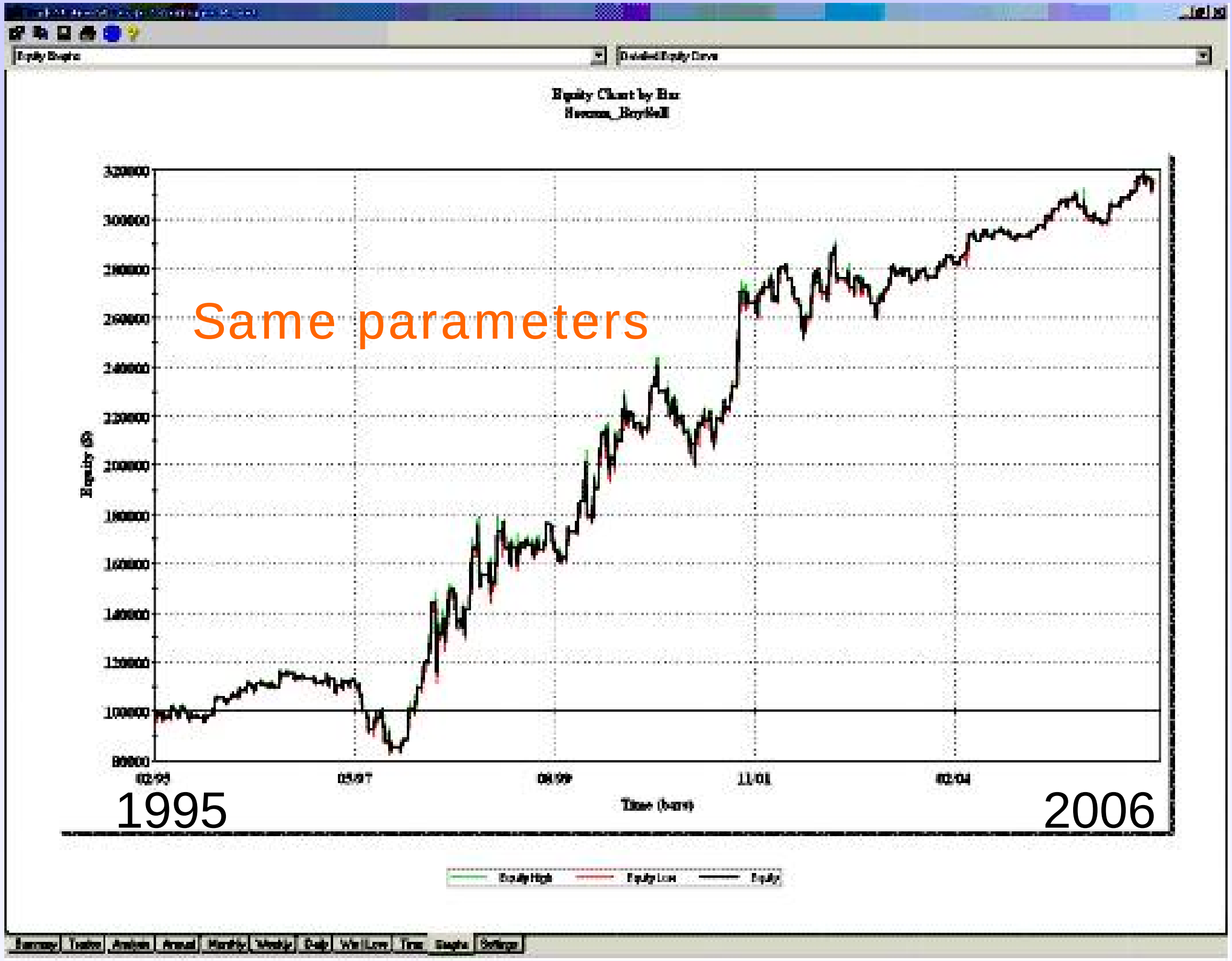
2.2 Entries: Long-term filters: Seasons



MIBTEL, daily
1995-2006

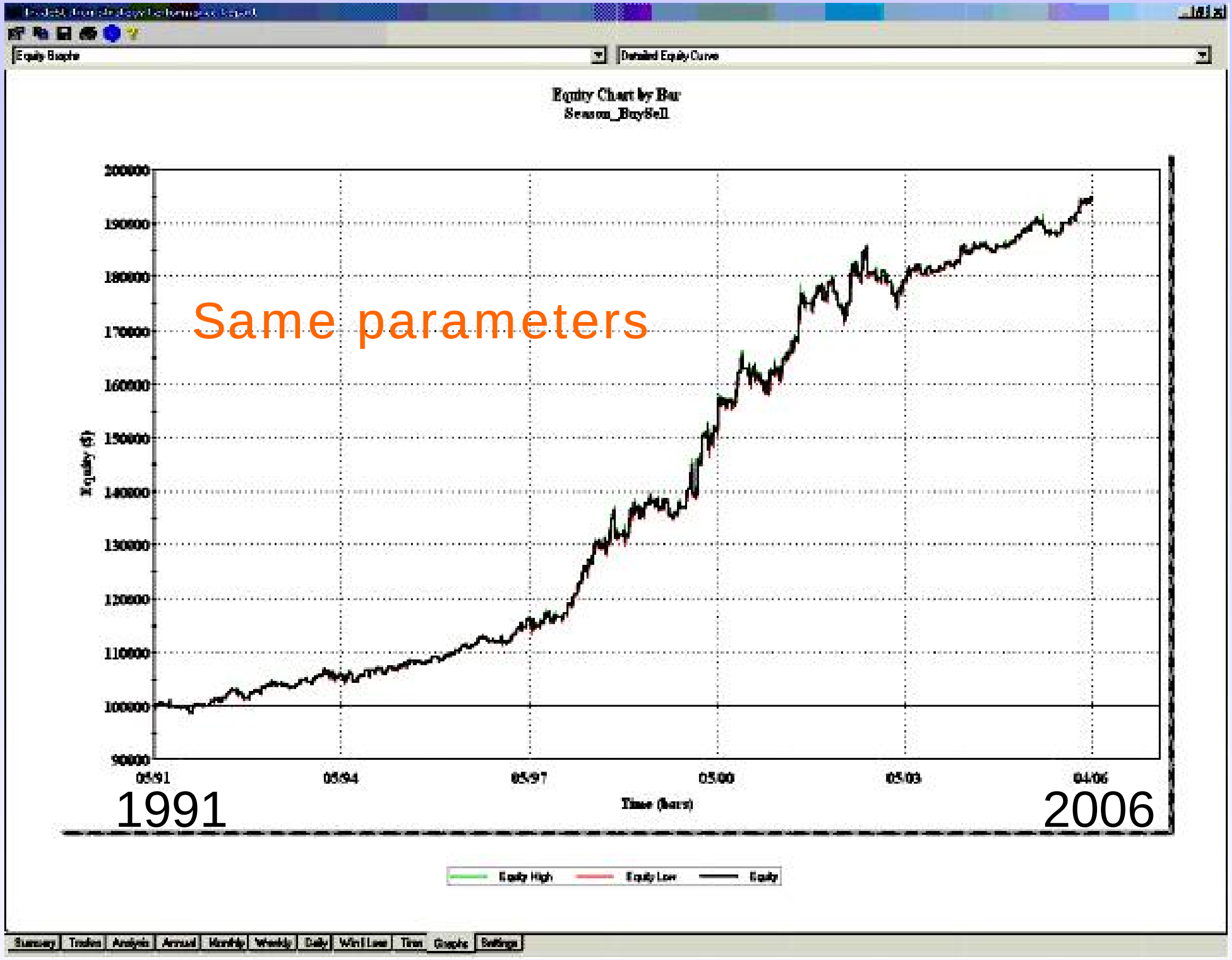
Tot. Net: 43.150 Pts.

Max DD: 6.660 Pts.

Avg. Trade: 320 Pts.

Time in market: 52%

2.2 Entries: Long-term filters: Seasons



CAC40, daily
1991-2006

Total Net: 9.471 Pts.

Max DD: 1.079 Pts.

Avg. Trade: 53 Pts.

Time in market: 52%

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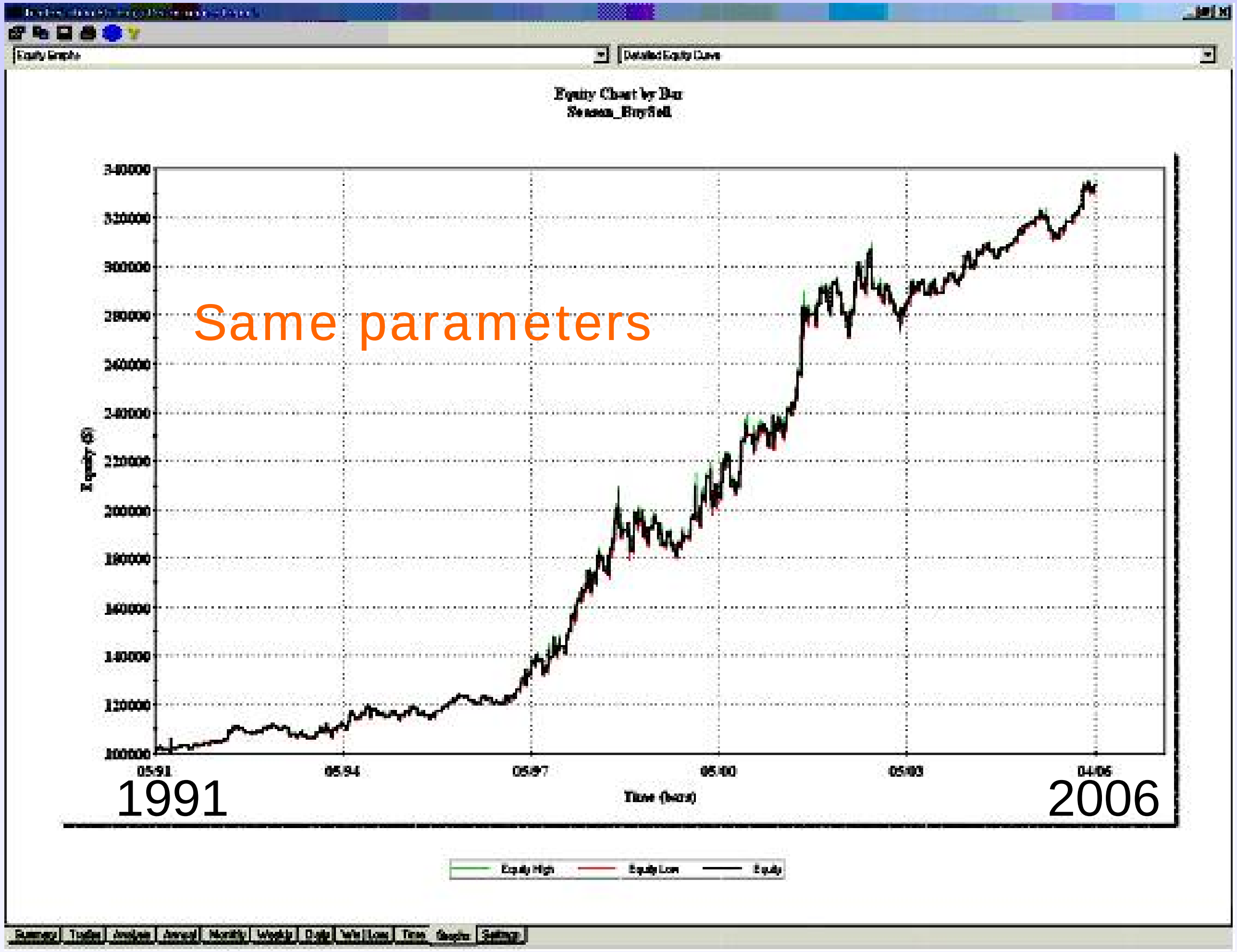
2.2 Entries: Long-term filters: Seasons



