SIPro & Keelix: Agenda

- Background
- Keelix: The Basics
  - Screening Language, Simulator Output, Job Handling
- Keelix vs. AAII
  - Comparisons for Neff, Zweig, Tiny Titans
- Keelix: Neff Screen
  - Initial Studies: Impacts of rotation periods, Amount of cash carried, # stocks in portfolio
- Keelix: Tiny Titans Screen
  - Initial Studies: Impact of rotation periods, # stocks in portfolio
  - Advanced Studies: Impact of liquidity, market cap
- Applications, Activities
  - Future Studies, Individual applications, SIPro User Group activities

Background

- SIPro is a great tool, but no simulation capability
  - AAII web site provides some real-time, some simulated results for SIPro screens
  - While this provides some insight, really have no way to answer even the simplest questions on variations of AAII screens
  - Can simulate manually (I've done it!!) – but lots of manual effort, very error prone, etc.
  - Need a simulator – but this is not a trivial project
- Keelix to the rescue!!
  - SIPro simulator exists – see: http://keelix.com/backtester/
  - Created around 2004
  - Best price: Free!!
  - Discussion forum available but fairly dead – Keelix hasn't participated since 5/05
  - Keelix does update the SIPro DB, keep the simulator running, etc.
  - No user manuals, etc. – learn from postings and a few urls
  - Big question – How good is the simulator?? (more later)

Keelix: The Basics

Keelix: Screening Language (1)

- Language based on SIPro terms and Radiscript
  - Very simple to learn
  - Many canned screens available to use as examples
  - Sensitive to language grammar and spelling – have to debug via job submission
  - References on Radiscript, SIPro
    - http://mechinv.org/files/TheGreatRadish/RadiScreen/Guide.doc
    - http://keelix.com/backtester/auth/showsifields.tt
  - Keelix's simulator uses a slightly modified form of Radiscript – have to read forum to determine his modifications, don't cares, etc.;
- Next slide is the Radiscript/Keelix for Neff screen
  - Colored items will be discussed

Keelix: Screening Language (2)

```
Define {Neff}
;
:definition and blanking
;
Deblank [SI EPS Growth Est] [SI PE to Div adj EPS Est growth] [SI Sales-Growth 5yr]
[SI Free cash flow/share 12m] [SI Free cash flow/share Y1] [SI Operating margin 12m]
[SI Operating margin Y1] [SI Ind Operating margin Y1] [SI Ind Operating margin 12m]
;
:screen
;
Set [Median NeffPE] : MEDIAN([[SI PE to Div adj EPS Est growth]])
Keep : [SI PE to Div adj EPS Est growth] <= 0.5 * [Median NeffPE]
Keep : [SI EPS Growth Est] >= 7
Keep : [SI EPS Growth Est] <= 20
Keep : [SI Sales-Growth 5yr] >= 7
Keep : [SI Sales-Growth 5yr] <= 20
Keep : [SI Free cash flow/share 12m] > 0
Keep : [SI Free cash flow/share Y1] > 0
Keep : [SI Operating margin 12m] >= [SI Ind Operating margin 12m]
Keep : [SI Operating margin Y1] >= [SI Ind Operating margin Y1]
Sort Descending [SI EPS Growth Est]
Top :25
End
```

Keelix: Simulator Output (1)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
2	Date	MnthlyDiff	keelix-raw		Stocks held									
3	12/29/2000		1		(ADPT,NHC,MERX,ZLC,CY,IMSC,RAYS,CC,FBN,RBOW,DTL,VSH,KEM,KSU,TBAC,PNR,BYD,WRLD,CDI,JF									
4	2/2/2001	23.88	1.2388		(NPCI,NHC,MERX,RBOW,VSH,KEM,TBAC,BYD,NHL,CDI,JRC,PCAR), warning (CC_45%_11.50_16.66, IMSC									
5	3/2/2001	-7.86	1.1415		(NPCI,NHC,ZLC,ROCK,RBOW,SHRP,KEM,TBAC,VSH,MAGI,MOVI,NHL,BYD,JRC), warning (MAGI_15.50=>									
6	3/30/2001	1.97	1.1639		(LOJN,NPCI,PXR,IDTI,AMD,ROCK,RBOW,SHRP,KEM,TBAC,DTL,VSH,COHU,HECO,MAGI,NHL,BYD,KMG,J									
7	4/27/2001	7.53	1.2515		(ATAC,IMSC,NPCI,ROHN,BR,LVB,TBAC,MND,BMHC,HECO,MAGI,NHL,SIDE,VSH,CRC,PV,DGICB), warning									
8	6/1/2001	9.5	1.3705		(ATAC,NHY,IDTI,AMD,BMHC,ROCK,MND,IFSIA,MAGI,PKE,SCNYA,DTL,EOG,FNLY,VSH,CRC,PV,STNV), s									
9	6/29/2001	1.8	1.3951		(ATAC,ROHN,USVI,NHY,IDTI,AMD,BMHC,ROCK,ELY,MND,DEBS,PNN,SCNYA,EOG,KEM,IMY,SIDE,VSH,C									
10	8/3/2001	3.11	1.4385		(ATAC,ROHN,USVI,NHY,EOG,AMD,TCBK,MPS,OHP,MND,VSH,KEM,PNN,SCNYA,CP,AVX,UNS,CRC,PHM									
11	8/31/2001	-2.08	1.4086		(ATAC,USVI,NHY,BR,TCBK,MPS,EOG,SFA,KEM,RSTI,SCNYA,VSH,CP,UNS,AVX,FNLY,CRC,RYL,ROHN,S									
12	9/28/2001	-12.2	1.2367		(ENTG,USVI,NHY,BR,TBL,EOG,SFA,MND,BA,KEM,MPS,RSTI,SCNYA,VSH,DCO,PPL,CP,UNS,AVX,FNLY,C									
13	11/2/2001	8.91	1.3469		(ATAC,USVI,ENTG,NHY,BR,JBX,EOG,MND,KEM,OHP,SIDE,SCNYA,BA,VSH,DCO,NFS,SSSS,UNS,FNLY,C									
14	11/30/2001	6.52	1.4348		(USVI,BR,NHY,LVB,EOG,KEM,BA,DCO,SSSS,UNS,GR,RYL,ROHN,STNV,KMG), warning (FNLY_42%_7.02_									
15	12/28/2001	5.98	1.5206		(ATAC,BR,NHY,LVB,EOG,KEM,DCO,GR,ROHN)									
16	2/1/2002	3.37	1.5719		(BR,LVB,ROHN,VLI)									
17	3/1/2002	-7.74	1.4503		(ATAC,LVB,MDC)									
18	3/28/2002	2.05	1.4801		(BMHC,MDC,AWBC,STC)									
19	5/3/2002	10.4	1.6339		(FCFS,NTK,STTX,SFD,WRLD,FAF,AWBC,STC)									

Note varying number of stocks – how many $$$ would you invest in 3 stocks??

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
77	11/3/2006	5.81	4.7501		(JOYG,PD,TNE,SPIL,CMI,PWEI,ARLP,KOMG,JUPM,NVR,BLT,PHI,PPP,TMX,CINF,XJT,SAFT)									
78	12/1/2006	4.33	4.9557		(TNE,ARLP,SPIL,CMI,SAFT,PWEI,NVR,NX,APC,PHI,BLT,TMX,PPP,CINF)									
79	12/29/2006	0.79	4.995		(PD,SNHY,TNE,SPIL,CAT,CMI,CRFT,NNBR,NICK,SAFT,APC,PWEI,ARLP,NVR,NX,PHI,BLT,FCX,TMX,PPP,CINF									
80	1/26/2007	0.71	5.0306		(PD,TNE,SPIL,CAT,CRFT,CMI,NNBR,NICK,SAFT,APC,ARLP,PWEI,NVR,NX,PHI,BLT,TMX,PPP,CINF,TKR,BVN)									
81	2/23/2007	2.64	5.1633		(CYBI,TNE,LUFK,SPIL,CRFT,NNBR,TRH,RNWK,NICK,CENT,GMR,CMI,MXRE,NVR,NX,ARLP,PRE,XL,PHI,TMX,A									
82	3/23/2007	0.68	5.1984		(CYBI,TNE,LUFK,SAFT,CENT,GMR,MXRE,ARLP,PRE,XL,CINF,APC)									
83	4/20/2007	5.33	5.4753		(CYBI,TNE,LUFK,SPIL,ALV,TRH,RNWK,NICK,SAFT,CENT,GMR,MXRE,NVR,RLI,ARLP,PRE,TDS,XL,WDC,CINF,G									
84	5/18/2007	2.6	5.6174		(AVCI,LUFK,ARW,NLS,SPIL,ALV,MYL,ARRS,XJT,TRH,RNWK,NICK,ARLP,SAFT,CENT,XL,RLI,MXGL,PRE,WDC)									
85	6/15/2007	0.09	5.6224											
86														
87	CAGR		31		Compound Annual Growth Rate									
88	GSD		25		Geometric Standard Deviation (SD calculated on logs of price differentials)									
89	Cycles		82		Number of trade event - in this case months									
90	Ups/downs		71		#Gain/#Periods = 58/82 (in this case) - the win%; %wins/%loss = 71/29 = 2.45									
91	Turnover		36		Average turnover in portfolio									
92	Avg.held		17		Average number of stocks held									
93	cagr/gsd		1.24		gain/volatility measure - similar to Sharpe's ratio									
94	mar		1		?? Unknown									
95	up		0.03		?? Unknown									
96	dd		0.03		?? Unknown									
97	upr		0.86		?? Unknown									
98	CAGR+3S		153											
99	CAGR+2S		103											
100	CAGR+1S		63											
101	CAGR-1S		5											
102	CAGR-2S		-16											
103	CAGR-3S		-33											
104														
105	Returns are	calcula	ted for s		tock price changes only.									
106	Dividends a	nd costs	of doing		trading are NOT included.									