DAX, daily 1991-2006

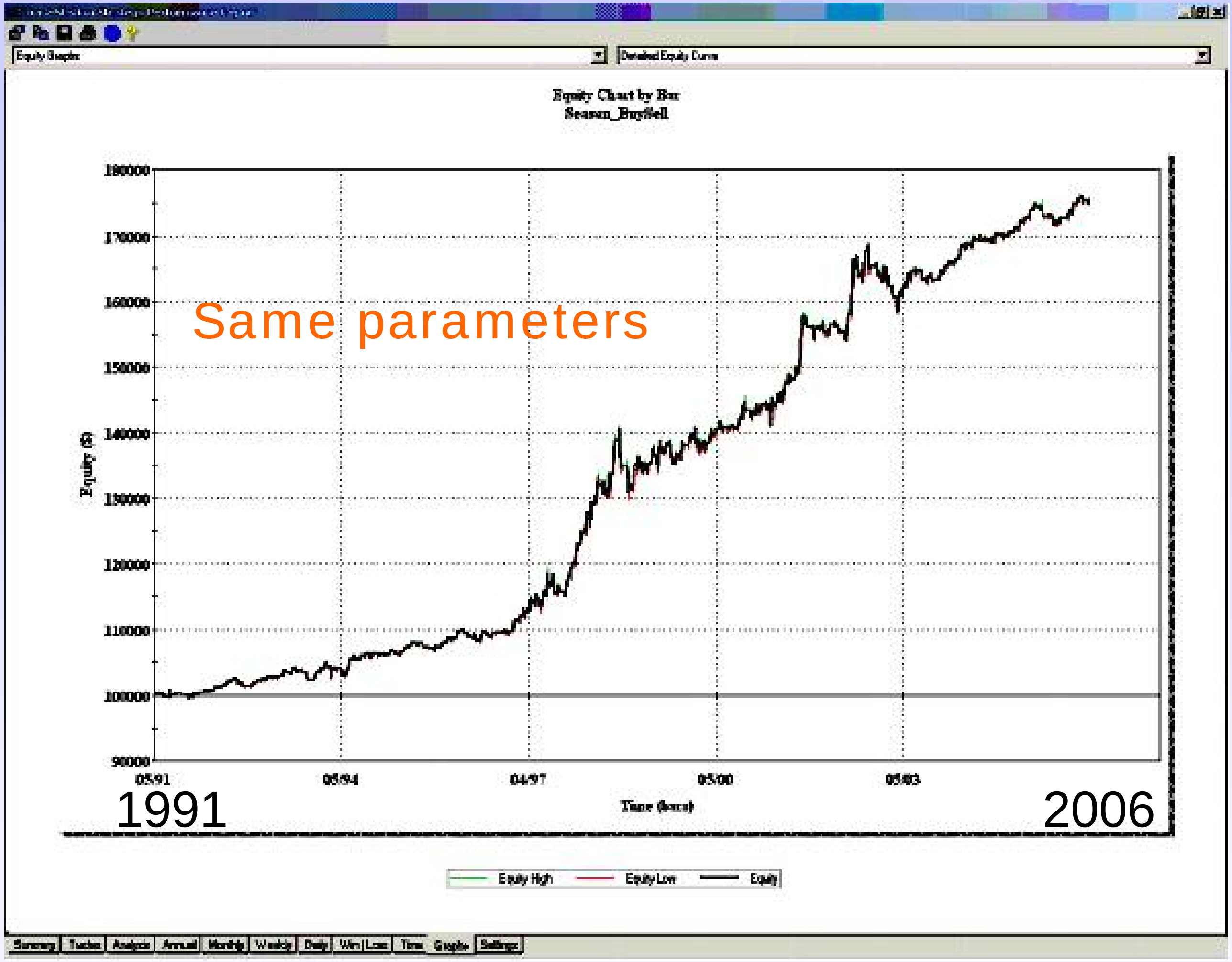
Total Net: 9.341 Pts.

Max DD: 1.316 Pts.

Avg. Trade: 52 Pts.

Time in market: 52%

2.2 Entries: Long-term filters: Seasons



SMI, daily
1991-2006

Total Net: 11640 Pts.

Max DD: 1.453 Pts.

Avg. Trade: 65 Pts.

Time in market: 52%

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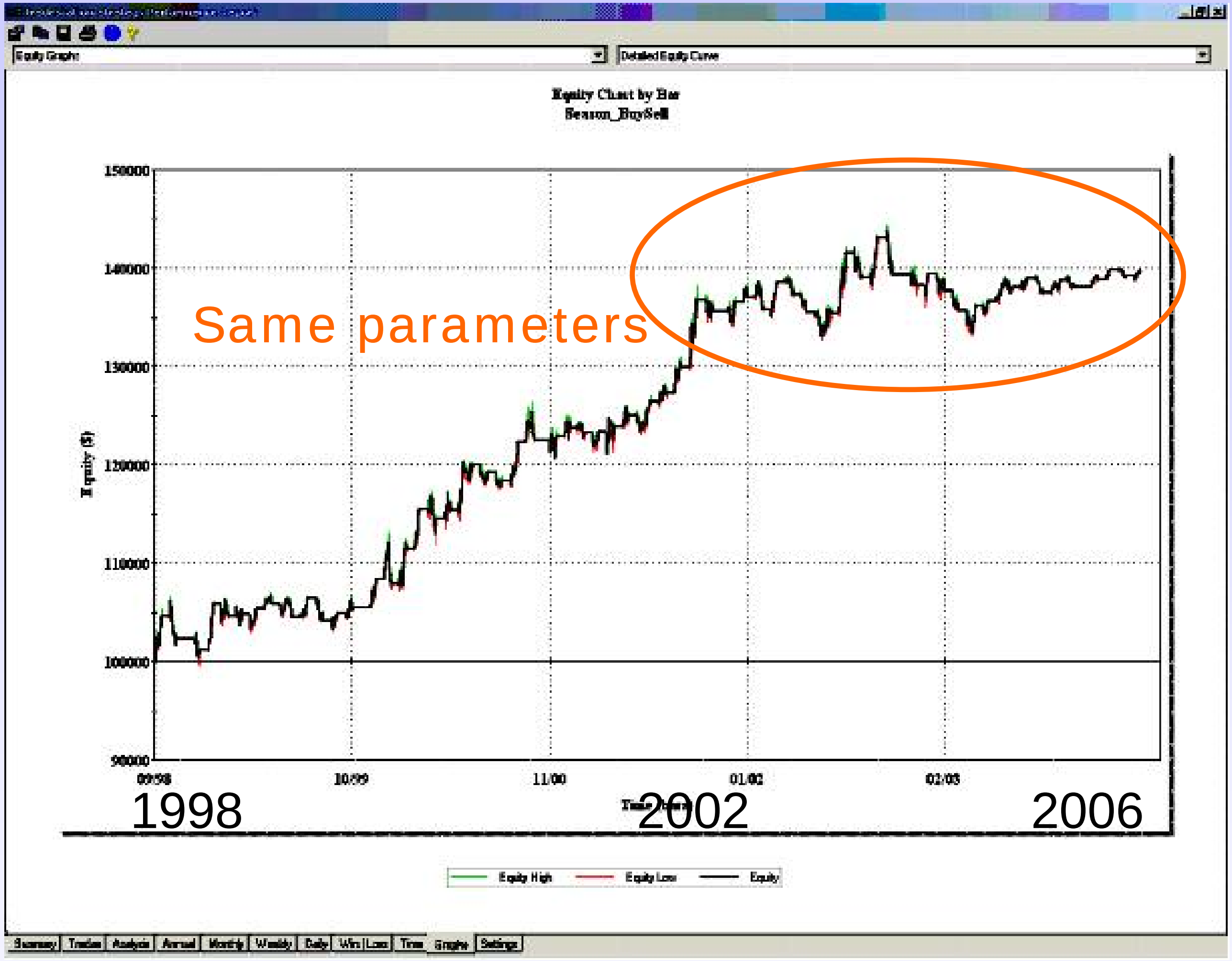
2.2 Entries: Long-term filters: Seasons



ESTX, daily 1998-2006

Total Net: 3.957 Pts.

Max DD: 997 Pts.

Avg. Trade: 60 Pts.

Time in market: 52%

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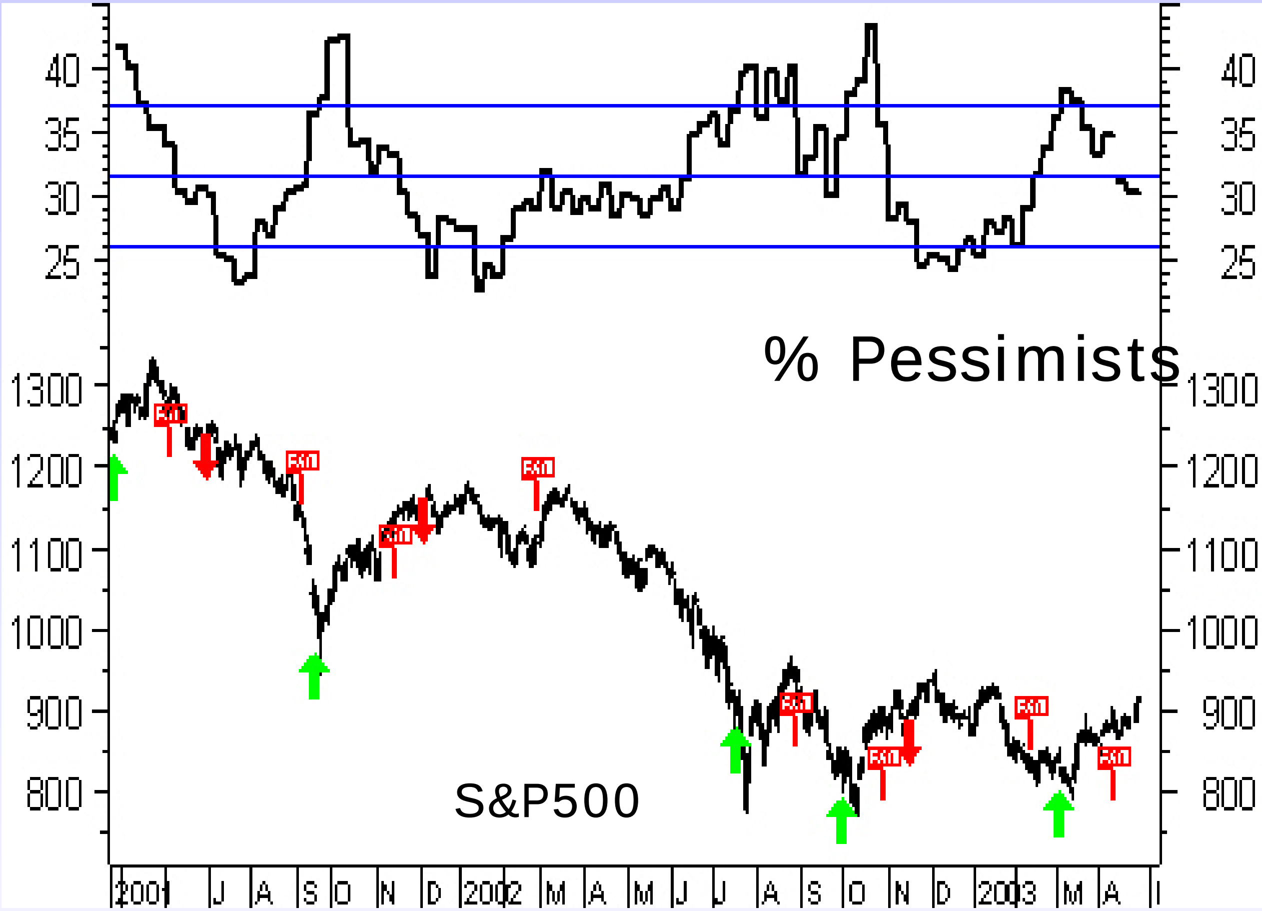
2.2 Entries: Long-term filters: Sentiment