Some of the performance stats a bit of a mystery at this point…

Keelix: Simulator Output (2)

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1																	
2	Stocks held																
3	(ADPT,NHC,MERX,ZLC,CY,IMSC,RAYS,CC,FBN,RBOW,DTL,VSH,KEM,KSU,TBAC,PNR,BYD,WRLD,CDI,JRC,PCAR), warning (IMSC_7.94=>0.07_bc)																
4	(NPCI,NHC,MERX,RBOW,VSH,KEM,TBAC,BYD,NHL,CDI,JRC,PCAR), warning (CC_45%_11.50_16.66, IMSC_57%_0.07_0.11, KEM_45%_15.12_21.89, RAYS_52%_5.12_7.81, VSH_33%_15.12_20.05)																
5	(NPCI,NHC,ZLC,ROCK,RBOW,SHRP,KEM,TBAC,VSH,MAGI,MOVI,NHL,BYD,JRC), warning (MAGI_15.50=>2.19_bc)																
6	(LOJN,NPCI,PXR,IDTI,AMD,ROCK,RBOW,SHRP,KEM,TBAC,DTL,VSH,COHU,HECO,MAGI,NHL,BYD,KMG,JRC,PCAR), warning (MOVI_31%_5.62_7.34, MAGI_15.81=>1.75_bc)																
7	(ATAC,IMSC,NPCI,ROHN,BR,LVB,TBAC,MND,BMHC,HECO,MAGI,NHL,SIDE,VSH,CRC,PV,DGICB), warning (BYD_36%_3.37_4.58, ROCK_32%_15.94_20.93, IDTI_33%_29.61_39.49, IMSC_12.70=>																
8	(ATAC,NHY,IDTI,AMD,BMHC,ROCK,MND,IFSIA,MAGI,PKE,SCNYA,DTL,EOG,FNLY,VSH,CRC,PV,STNV), stopped (DGICB, HECO) warning (BMHC_48%_9.15_13.52, IMSC_77%_0.09_0.16, ROHN																
9	(ATAC,ROHN,USVI,NHY,IDTI,AMD,BMHC,ROCK,ELY,MND,DEBS,PNN,SCNYA,EOG,KEM,IMY,SIDE,VSH,CRC,PV,STNV,P,KMG), stopped (MAGI)																

	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
42	(CURE,PLNR,ISLE,MWRK,NVR,PTSX,SIE,MDC,BER,FAF,PXD,HLYW,BR,IPCR,XJT,ORI,ITIC,FDP,KEP)																
43	(CURE,MDC,OSTE,CXW,HARB,OIS,LNCR,MVL,PLNR,AAI,MWRK,ALY,BWA,KPN,PXD,UFCS,MBI,NVR,FNM,FAF,BER,HLYW,TAP.B,BR,XJT), splits (MDC:1.1000)																
44	(CURE,OSTE,MDC,CTCI,CXW,LOJN,AAI,BXG,WRLD,BWA,MWRK,PXD,KPN,KBH,UFCS,MBI,FAF,FNM,OCA,XJT,RYL,JNS,IPCR,ORI,GGI), splits (MVL:1.5000) stopped (TAP.B)																
45	(OSTE,AAI,BXG,WSTL,MWRK,RYL,KBH,FNM,KPN,FAF,XJT,JNS,KEP,IPCR,GGI,ITIC,TLD), splits (BWA:2.0000)																
46	(OSTE,CRFT,CXW,WRLD,BXG,CTX,MWRK,HLYW,RYL,BER,UFCS,NVR,FNM,XJT,KPN,FAF,JNS,KEP,GGI,ITIC,IPCR,TLD)																

Key:

BC: Use BigCharts price

Stopped: uses 1% gain for stopped stock

Keelix: Job Handling (1)

If you use the new multi-screen and/or blend features, make sure each screen in it has a unique name (the string you give to "Define"). If they have the same name, the returns calculated are wrong.

Holding period: monthly (28 days)

Start date (YYYY-MM-DD): 2000-12-29 end date: 2007-07-20

Number of stocks to hold: 25

Various options: ☐ norebalance ☐ cashfornopicks

Job description: Neff-25stk-0cash-mnthly

Compare with: sp500 *e.g. DJIA, SP500*

Exclude tickers: *e.g. VZ, TLTN*

Blend weights: *e.g. 3,1 for a two-screen blend, with 75% of the first and 25% of the second.*

Submit job

Fetch predefined screener source: 3pt_Relative_Value Fetch source

Paste screener source code below (in Radiscript):

```
Define {Neff}
;
;definition and blanking
;
Uses [SI EPS Growth Est] [SI PE to Div adj EPS Est growth] [SI Sales-Growth
5yr] [SI Free cash flow/share 12m] [SI Free cash flow/share Y1] [SI Operating
margin 12m] [SI Operating margin Y1]  [SI Ind Operating margin Y1] [SI Ind
Operating margin 12m]
;
Deblank [SI EPS Growth Est] [SI PE to Div adj EPS Est growth] [SI Sales-Growth
5yr] [SI Free cash flow/share 12m] [SI Free cash flow/share Y1] [SI Operating
margin 12m] [SI Operating margin Y1]  [SI Ind Operating margin Y1] [SI Ind
Operating margin 12m]
;
```

No rebalance: If stock remains in portfolio do not adjust position size (sell, re-buy)

Cash for no picks: If screen does not purchase # stocks specified, fill remaining positions with cash

Exclude tickers: will not allow purchase of these tickers. Helpful for stopped, BC tickers.

Blend allows you to blend 2 screens together

Fetch source provides code for canned screens

Keelix: Job Handling (2)

Search backtester job database

Here you can search for backtester jobs run by anyone on this system. Whenever ranges are asked for, they are inclusive.

Custom search

Sorting parameters

Sort by: cagr/gsd

Filter parameters

Minimum number of cycles: 24

Frequency (holding period in days): Min: 28 Max: 30

Number of stocks held: Min: 5 Max: 5

Filter on username:

Search...

Quick searches

Lookup job id/number: Search...

Show all pending jobs (execution order)

Show all completed jobs (latest first)

Show all **my** pending jobs (execution order)

Show all **my** completed jobs (latest first)

Keelix: Job Handling (3)

Search results

Clicking the job id will show you the detailed backtested results and the job parameters. If a *Update* link appears in the first column, it means that this job can be run again with newer data. Pressing the *Update* link will queue the job in the backtester and may affect the overall ranking of the job after the job has been backtested again with newer data. If jobs have been "updated" the original values for the fields stop_date, cagrgsd, cagr and gsd are shown in parenthesis behind the new updated values.

[Next 25]

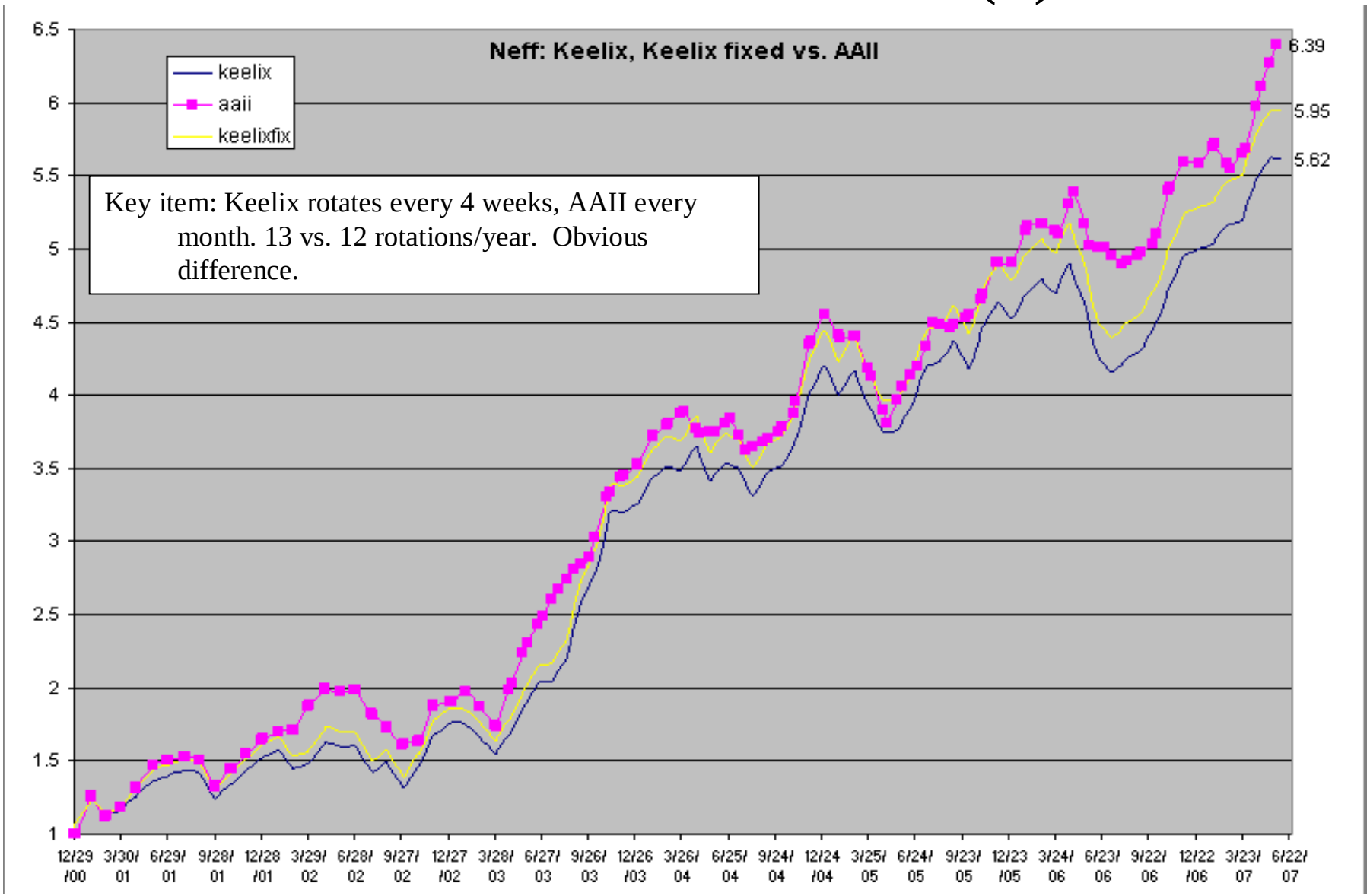
id	start_date	stop_date	hold	freq	cagr	gsd	cagrgsd	cycles	upsdowns	turnover	submitted_by	description
174507	2000-12-29	2007-07-20	25	28	199	1032	0.19	83	64	29	azz11	Flsh8-25stk-ocash-mnthly-dbg18
174506	2000-12-29	2007-07-20	20	90	32	24	1.33	26	69	66	azz11	neff-20stk-0cash-qrtrly
174505	2000-12-29	2007-07-20	10	90	33	26	1.27	26	69	74	azz11	neff-10stk-0cash-qrtrly
174504	2000-12-29	2007-07-20	5	90	31	30	1.03	26	73	81	azz11	neff-5stk-0cash-qrtrly
174503	2000-12-29	2007-07-20	20	90	25	21	1.19	26	69	66	azz11	neff-20stk-cashok-qrtrly
174502	2000-12-29	2007-07-20	10	90	31	26	1.19	26	69	74	azz11	neff-10stk-cashok-qrtrly
174500	2000-12-29	2007-07-20	5	90	31	30	1.03	26	73	81	azz11	neff-5stk-cashok-qrtrly
174499			25					83			azz11	flsh8-0cash-25stk-mnthly-dbg17a
174498			25					83			azz11	flsh8-0cash-25stk-mnthly-dbg17
174391	2001-12-28	2007-07-13	5	90	15	30	0.50	22	64	86	azz11	zweig-5stk-cashok-qrtrly
174390	2001-12-28	2007-07-13	10	90	15	22	0.68	22	59	84	azz11	zweig-10stk-cashok-qrtrly

Keelix vs. AAII

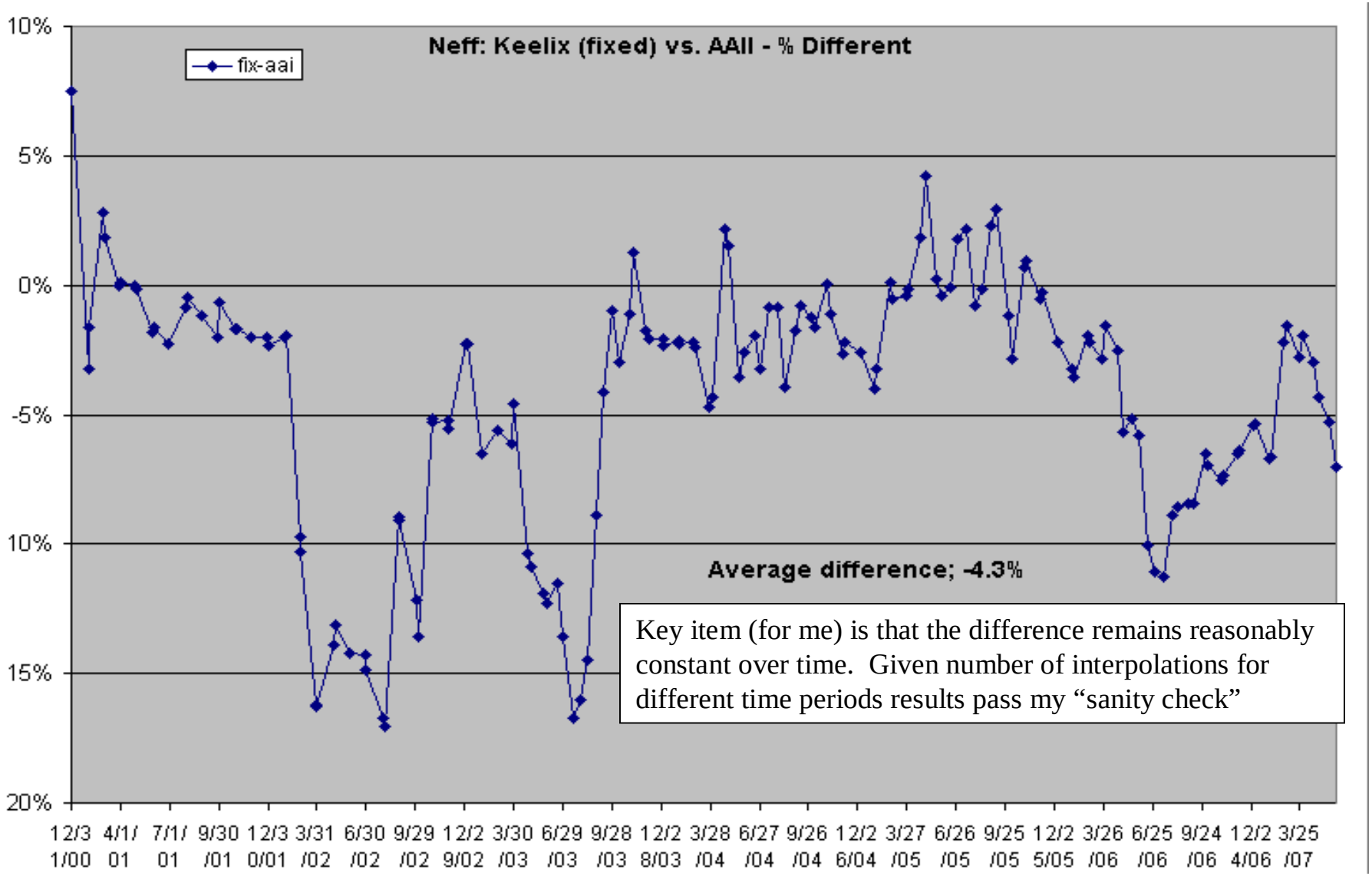
Keelix vs. AAII (1)

- The ***BIG*** Question: How good is the Keelix simulator? Can you trust its results?
  - How many $$$ are you willing to bet on freeware?
- To Answer this, compared Keelix output against screen results at AAII web site
  - Assuming AAII is the “correct” result
  - Compared Keelix output as produced by simulator and with "fixes”
    - Fixes based on review of Keelix’s price warnings, splits, etc.
- Next slides shows results of this effort
  - End result: Good correspondence between results
    - How accurate is AAII?? Hmm…..
- Slides showing comparisons for Zweig, Tiny Titans in reference section

Keelix vs. AAII: Neff (2)



Keelix vs. AAII: Neff (3)



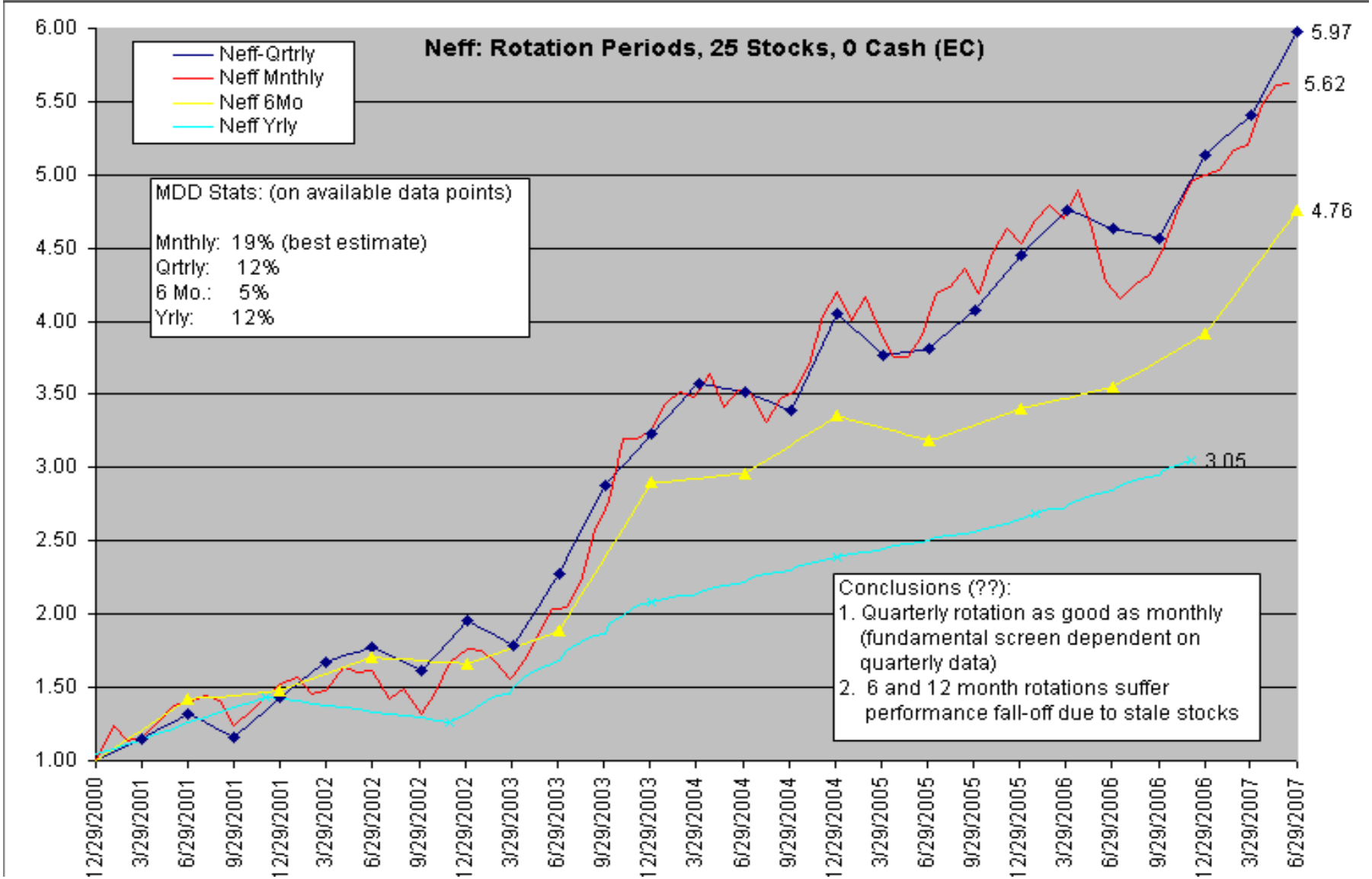
Key item (for me) is that the difference remains reasonably constant over time. Given number of interpolations for different time periods results pass my "sanity check"