Pessimists as filter for entries

Source: Investors Intelligence

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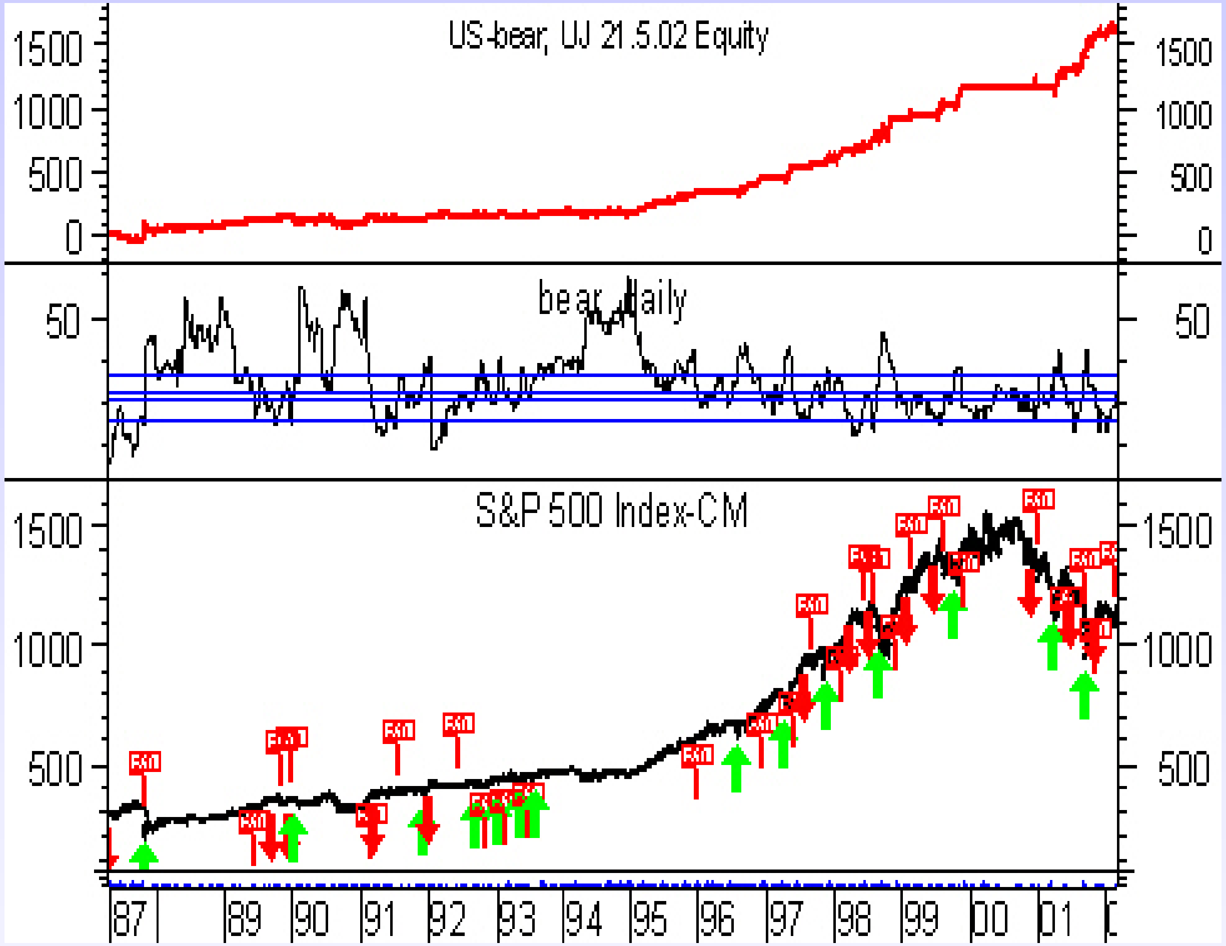
2.2. Entries: Long-term filters: Sentiment



Total Net: 1.706 Pts.

Avg. Trade: 52 Pts.

32 Trades: 24 wins

Pessimists as filter for entries

S&P500, daily 1987-2002

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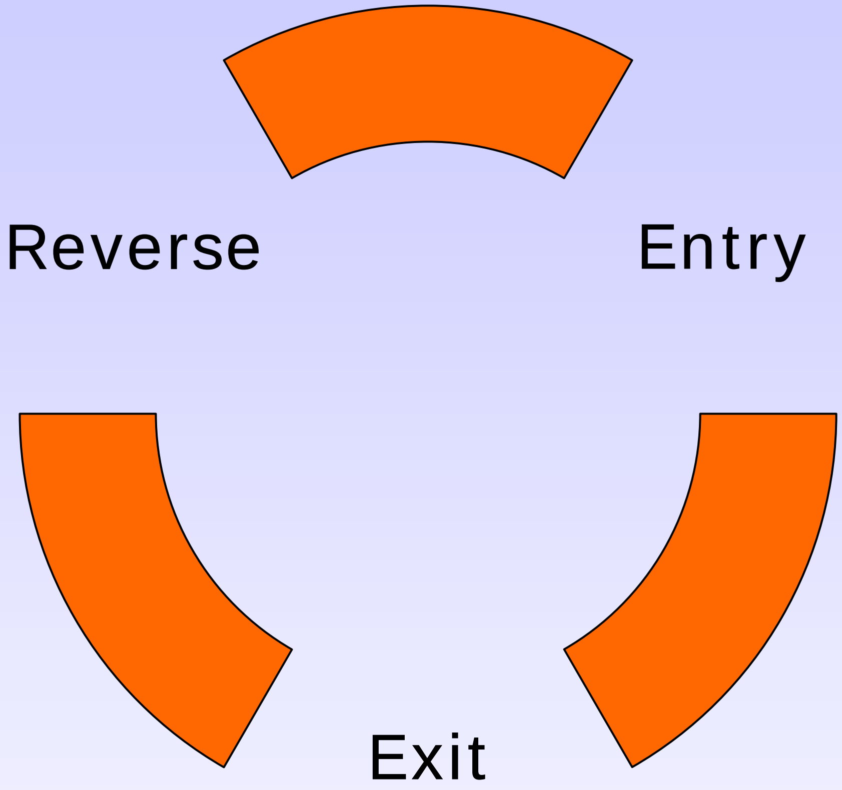
3. The Dynamic of Exits



Exits ←→ Entries: NO RANDOM ENTRIES!!!

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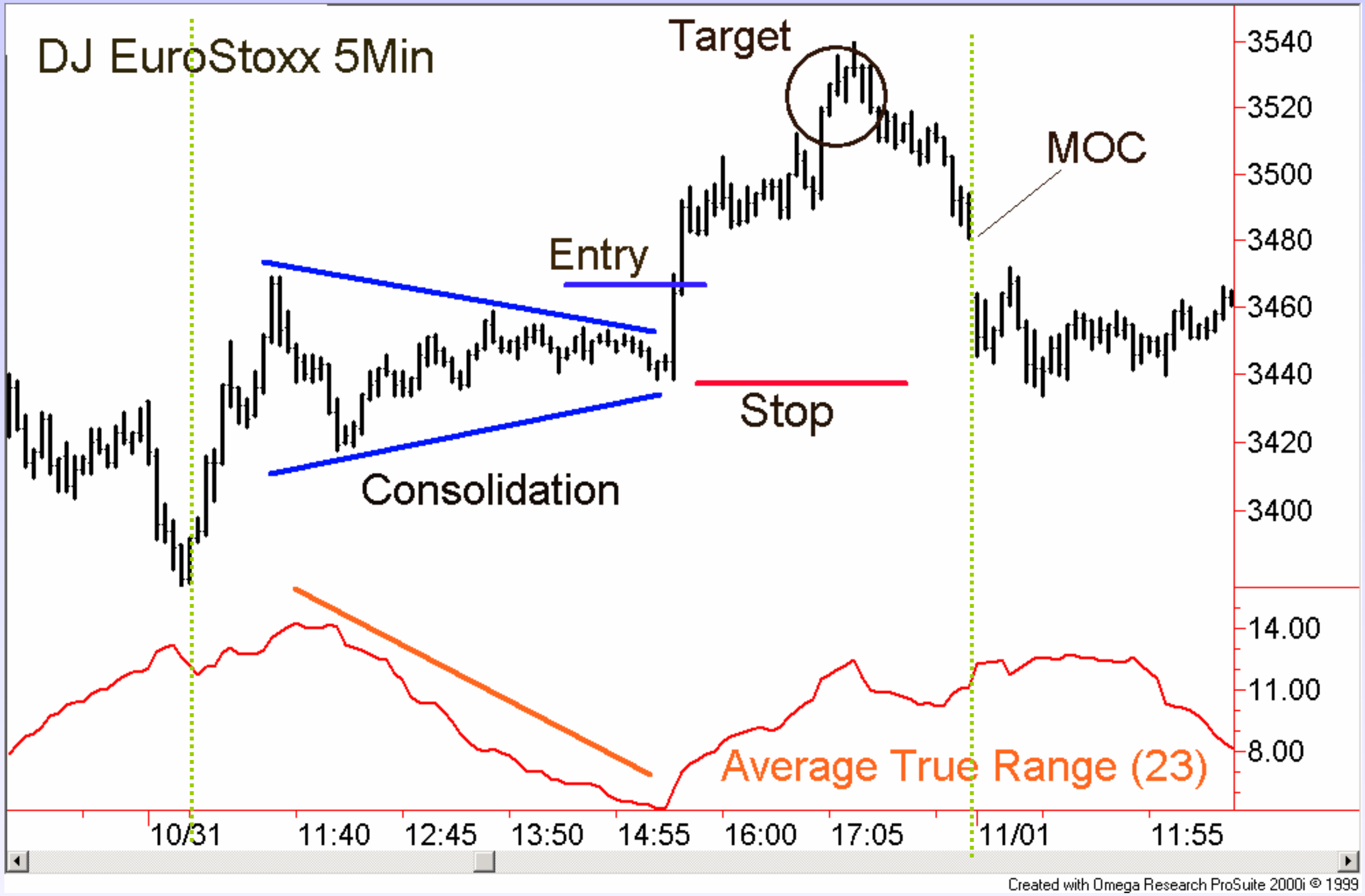
3. Exits for a day-trading system



Entry: Toby Crabel ORB with daily filter; 2-3 % in market

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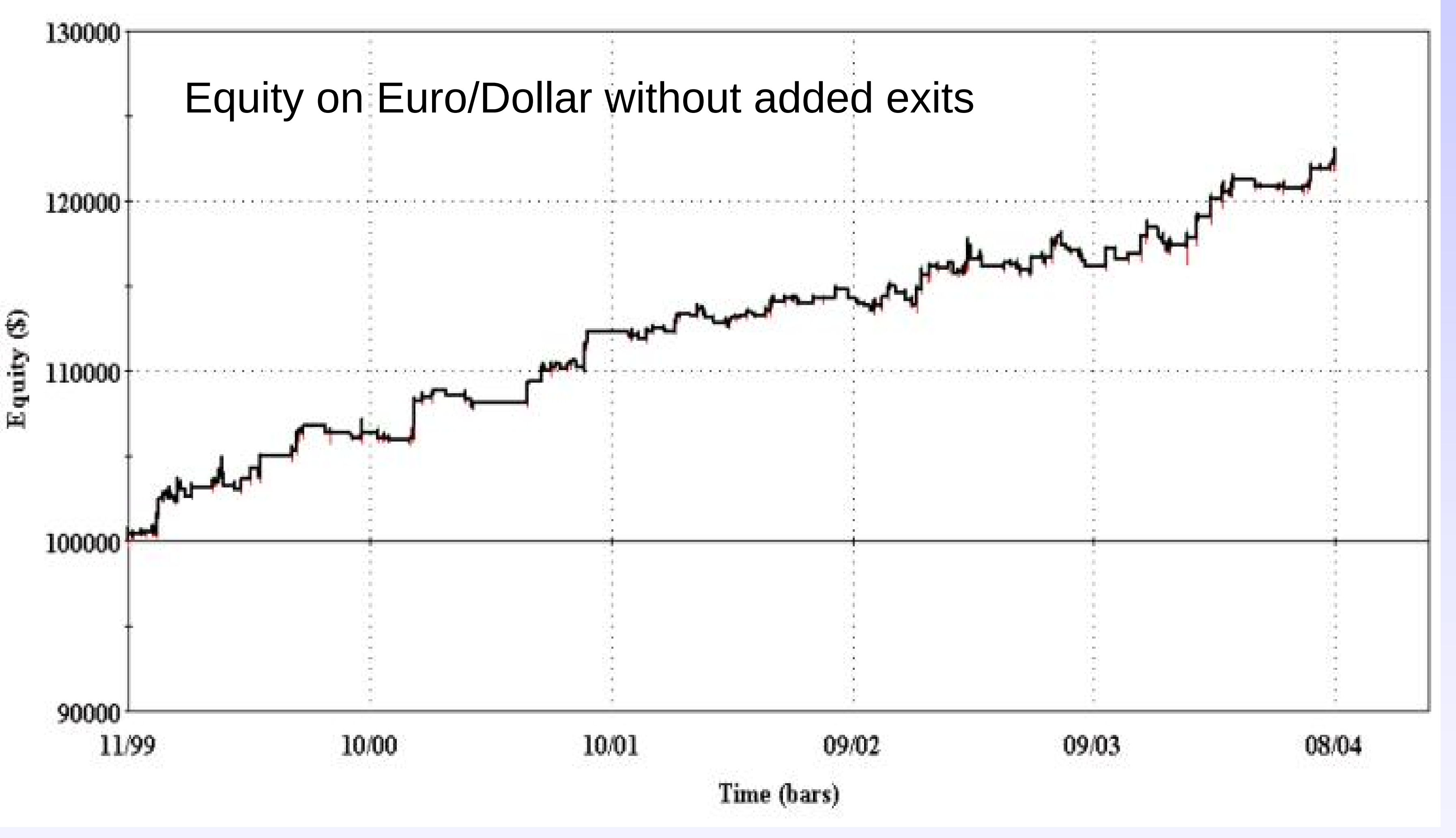
3. Exits for a day-trading system



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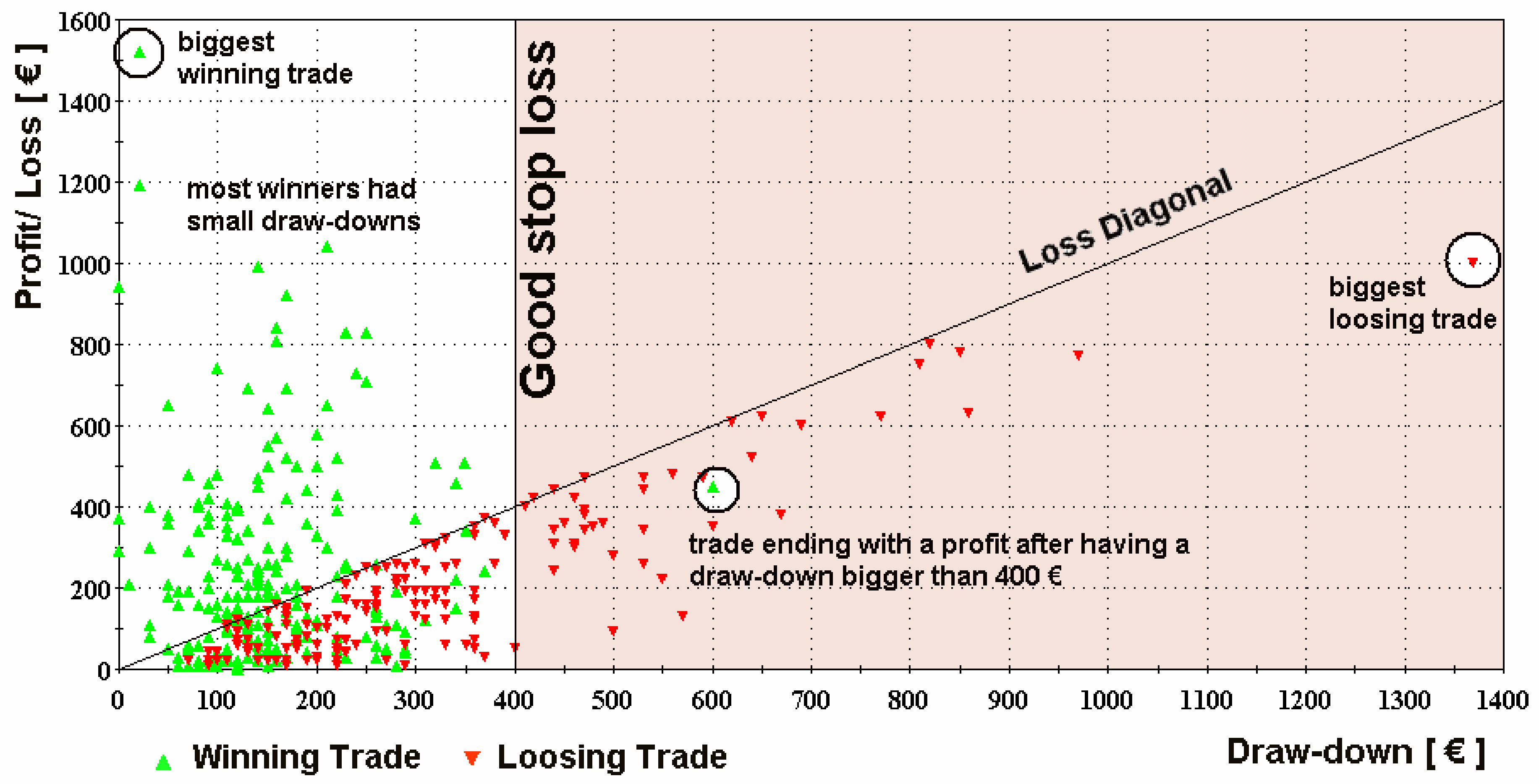
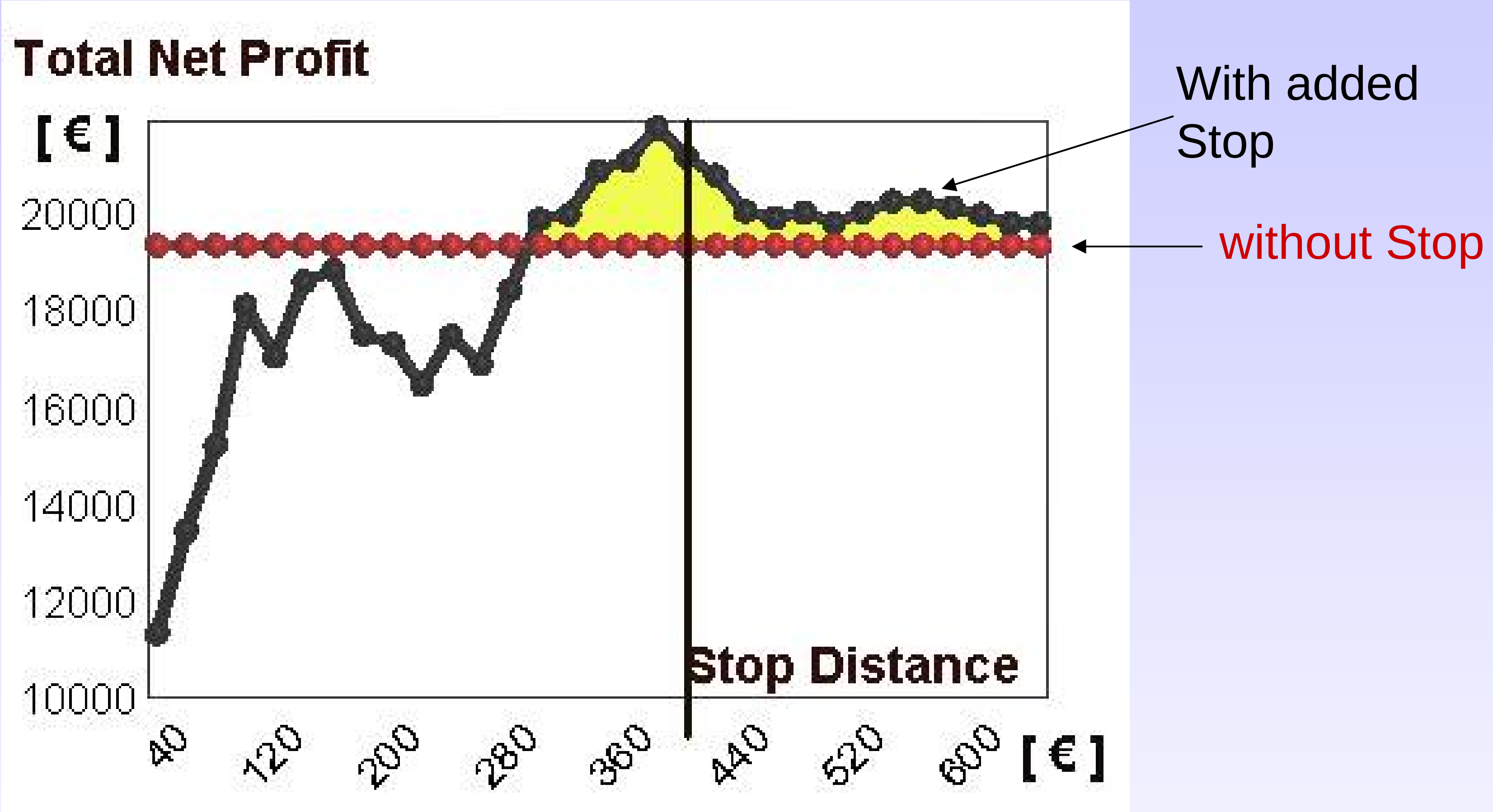
3. Exits for a day-trading system



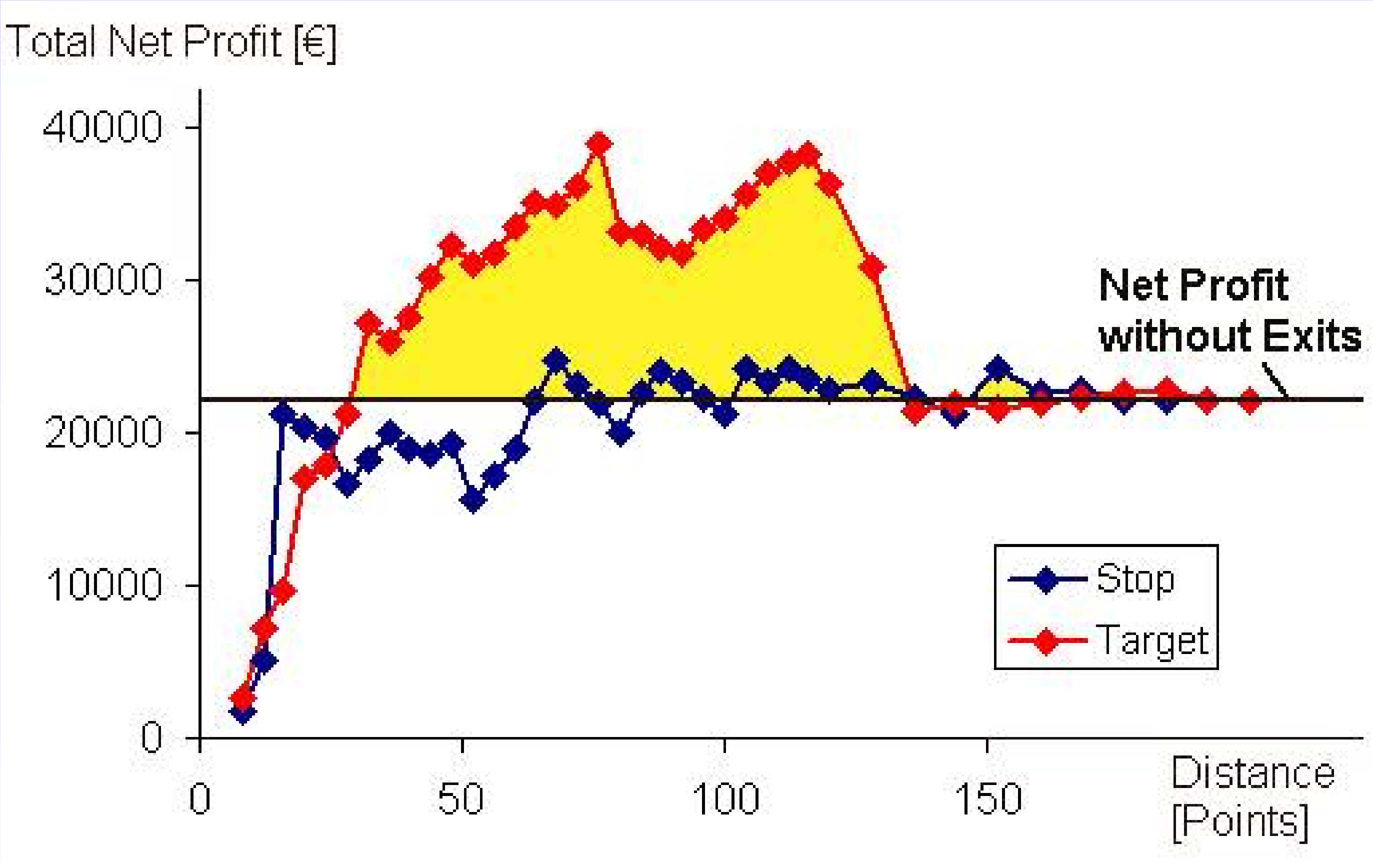
Trade distribution without added exits, 1997-2005