Keelix: The Neff Screen

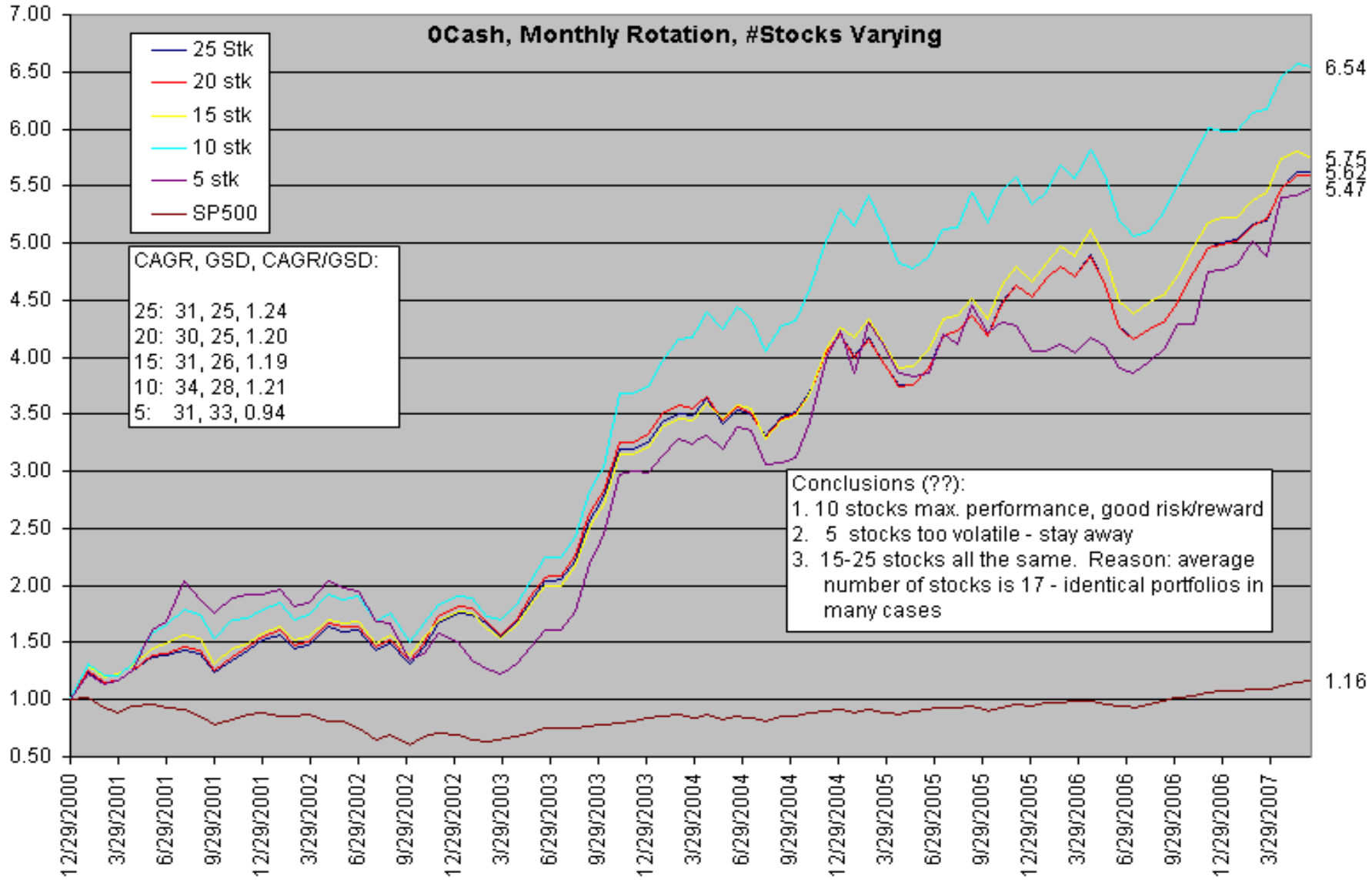
Neff Screen: Initial Studies

- Given back test capability can explore possible answers to the following questions:
  - Rotation period: Do I really have to rotate every month? What happens if I rotate quarterly? Semi-annually? Yearly?
  - #Stocks: How many stocks should I hold? 10? 15? 20? What is the risk/reward trade-off?
  - Cash: What should I do when the screen produces fewer stocks than my target number? Should I be 100% invested or should I balance the remainder with cash?
- Ran various simulations to answer these questions; Findings, commentary on following slides
  - Relatively few surprises (which is good)

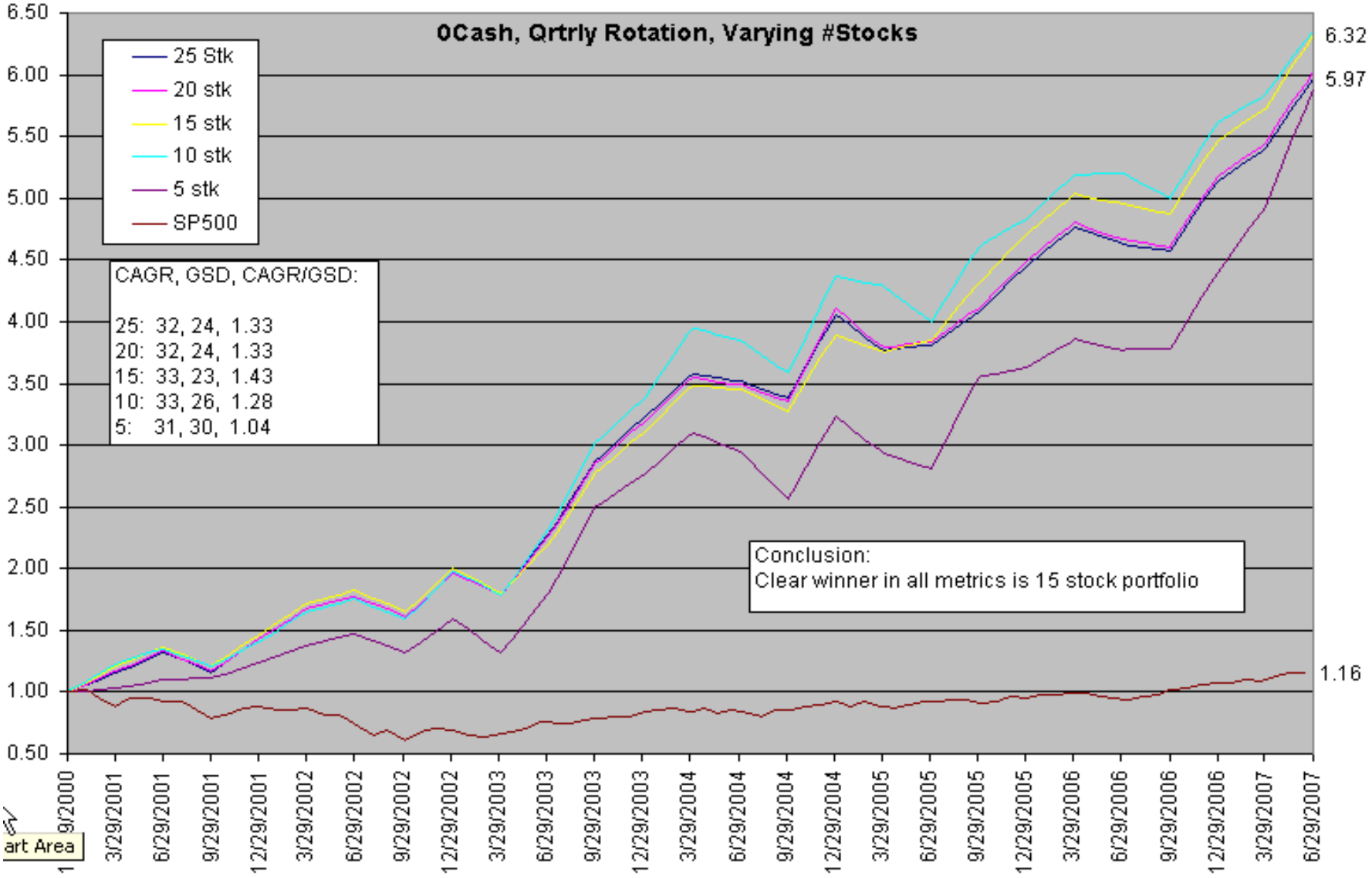
Neff Screen: Rotation Study



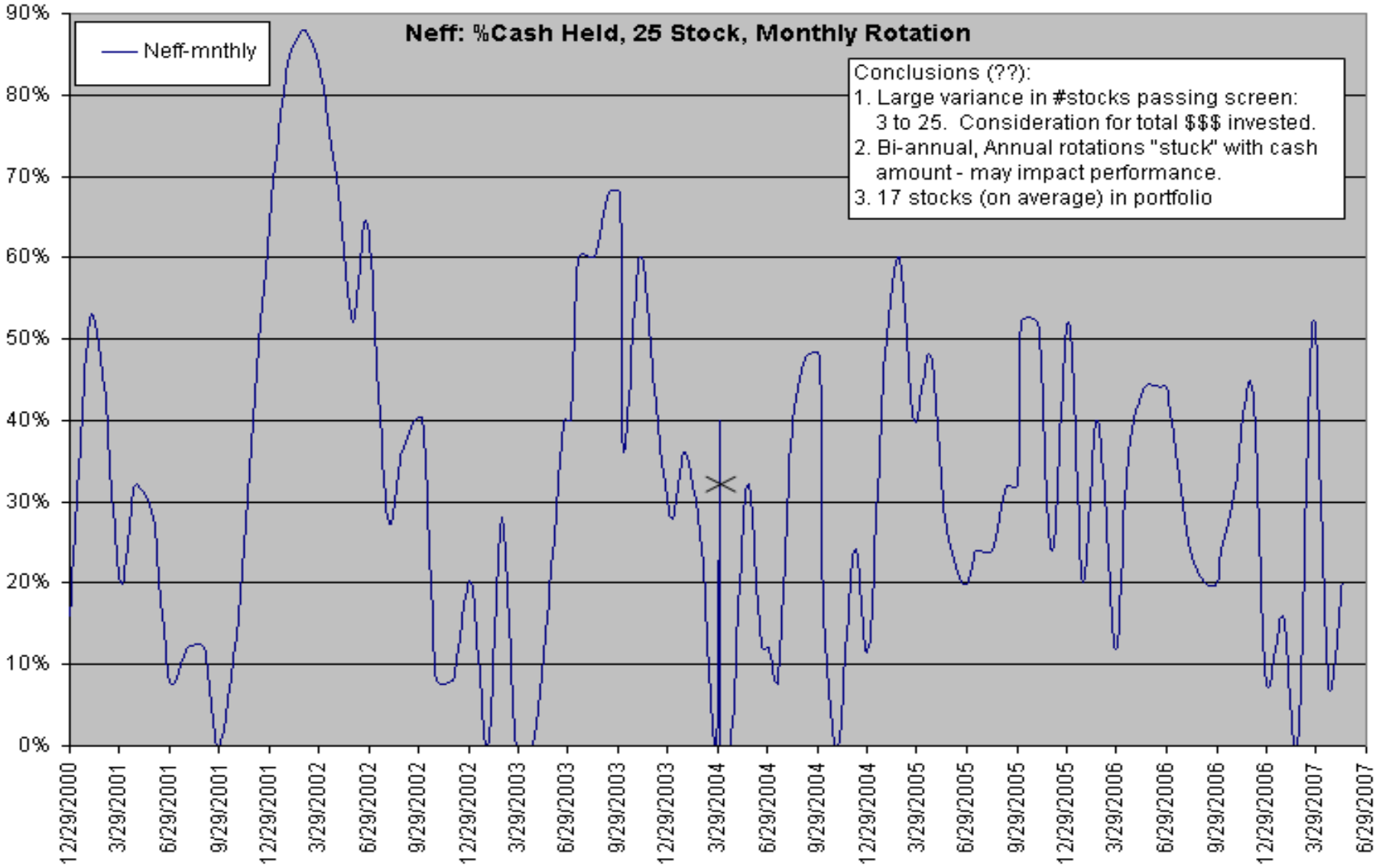
Neff Screen: #Stocks, Monthly Study



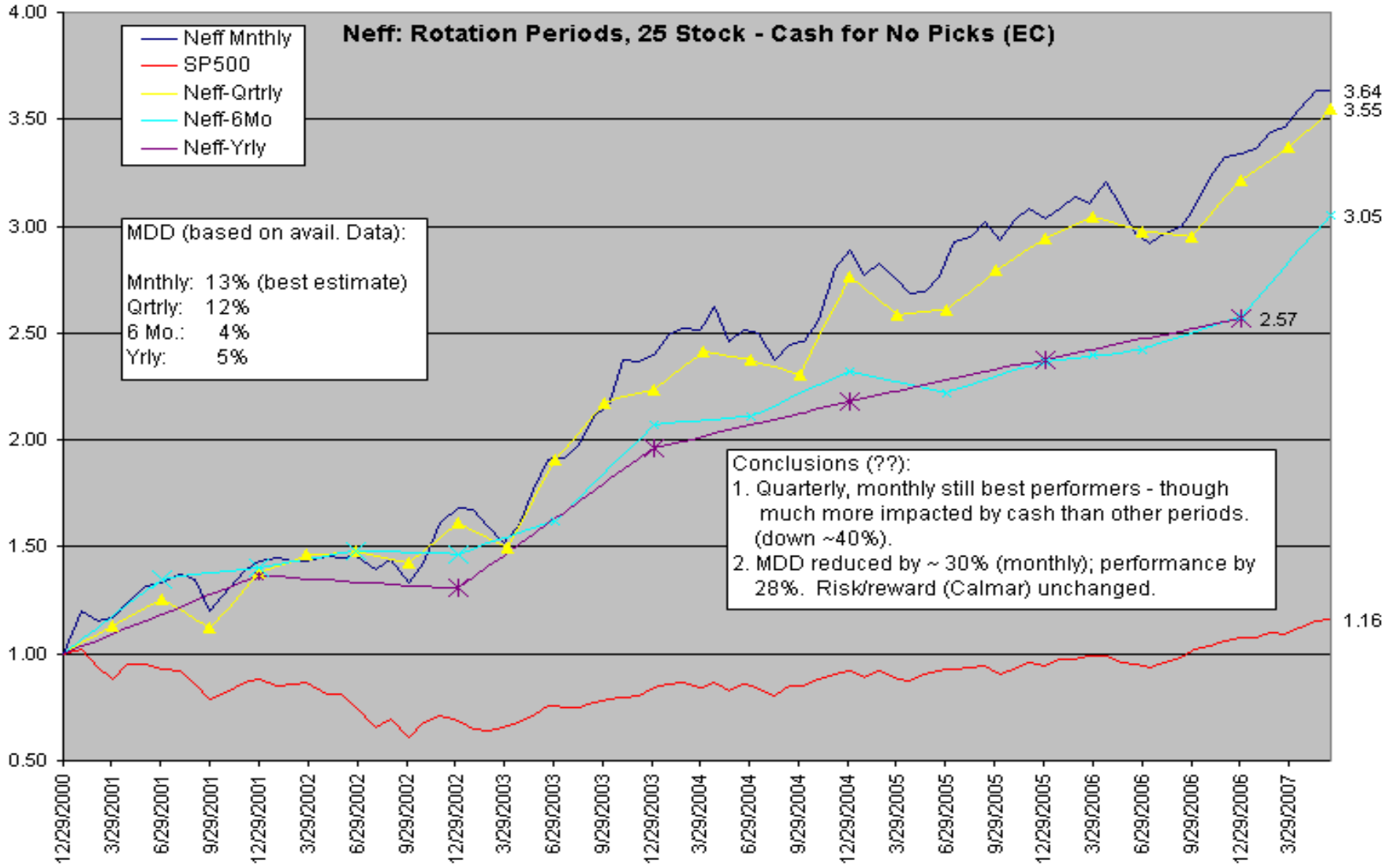
Neff Screen: #Stocks, Quarterly Study



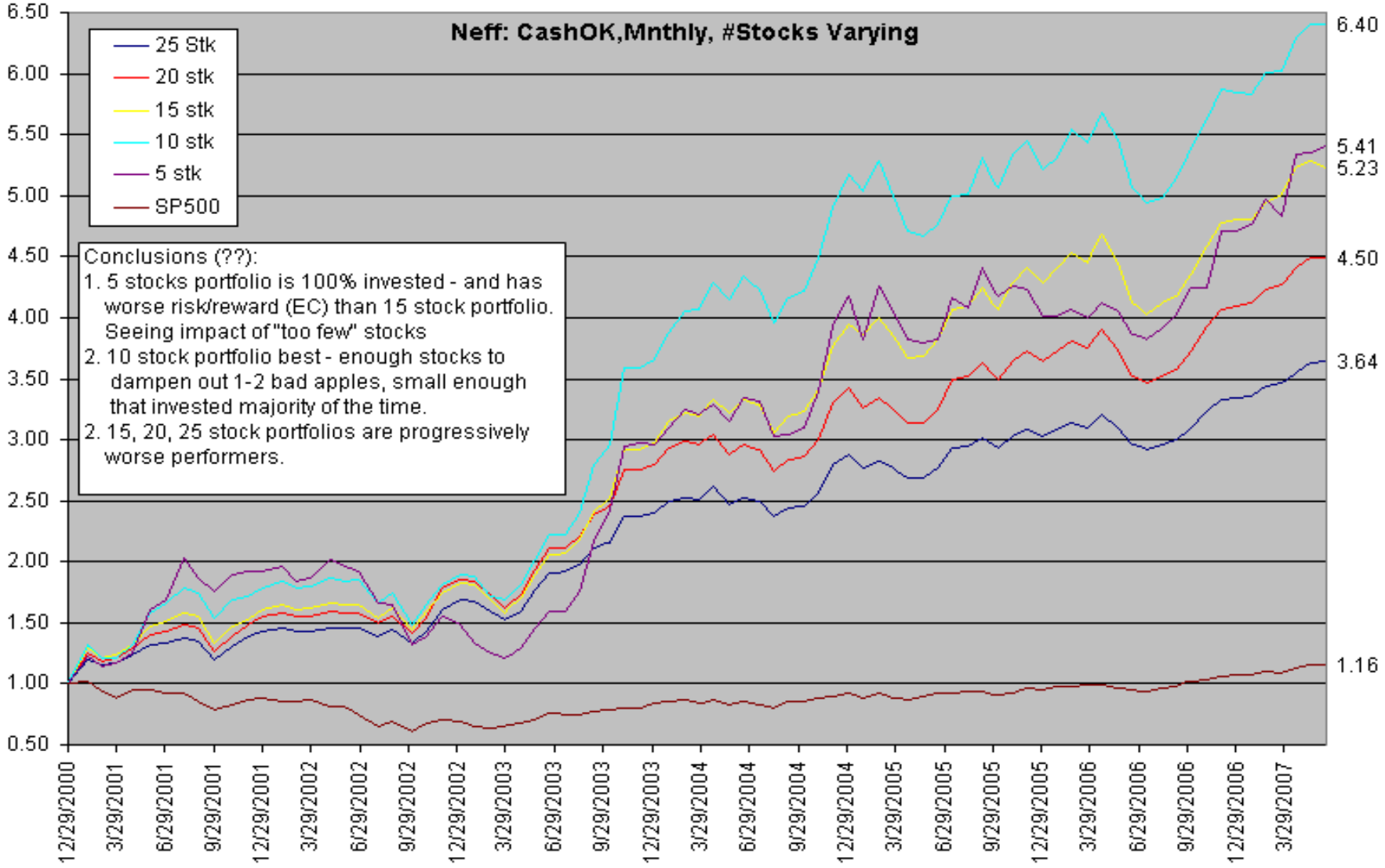
Neff Screen: %Cash, Monthly



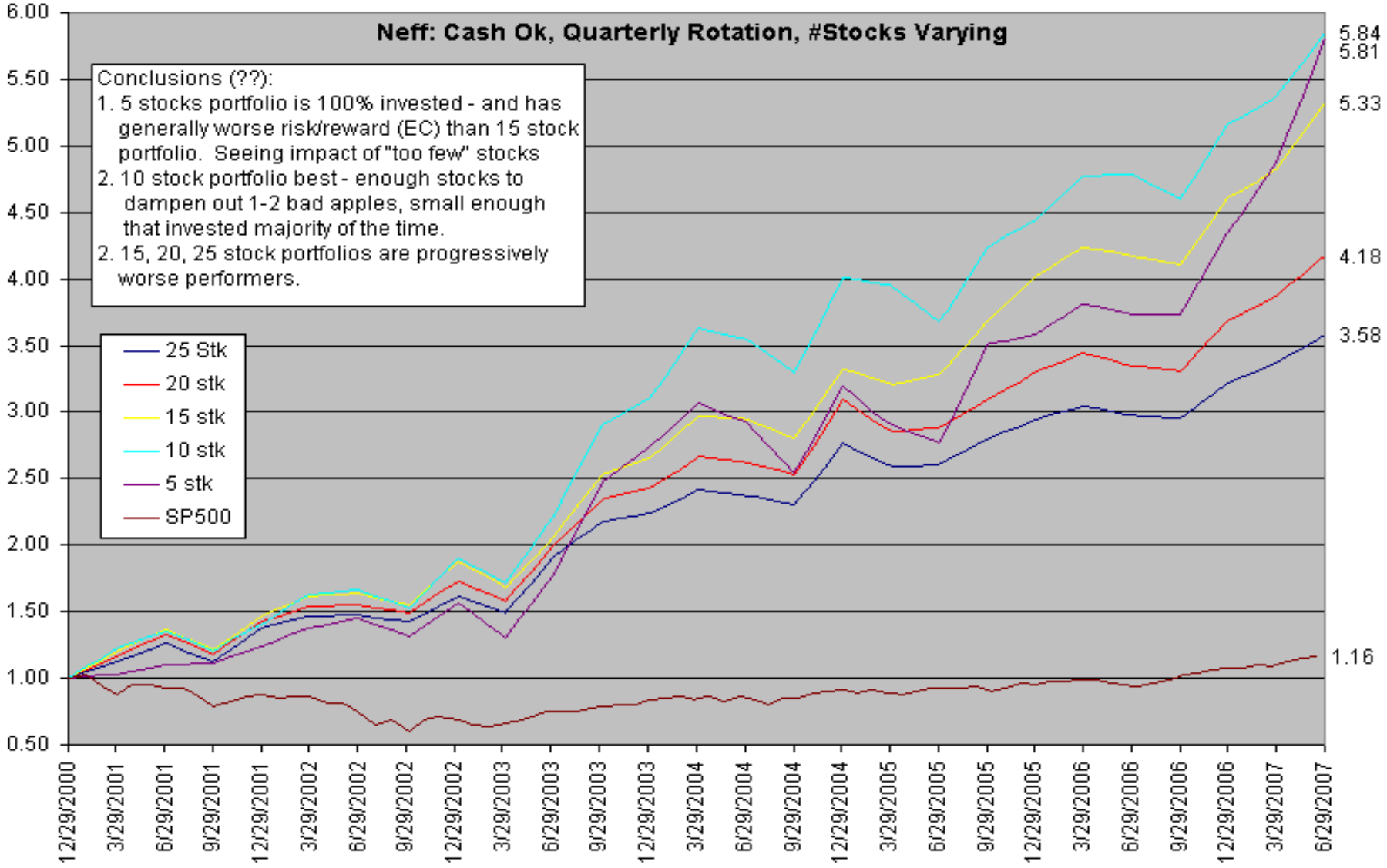
Neff Screen: Cash, Varying Rotation Periods