3. Exits for a day-trading system



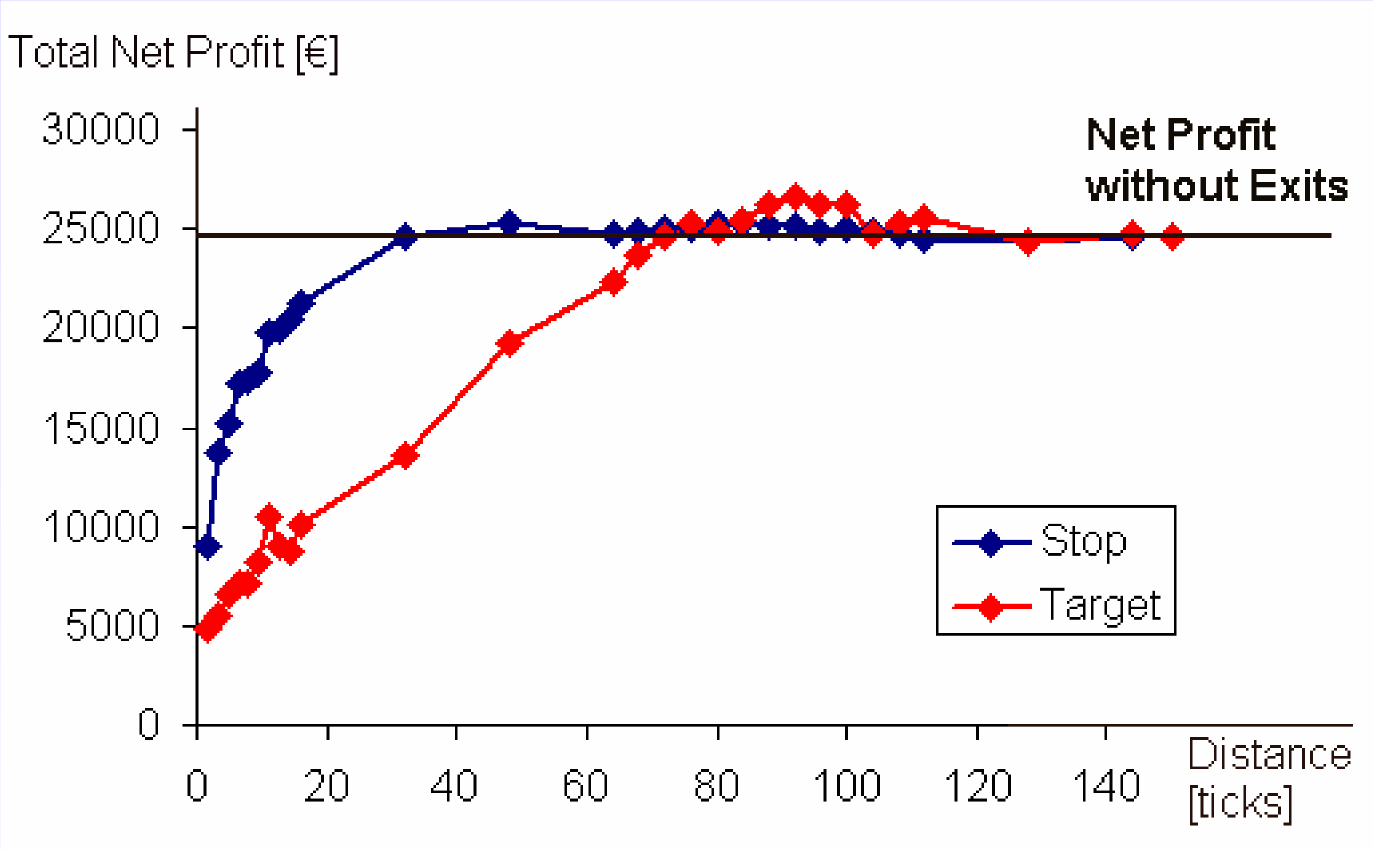
Stops for Bund, for a intraday Breakout-System

3. Exits for a day-trading system



Exits on the DAX

3. Exits for a day-trading system



Exits on the Euro/Dollar

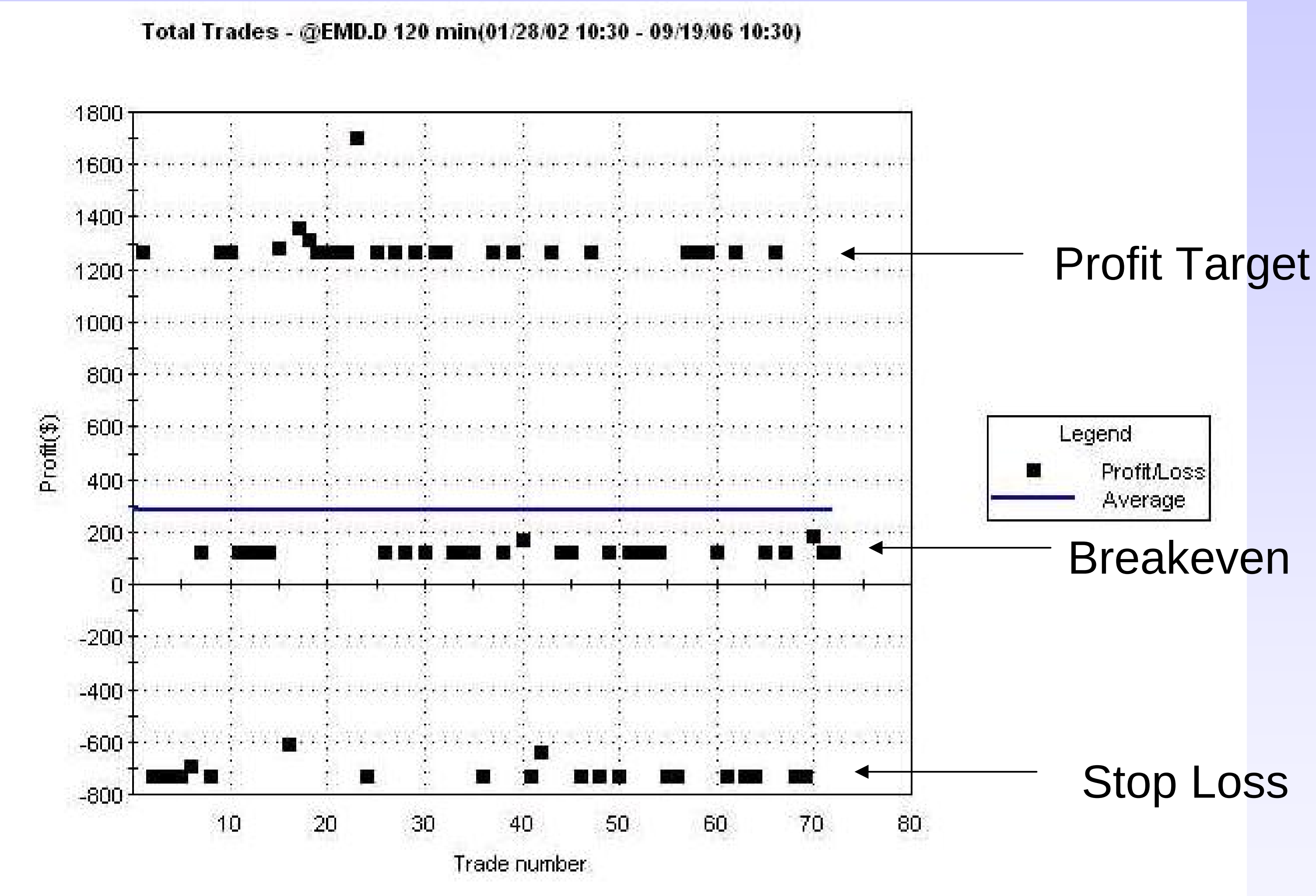
3. Exits for a day-trading system

	Stop	Target
BUND	> 35 ticks	No
Euro/Dollar	> 40 ticks	100 ticks or none
DAX	> 20 points	60-120 points
ESTX50	> 25 points	> 30 points
S&P500	> 12 points	30-35 points
Nasdaq	> 10 points	25-30 points

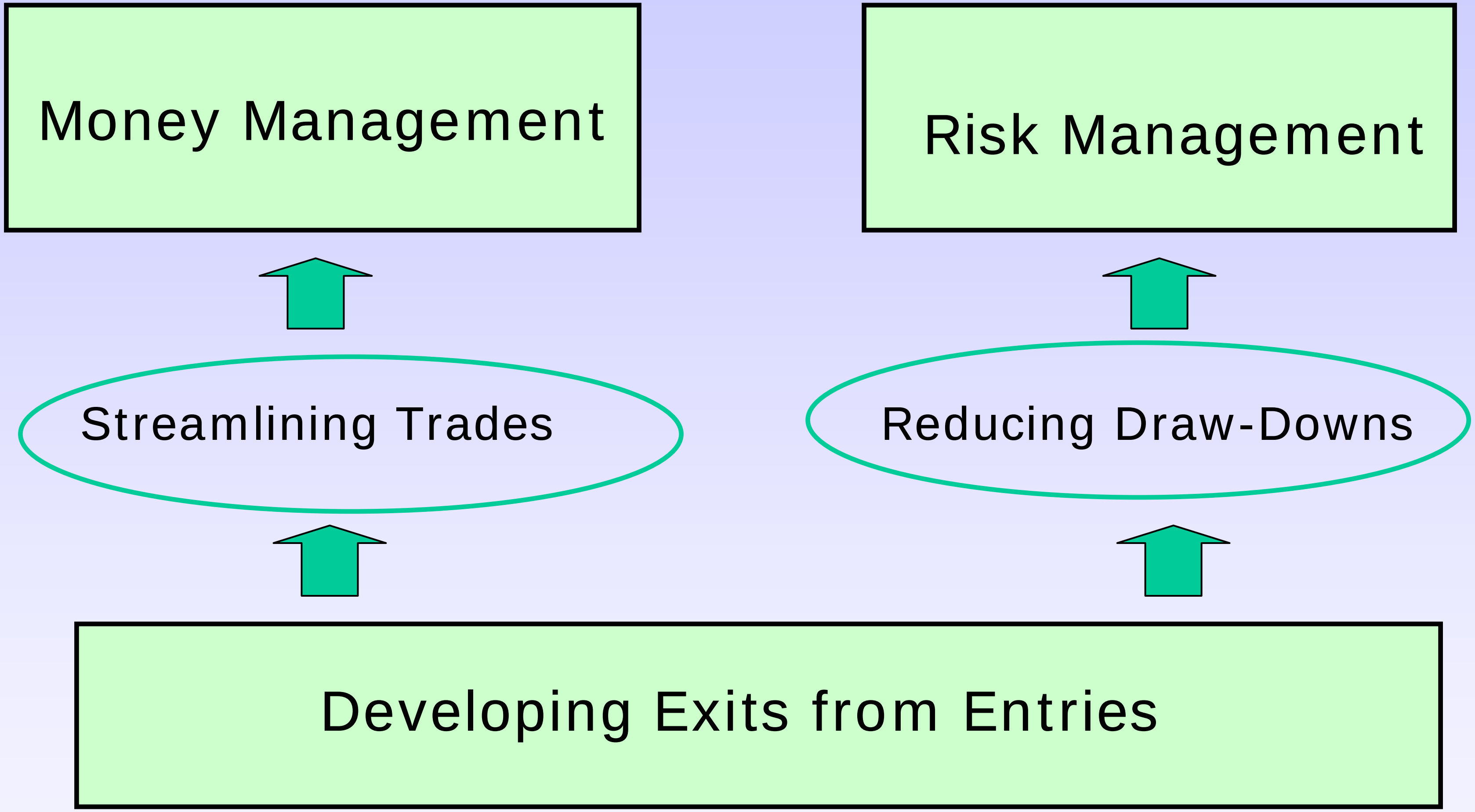
Suitable Stops and Profit Targets at present

See TRADERS' April 2006 and June 2006

3. Exits: Effects on trade distribution



3. Exits: Summary



4. Which markets to trade?

day-trading or short-term-trading:
slippage and commission relevant

Need minimum volatility

4.1 Stock Index Futures

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4.1 Stock Index Futures

"Trading Stock-Index futures is a pure exercise in taming the volatility beast !

No market has been more challenging to me and other developers as these futures are.
And that has a main reason: **VOLATILITY** "

Comment from a trading system developer in the year 2002

4.1 Stock Index Futures: Example

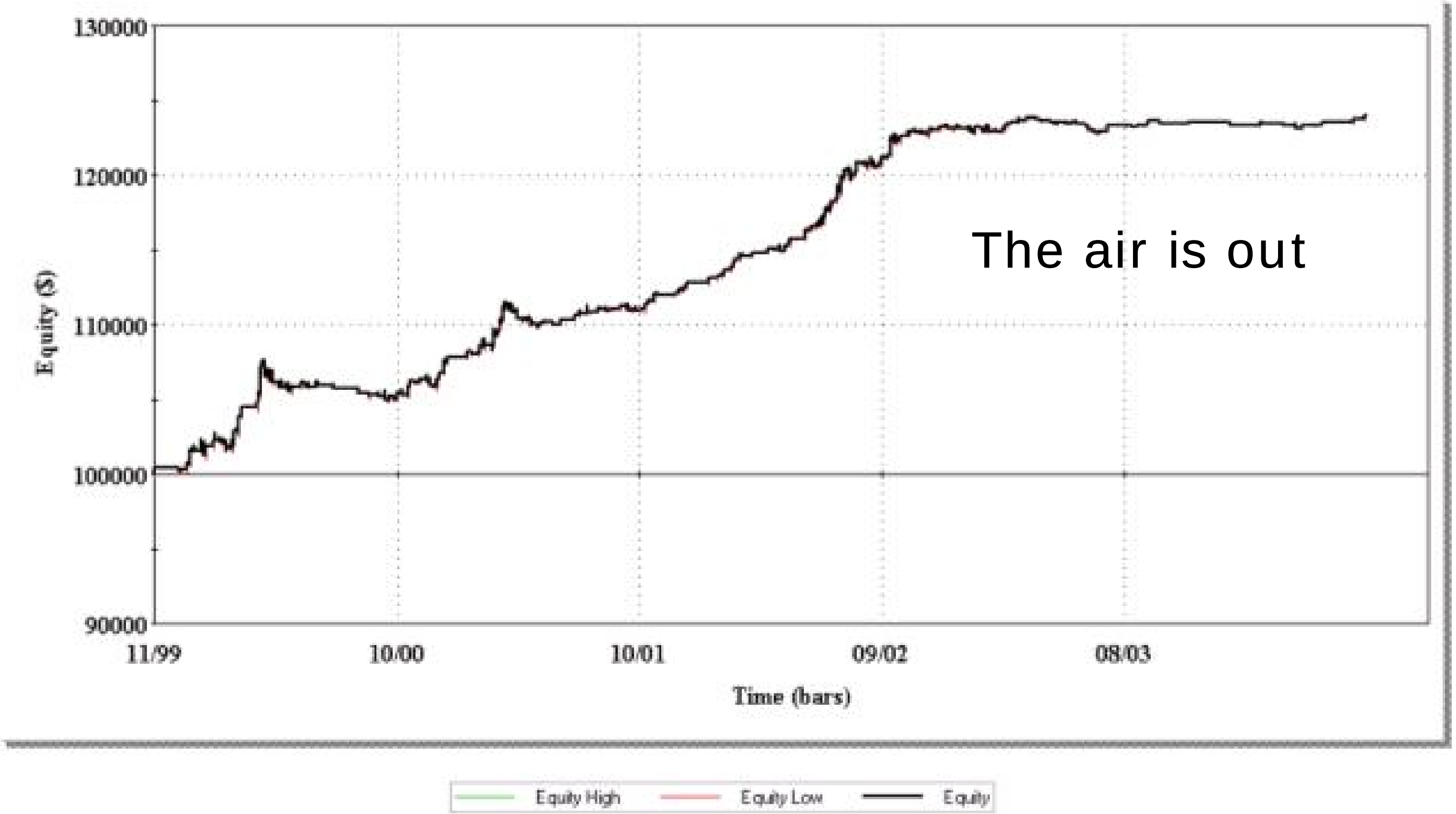
1) being in the market a small fraction of the time (less than 1%) and averaging two trades per week".

2) The system capitalizes on the very last move of the daysession!

See 5-min chart of Mini S&P

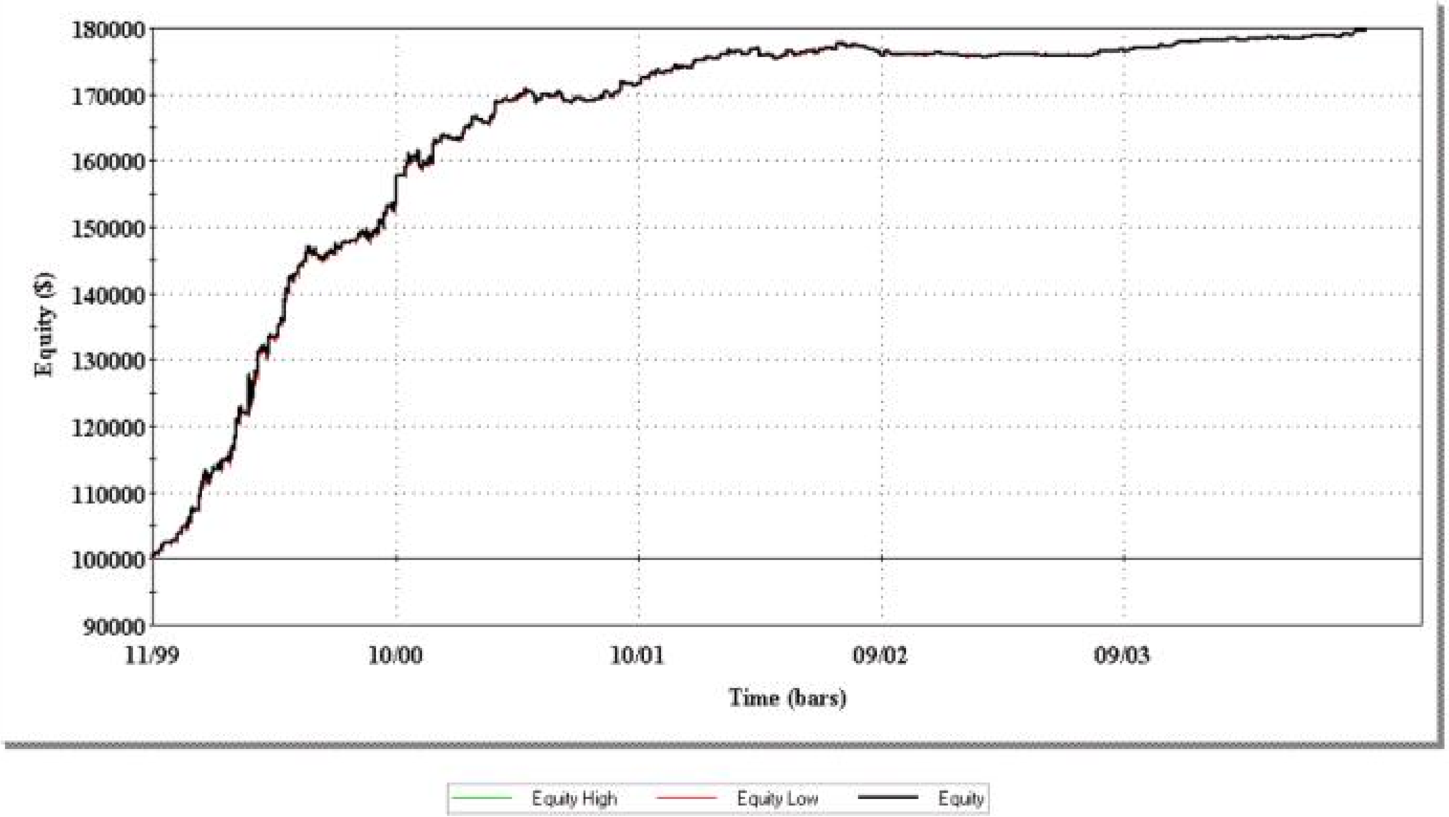
4.1 Stock Index Futures: Example

Mini S&P 5Min, Day-trading Equity



4.1 Stock Index Futures: Example

The NASDAQ story is even worse !



4.1 Stock Index Futures: Alternatives

Solutions:

Longer Time-Frame: 120 Min instead of 5 Min

Trade less! Attach more filters!

Choose different Markets: Russel2000 and S&P400MidCap instead of S&P and Nasdaq!

See 120-min chart of Mini Russell

4.2. Currency-Futures: Euro / Dollar

Advantages:

- Liquidity
- Volatility
- 24 hours open
- FOREX or Future

→ Daytrading

→ Medium Term Trading

- Macro-Economy

→ Long Term Trends

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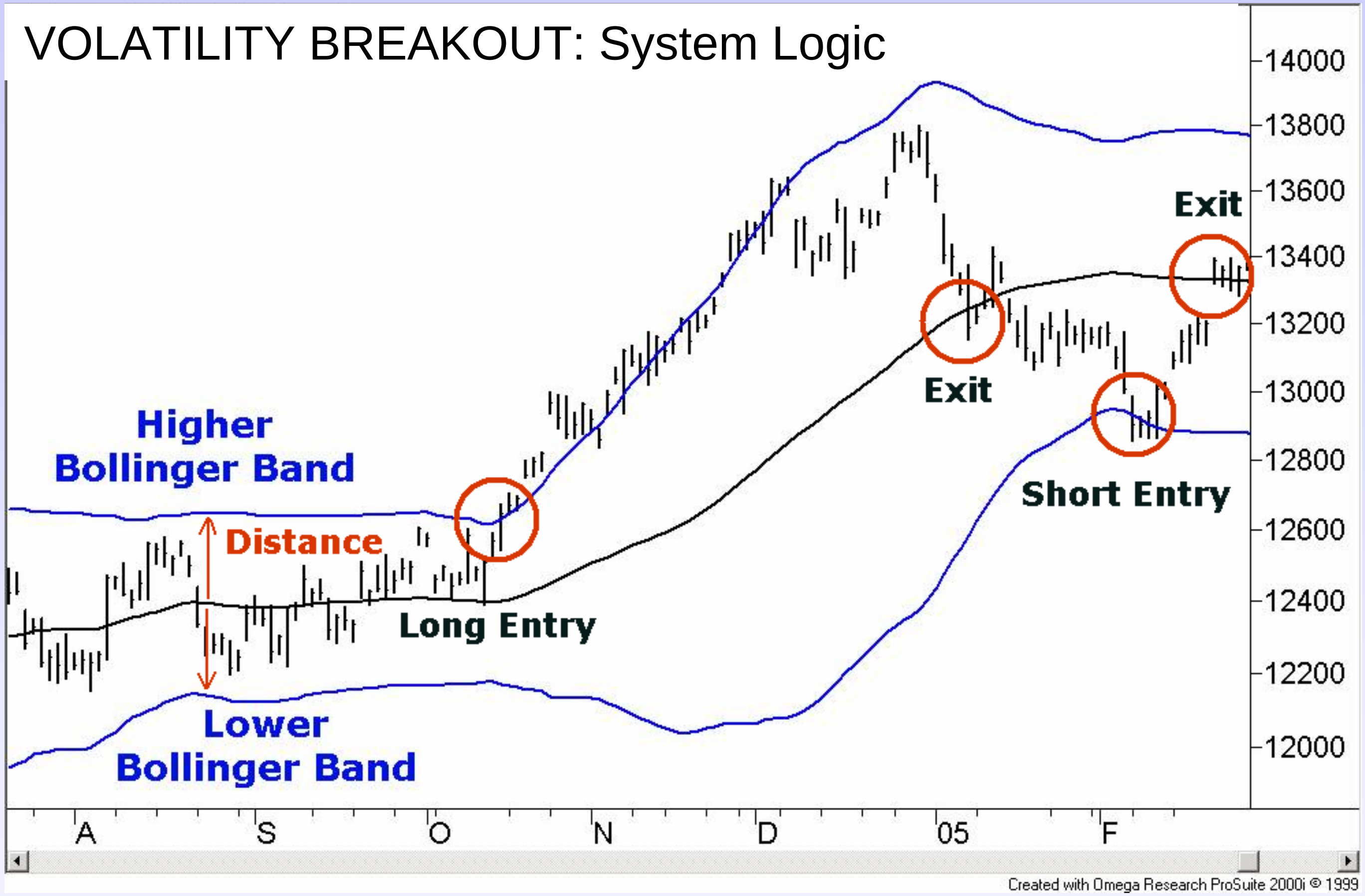
4.2. Daily: Euro / Dollar-system