Neff Screen: Cash, Monthly, Varying #Stocks



Neff: Cash, Quarterly, Varying #Stocks



Keelix: Tiny Titans Screen

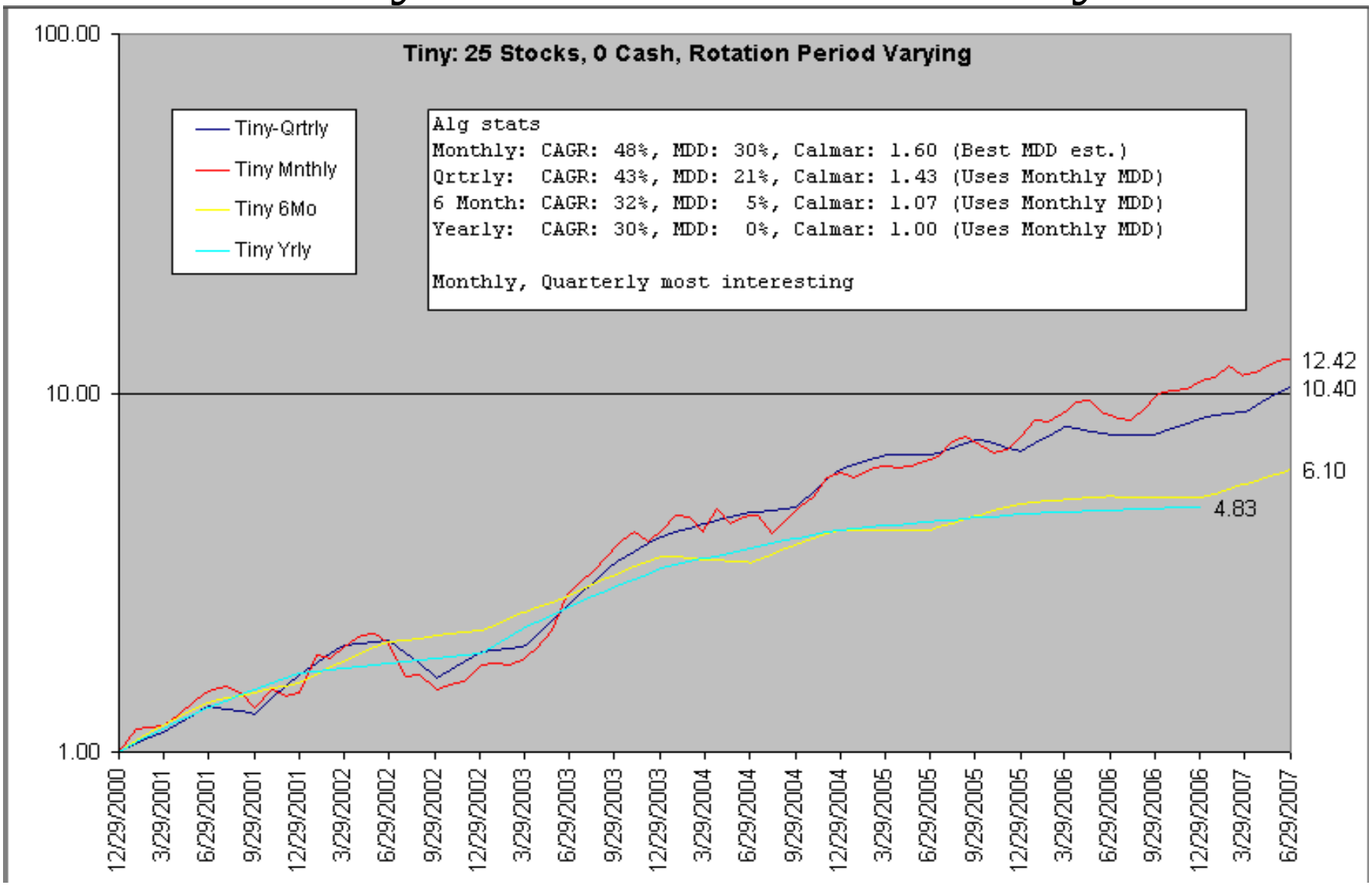
Keelix: Tiny Titans Screen

- Perform same basic studies on Tiny Titans screen
  - Rotation period, number of stocks
  - Cash studied – little impact since almost always 100% invested
- Tiny Titan screen shown below
  - Should match screen discussed in last meeting

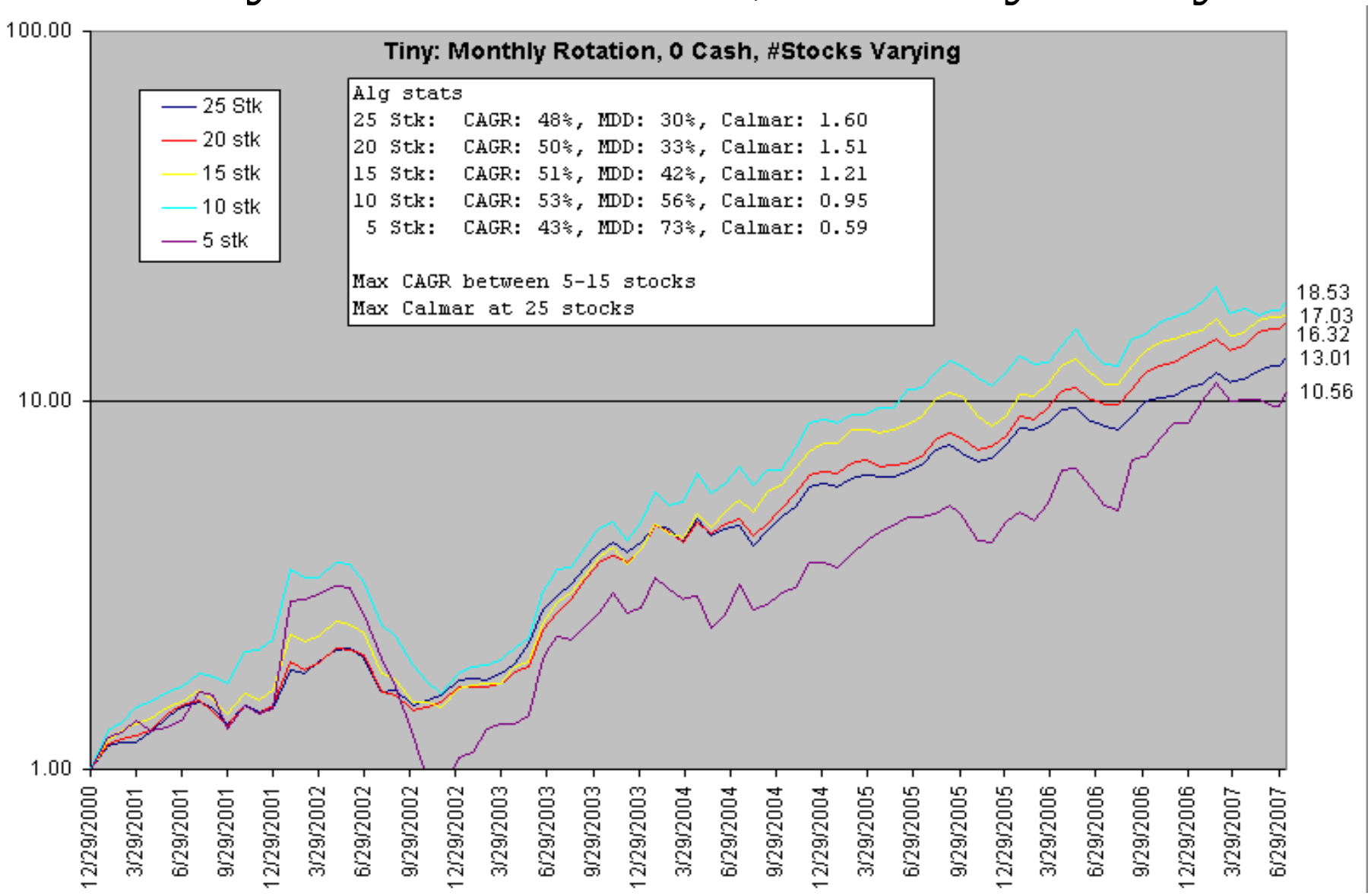
```
Define {TinyTitans}
;
;definition and blanking
;
Deblank [SI Country] [SI Exchange] [SI Market Cap Q1] [SI Price/Sales] [SI Relative
Strength 52 week]
;
;screen
;
Keep : [SI Country] = "UnitedStates"
Keep : [SI Exchange] <> "Over the counter"
Keep : [SI Market Cap Q1] >= 25
Keep : [SI Market Cap Q1] <= 250
Keep : [SI Price/Sales] < 1
Sort Descending [SI Relative Strength 52 week]
Top : 25
End
```