<u>*See TRADERS, February 2006*</u>

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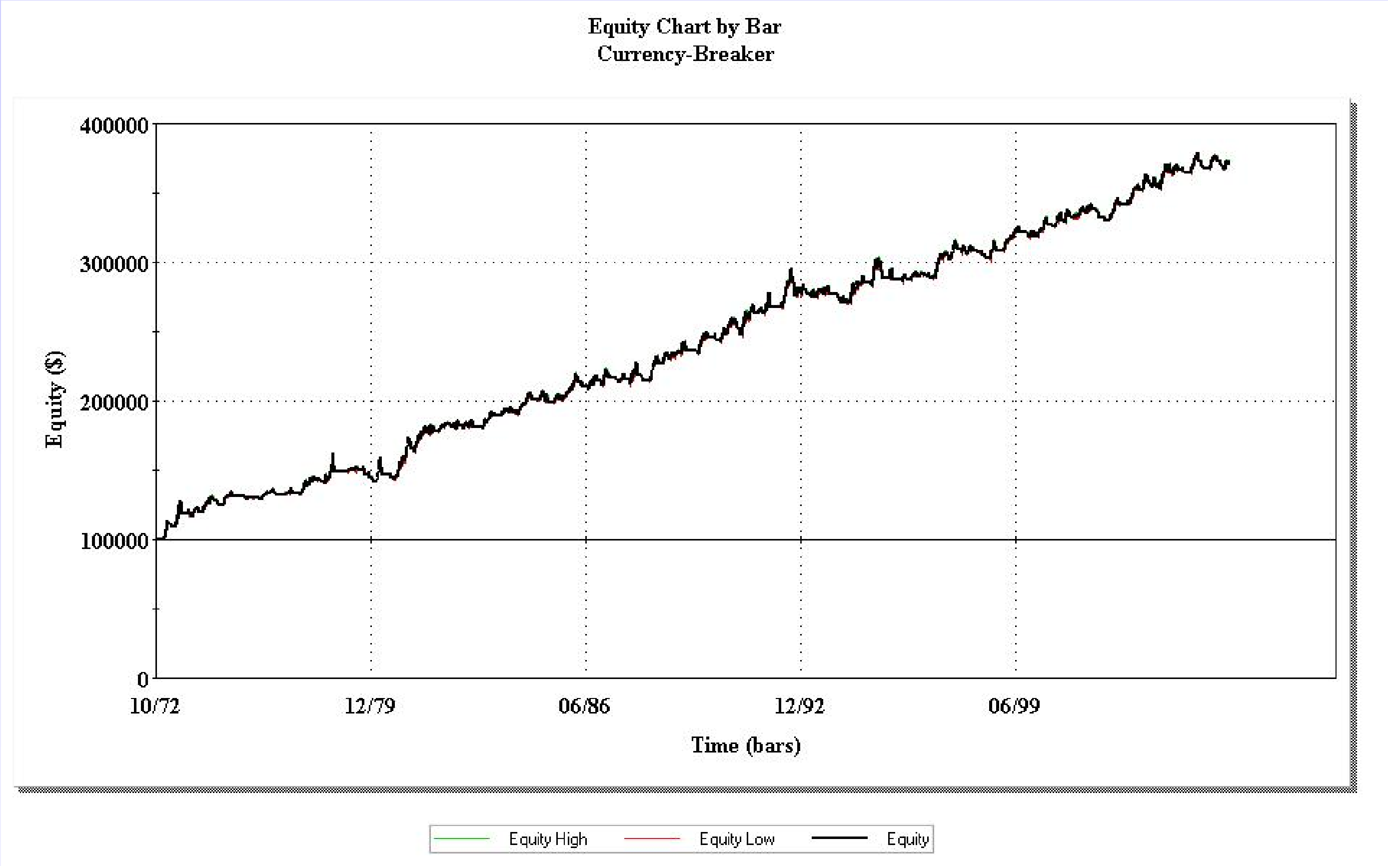
4.2. Daily: Euro / Dollar-system

TradeStation Strategy Performance Report - Currency-Breaker ME@@EURO-Daily (05/16/1972-12/19/2005)

Performance Summary: All Trades

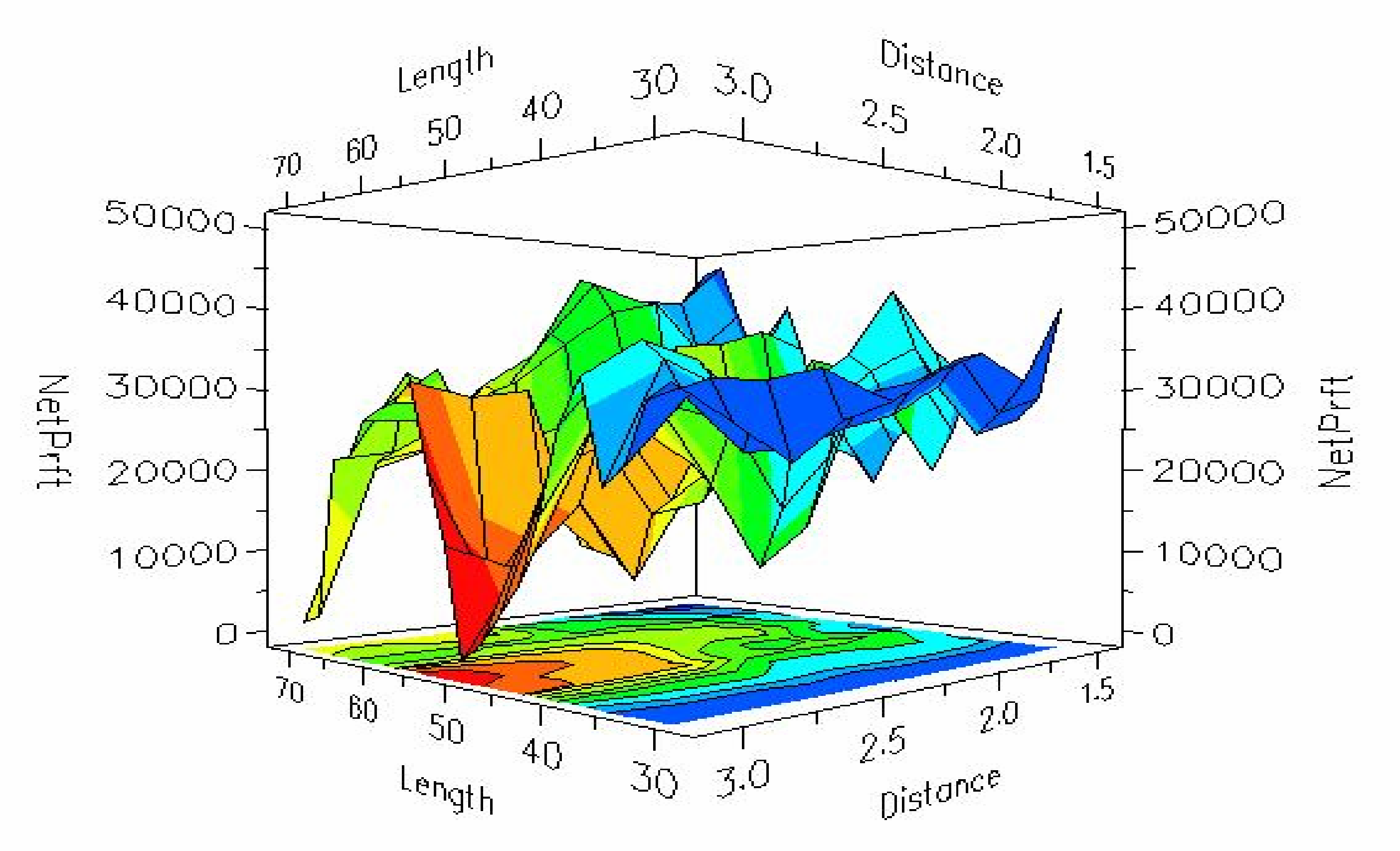
Total Net Profit	$270,100.00	Open position P/L	$0.00
Gross Profit	$381,862.50	Gross Loss	($111,762.50)
Total # of trades	110	Percent profitable	59.09%
Number winning trades	65	Number losing trades	45
Largest winning trade	$19,987.50	Largest losing trade	($8,812.50)
Average winning trade	$5,874.81	Average losing trade	($2,483.61)
Ratio avg win/avg loss	2.37	Avg trade (win & loss)	$2,455.45
Max consec. Winners	6	Max consec. losers	3
Avg # bars in winners	70	Avg # bars in losers	19
Max intraday drawdown	($15,537.50)		
Profit Factor	3.42	Max # contracts held	1
Account size required	$15,537.50	Return on account	1738.37%

4.2. Daily: Euro / Dollar-system



Detailed Equity Curve of the Bollinger Band System on the Euro Daily data 1972-2006

4.2. Daily: Euro / Dollar-system



Bollinger Band System on the Euro: Net Profit as a function of the System‘s input parameters. Daily data 1972-2006

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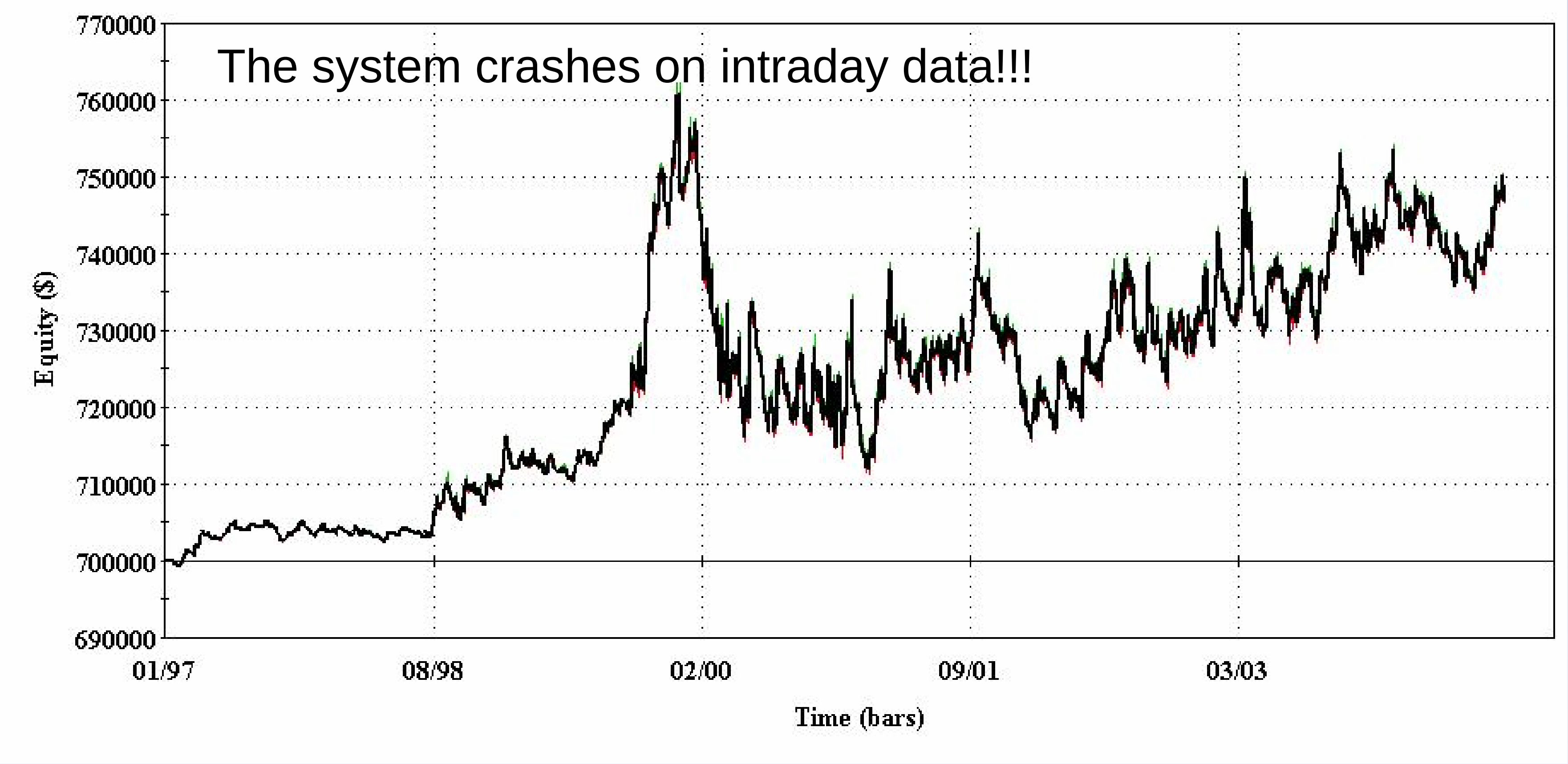
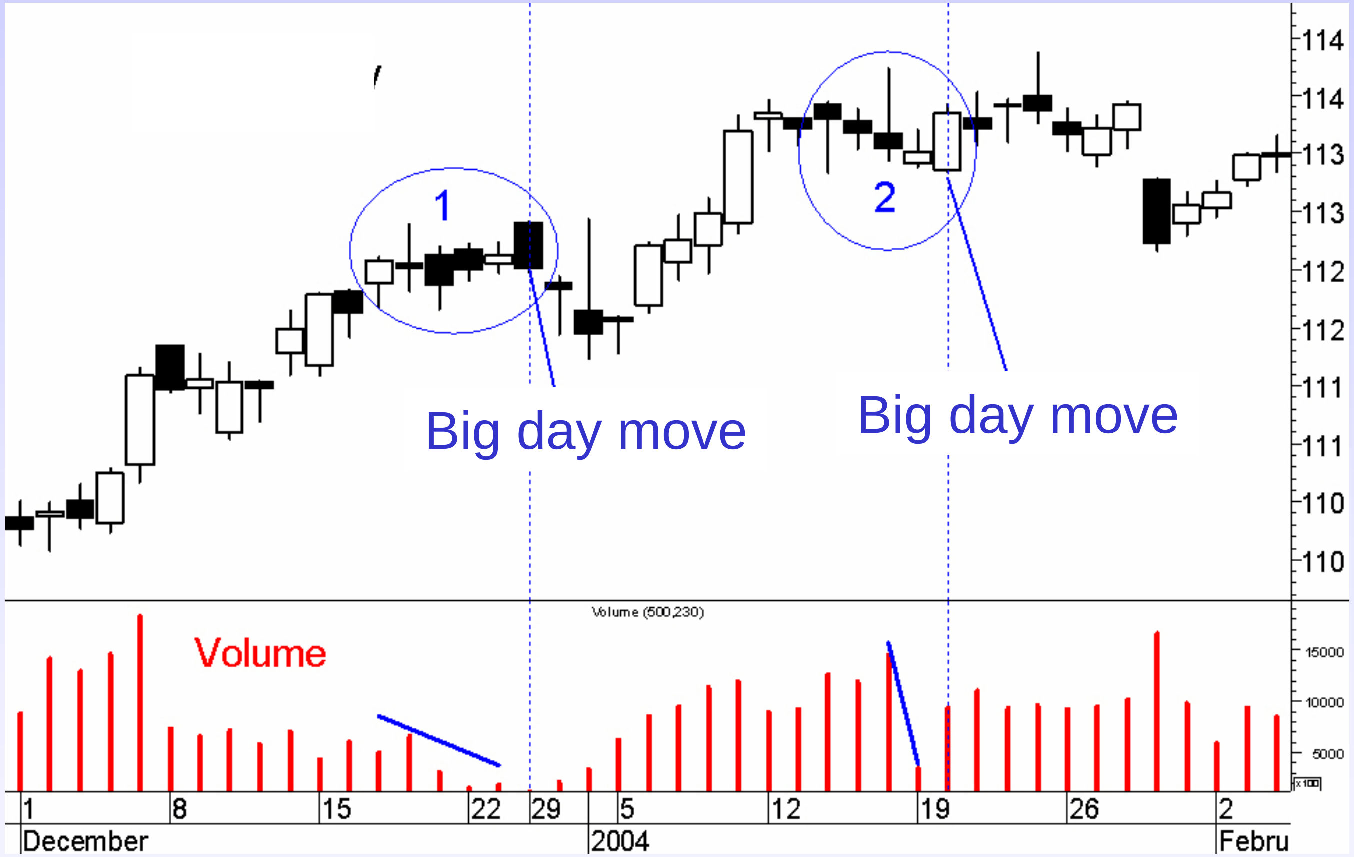
4.2. Intraday: Euro / Dollar-system



Equity Curve of the Bollinger Band System; Portfolio of 7 markets; Intraday 60 Minutes 1997-2004, same parameters

4.2. Intraday: Euro/Dollar-system

Daily filters make the day-trade more successful. Do not trade every day!



4.2. Intraday: Euro / Dollar-system

See 5-Min chart of ECZ06 (Euro/Dollar Future)

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4.2. Weekly: Euro / Dollar-system

ENTRY IN DIRECTION OF NEW 20 WEEK HIGH/LOW

Adaptive Moving Average as filter

REVERSAL IF WRONG

using modified Parabolic –Indicator and Pivots

RE-ENTRY

Adaptive Moving Average as filter

4.2. Weekly: Euro / Dollar-system

TradeStation Strategy Performance Report - AMA UJ2006 ME@@EURO-Weekly (05/19/19

Performance Summary: All Trades

Total Net Profit	$205,375.00	Open position P/L	$0.00
Gross Profit	$305,787.50	Gross Loss	($100,412.50)
Total # of trades	92	Percent profitable	55.43%
Number winning trades	51	Number losing trades	41
Largest winning trade	$20,762.50	Largest losing trade	($3,975.00)
Average winning trade	$5,995.83	Average losing trade	($2,449.09)
Ratio avg win/avg loss	2.45	Avg trade (win & loss)	$2,232.34
Max consec. Winners	7	Max consec. losers	7
Avg # bars in winners	13	Avg # bars in losers	3
Max intraday drawdown	($21,000.00)		
Profit Factor	3.05	Max # contracts held	1
Account size required	$21,000.00	Return on account	977.98%

4.2. Weekly: Euro / Dollar-system

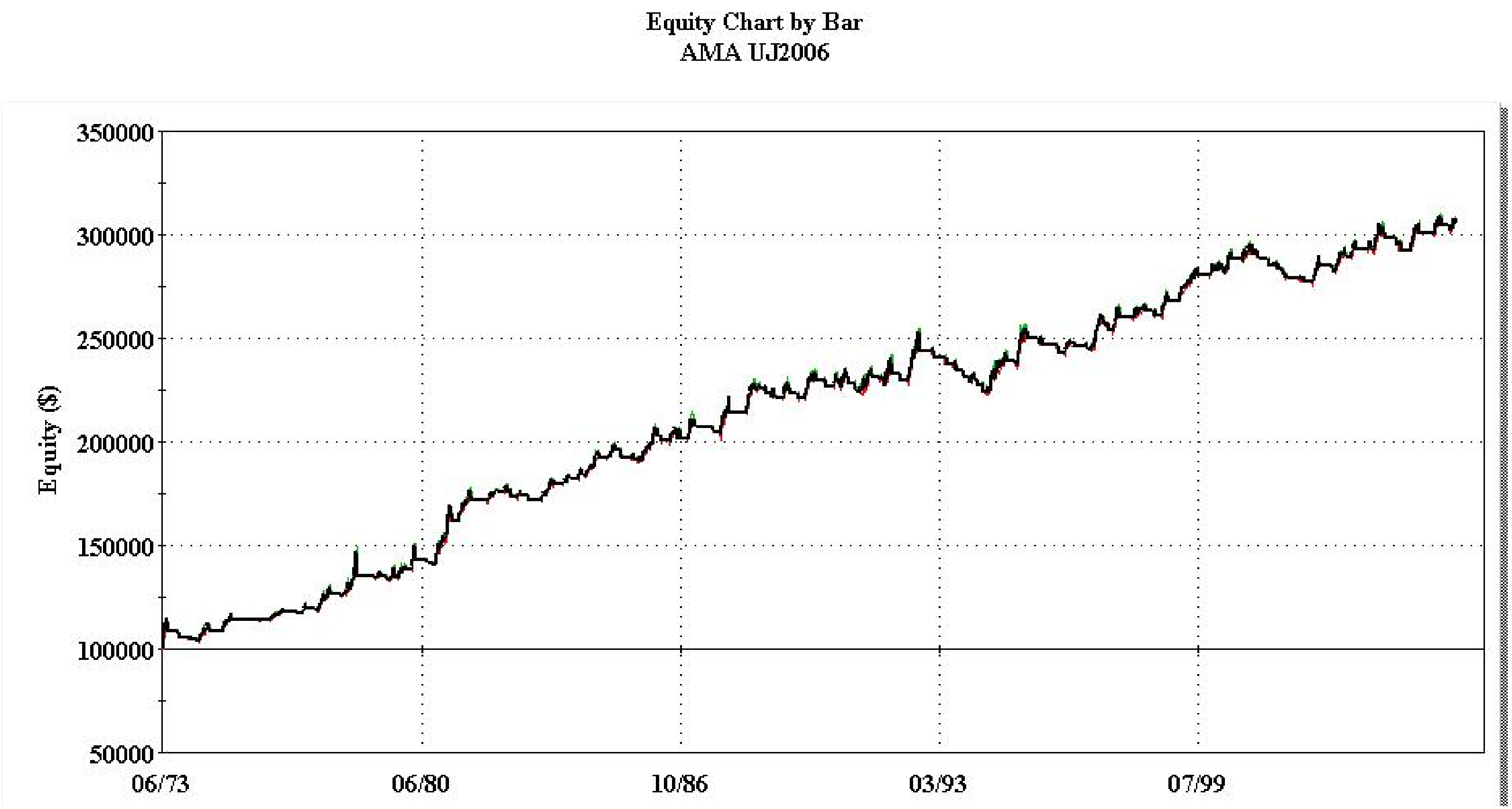
A: Trade only good opportunities

Percent in the market: 49.25%

B: Let the Profits Run / Keep the losses short

Avg. time in winning trades: 94 days
Avg. time in losing trades: 28 days

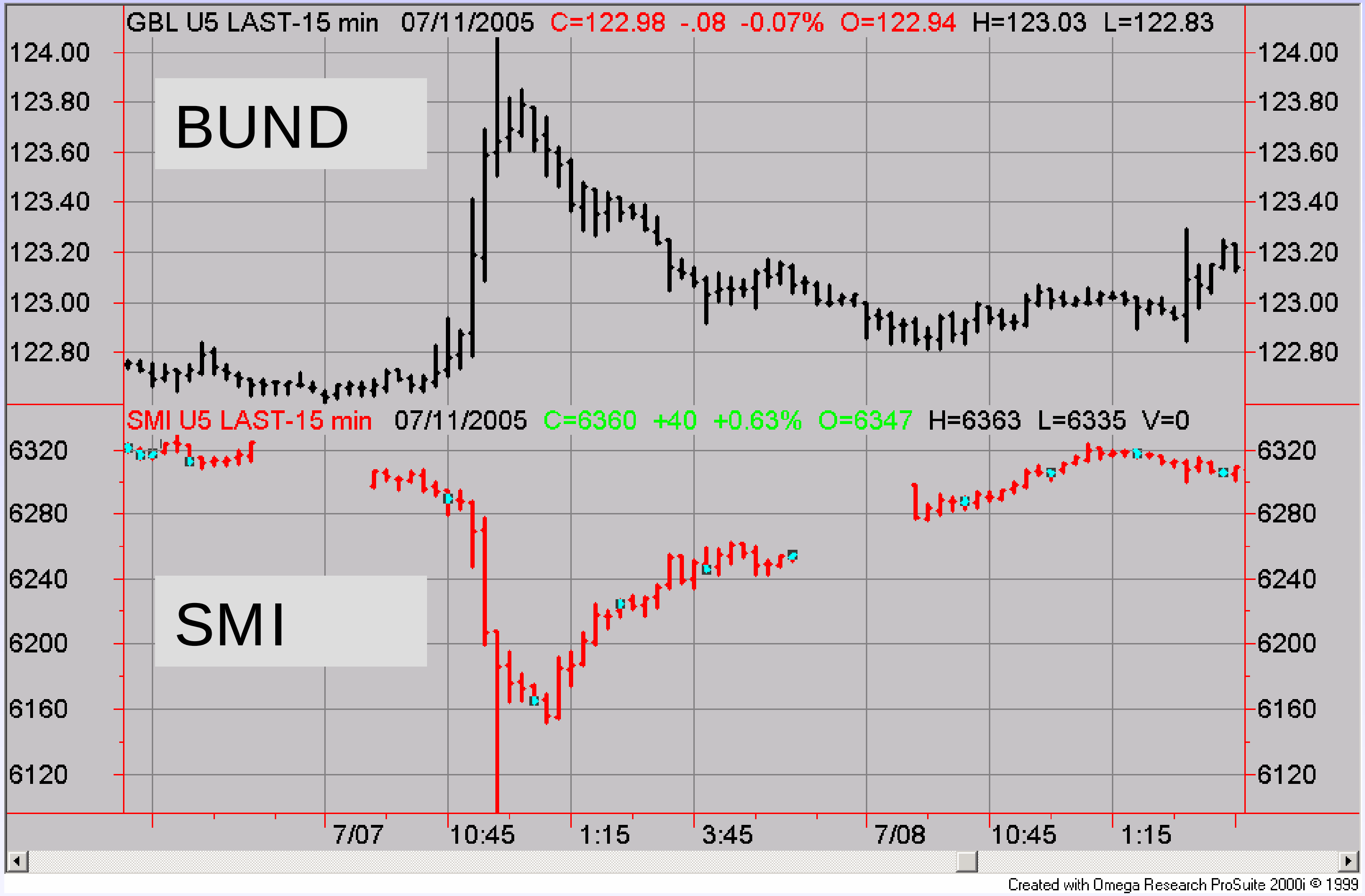
4.2. Weekly: Euro / Dollar-system



Detailed Equity Curve of the AMA-Parabolic System on the Euro (earlier: D-Mark)

5. Building System portfolios

Take care of correlations, between markets and systems!



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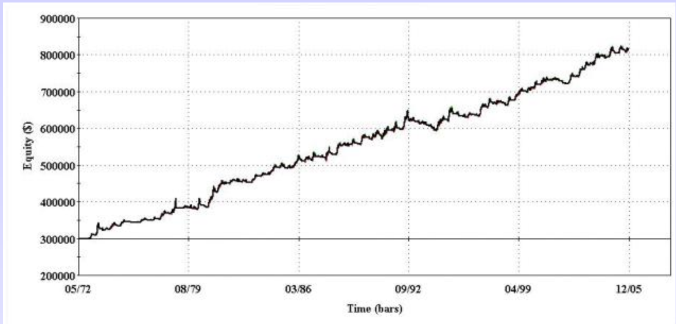
5. Building System portfolios: Goal

Pre-determined return



Market diversification, correlations

Daily Systems

Intraday Systems

Weekly Systems

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6. Summary

Robust System-Portfolio

Different time frames

Statistically tested Entries and Exits

Different markets with inherent attributes

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