Note ease of getting Top 25 stocks by 52 week Relative Strength

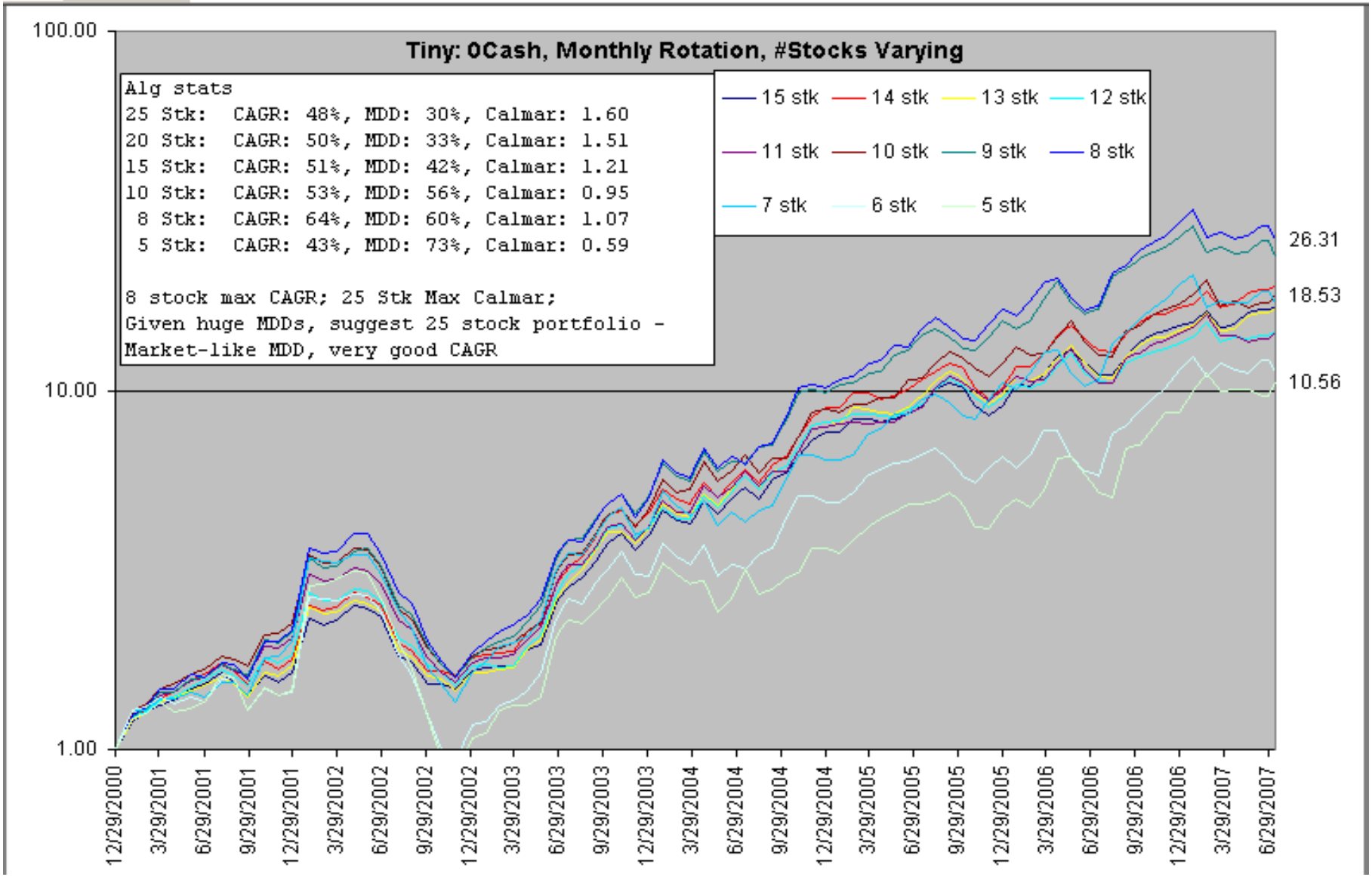
Tiny Titans: Rotation Study



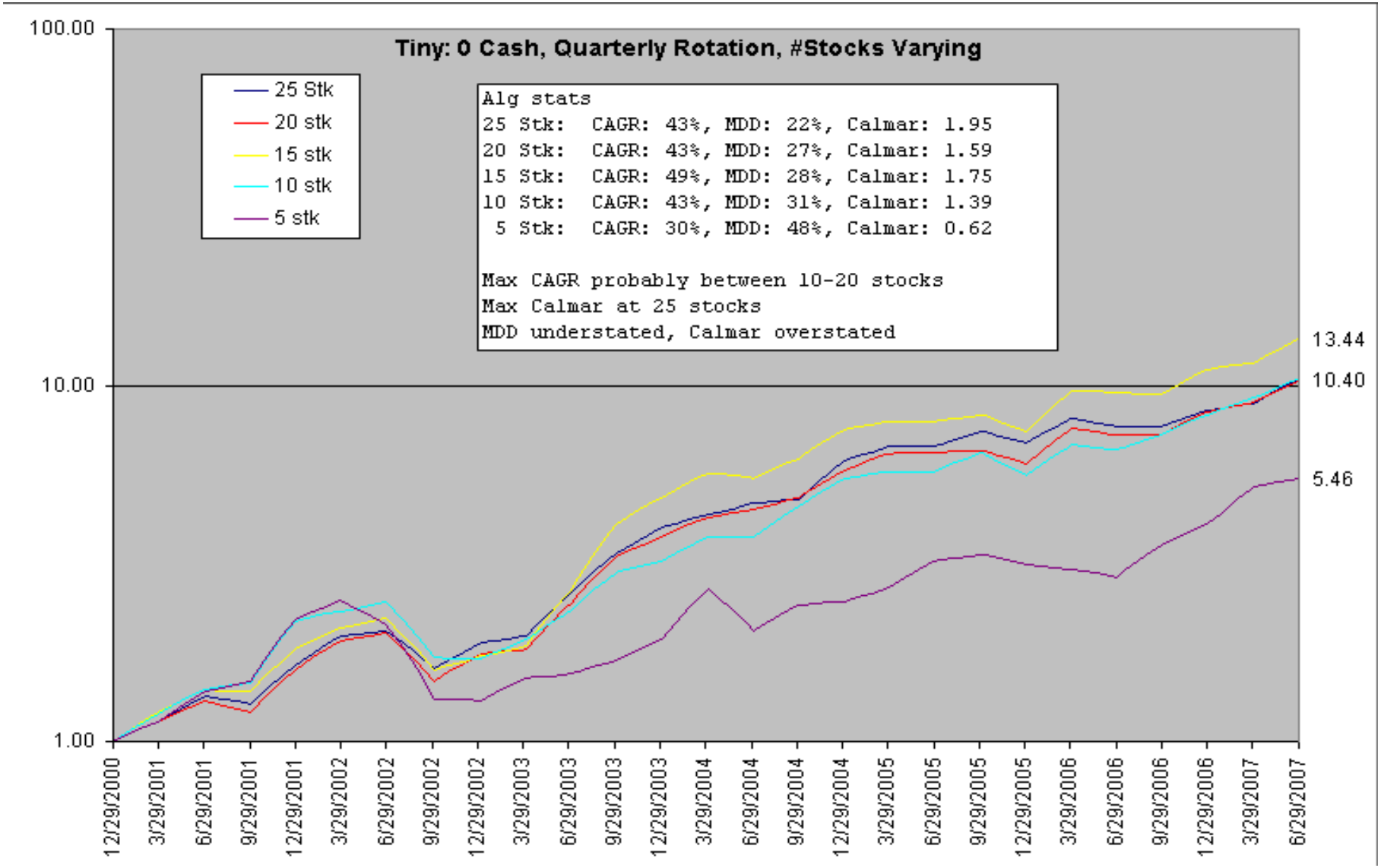
Tiny Titans: #Stocks, Monthly Study



Tiny Titans: Optimal #Stocks, Monthly



Tiny Titans: #Stocks, Quarterly Study



Applications and Activities

Future Studies

- AAII Screen Verification, Variations
  - Run through other high-performing AAII screens, verify simulation results, run similar studies for #stocks, rotation period, etc.
    - Foolish Small Cap 8 Revisited in progress
- AAII Screen Modifications
  - Change screen filter, sort to determine factors that matter most to each screen (helps reduce curve fitting, understand underlying forces)
- Home Grown Screens
  - Try your own ideas based on above work, intuition, readings, etc.

User Group Activities

We should pool our efforts on AAII screen studies

- Makes no sense for us to work independently if we all have many of the same basic questions

- Specific suggestions: Volunteer to do a study, present results at a future meeting
  - Example 1: The AAII screen of your choice
    - Do studies on verification vs. AAII, rotation period, # stocks in portfolio, impact of cash
  - Example 2: Modify an AAII screen
    - Some ideas: Which screening factors have the most impact? Sensitivity studies on each factor? Impact of different sorts
  - Example 3: Create a screen of your own
    - From external sources (e.g., Reuters, other screen sources); from papers, studies (e.g., Schwab); "brew your own ideas"
- Perhaps Andy might be convinced to coordinate our efforts??
  - Keep a list of who is doing which screens, etc.

Neff Screen: Individual Portfolios

Ideas, suggestions for your consideration….

- Assume implemented in tax deferred account – ignoring trade counts, taxes, etc.
- Aggressive Investor:
  - 10 stock portfolio, 100% invested, rotate monthly
  - Enjoy the adult beverage of your choice when you put 100% of your $$ into 3 stocks…
- Prudent Investor:
  - 10 stock portfolio, 10% invested in each stock – cash for empty slots, rotate quarterly
  - When some portfolio slots are in cash, run screen every month and add any new stocks that pass to your portfolio
- Conservative Investor:
  - 15 stock portfolio, 7% invested in each stock – cash for empty slots, rotate quarterly

Tiny Titans Screen: Individual Portfolios

Ideas, suggestions for your consideration….

- Assume implemented in tax deferred account – ignoring trade counts, taxes, etc.
- Aggressive Investor:
  - Focus on portfolios <=$100K ($4K/stock), Market Cap <=$250M
  - 15 stock portfolio, 100% invested, rotate monthly
  - Enjoy the adult beverage of your choice when you see DDs of >40% in bear markets…
- Prudent Investor:
  - Focus on portfolios <=$250K ($10K/stock), Market Cap <=$250M
  - 25 stock portfolio, rotate monthly
- Conservative Investor:
  - Focus on portfolios <=$250K ($10K/stock), Market Cap <=$250M
  - 25 stock portfolio, rotate quarterly

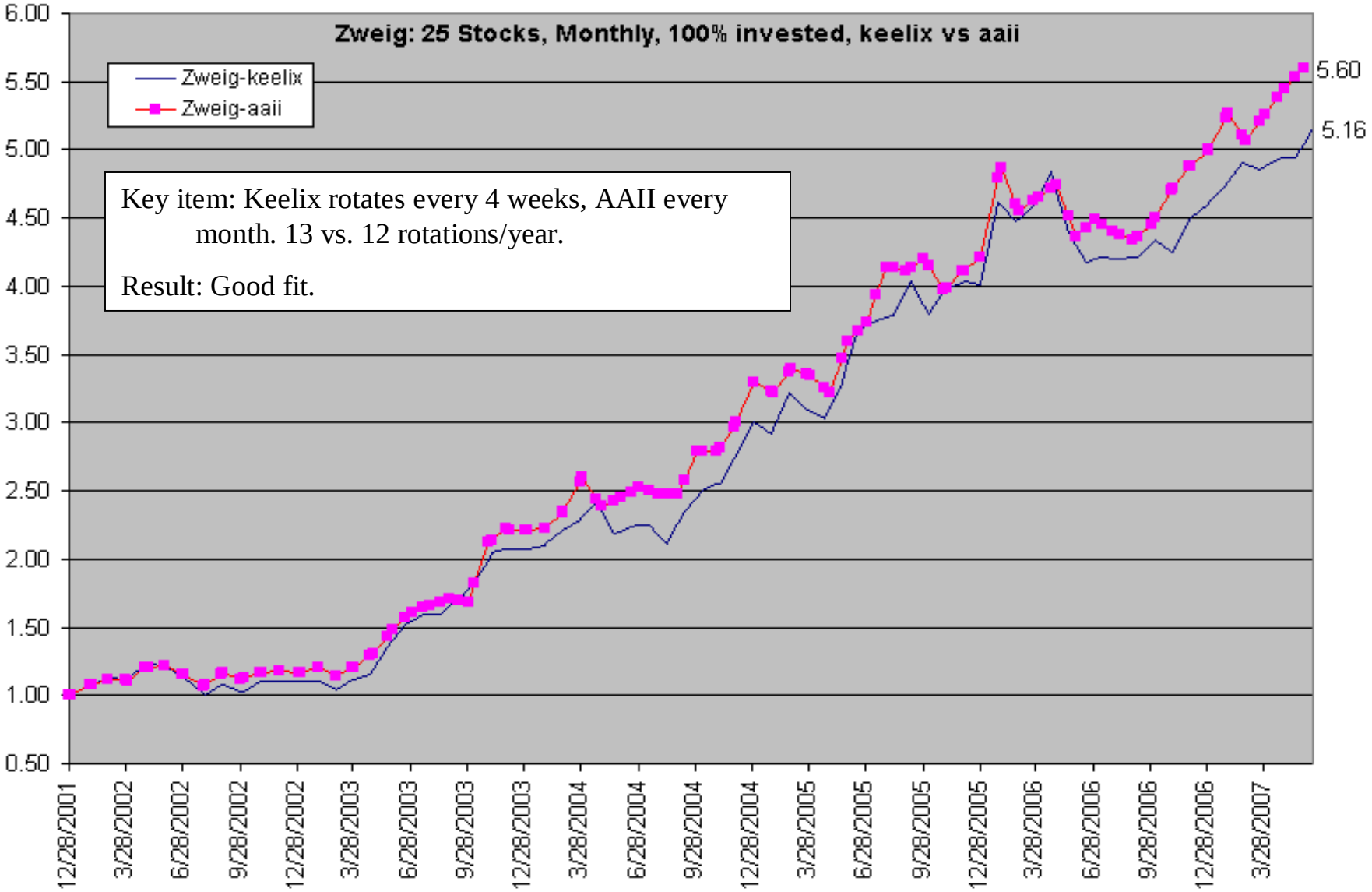
Reference and Backup Slides

Zweig, Tiny Titans (Keelix vs. AAII, Screens)

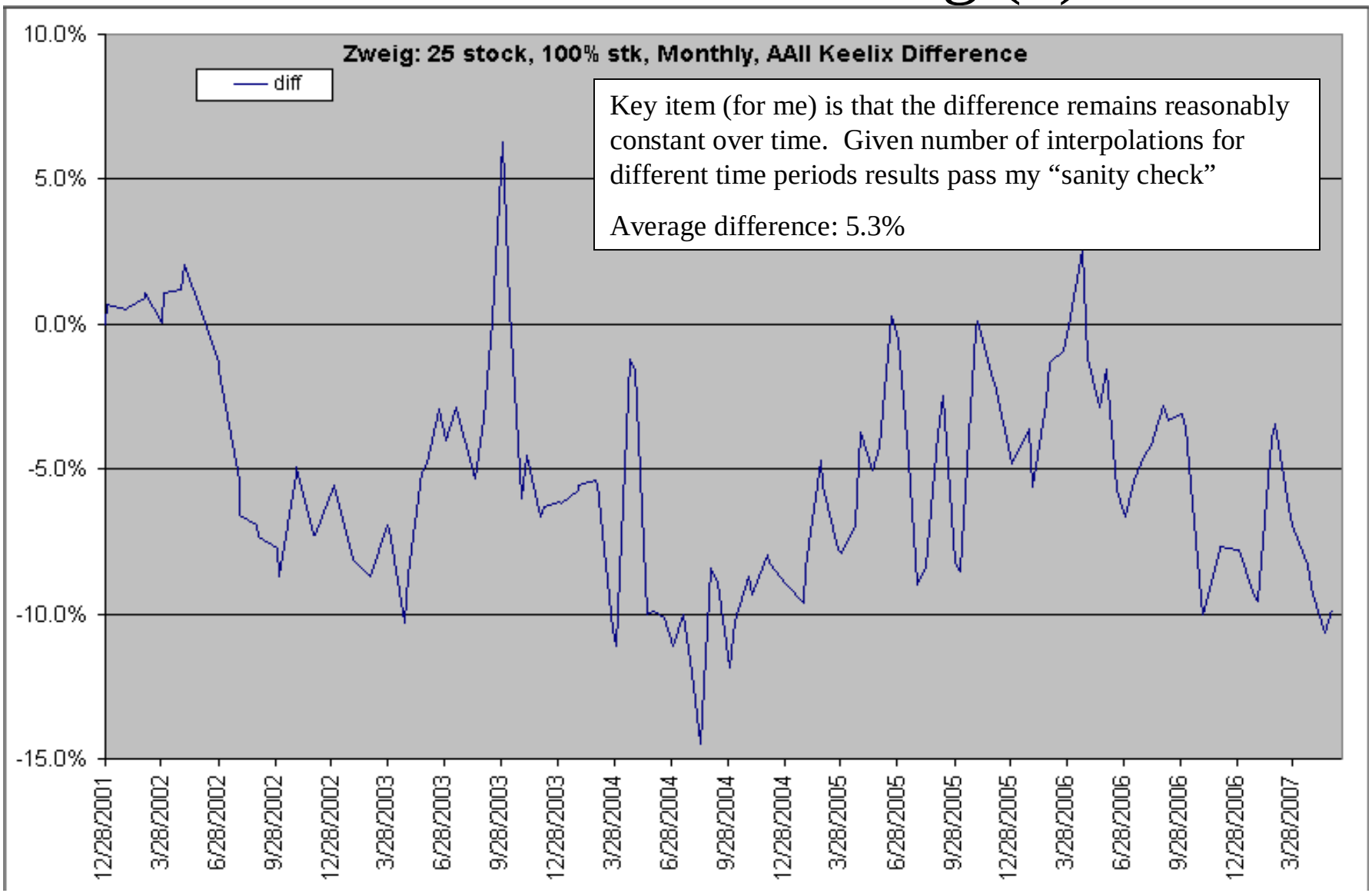
Keelix: Zweig Screen

```
Define {Zweig-26}

Keep : [SI EPS 12m] >= 0
Set [Median PE] :MEDIAN([[SI PE]])

Deblank [SI EPS Dil Cont-Growth from Q5 to Q1] [SI EPS Dil Cont-Growth from Q6 to Q2] [SI EPS Dil Cont-Growth
from Q7 to Q3] [SI EPS Dil Cont-Growth from Q8 to Q4] [SI Sales-Growth from Q5 to Q1] [SI Sales-Growth from Q6 to
Q2] [SI EPS-Diluted Continuing 12m] [SI EPS-Diluted Continuing Y1] [SI EPS-Diluted Continuing Y2] [SI EPS-Diluted
Continuing Y3] [SI EPS Dil Cont-Growth 3yr] [SI Sales-Growth 3yr] [SI EPS Dil Cont-Growth from Q5 to Q1] [SI PE]
[SI Relative Strength 26 week] [SI ADR/ADS Stock] [SI Industry] [SI % Rank-Volume--Average Monthly 3m] [SI Price
Change 26 week]

Keep :[SI EPS Dil Cont-Growth from Q5 to Q1]>0
Keep :[SI EPS Dil Cont-Growth from Q6 to Q2]>0
Keep :[SI EPS Dil Cont-Growth from Q7 to Q3]>0
Keep :[SI EPS Dil Cont-Growth from Q8 to Q4]>0
Keep :[SI Sales-Growth from Q5 to Q1]>0
Keep :[SI Sales-Growth from Q5 to Q1]>[SI Sales-Growth from Q6 to Q2]
Keep :[SI EPS-Diluted Continuing 12m]>=[SI EPS-Diluted Continuing Y1]
Keep :[SI EPS-Diluted Continuing Y1]>[SI EPS-Diluted Continuing Y2]
Keep :[SI EPS-Diluted Continuing Y2]>[SI EPS-Diluted Continuing Y3]
Keep :[SI EPS Dil Cont-Growth 3yr]>=15
Keep :[SI Sales-Growth 3yr]>=15
Keep :OR([SI EPS Dil Cont-Growth from Q5 to Q1]>[SI EPS DC-Growth from Q6-Q8 to Q2-Q4],[SI EPS Dil Cont-Growth
from Q5 to Q1]>=30)
Keep :[SI EPS Dil Cont-Growth from Q5 to Q1]>=[SI EPS Dil Cont-Growth 3yr]
Keep :[SI PE]>5
Keep :[SI PE]<1.5*[Median PE]
Keep :[SI Relative Strength 26 week]>0
Keep :[SI ADR/ADS Stock]="F"
Keep :AND([SI Industry]<>"0721-Misc.FinancialServices",[SI Industry]<>"0933-RealEstateOperations")
Keep :[SI % Rank-Volume--Average Monthly 3m]>=25
Sort Descending [SI Price Change 26 week]
; Top :5
End',
```

Keelix vs. AAII: Zweig (1)



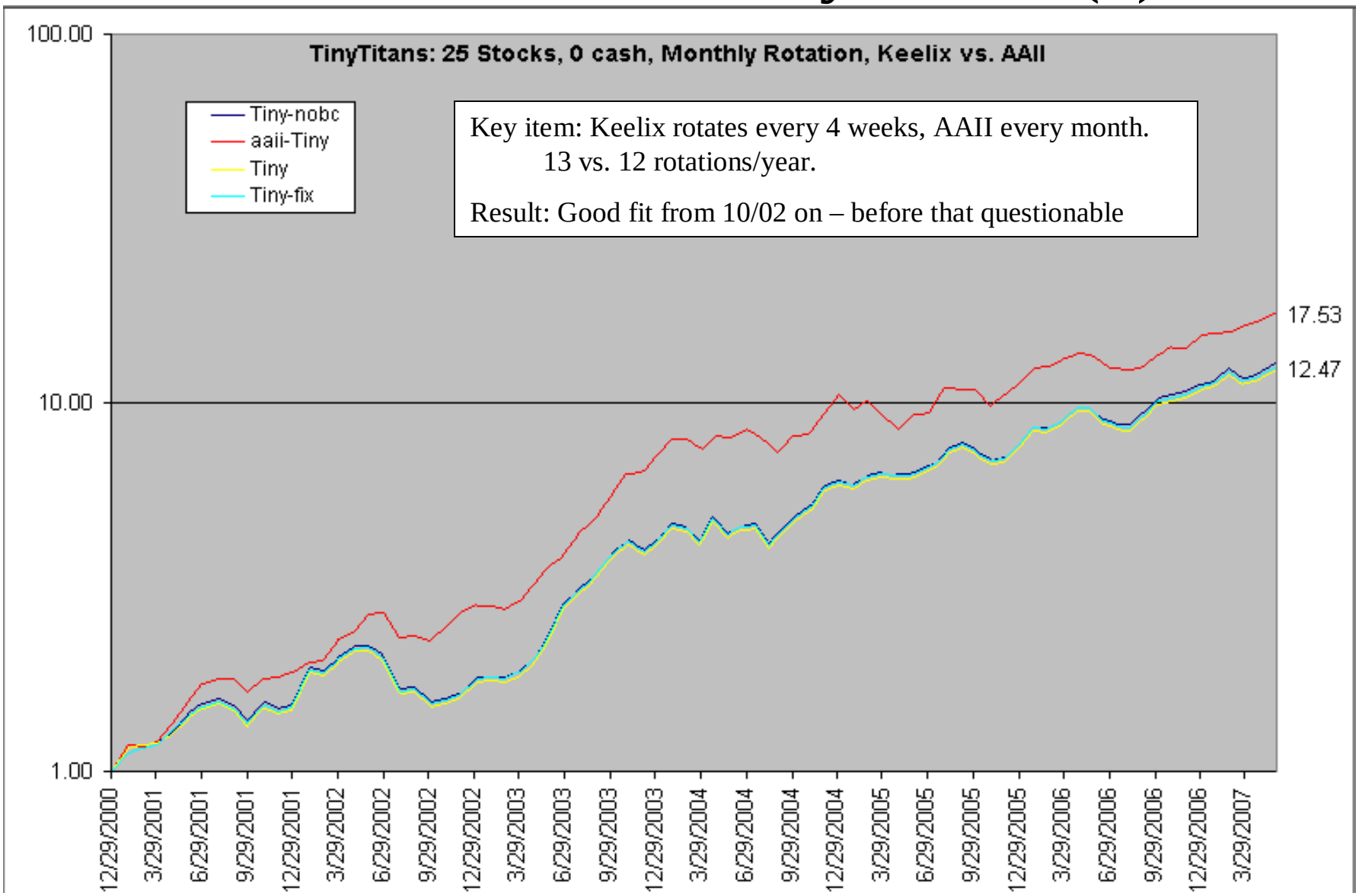
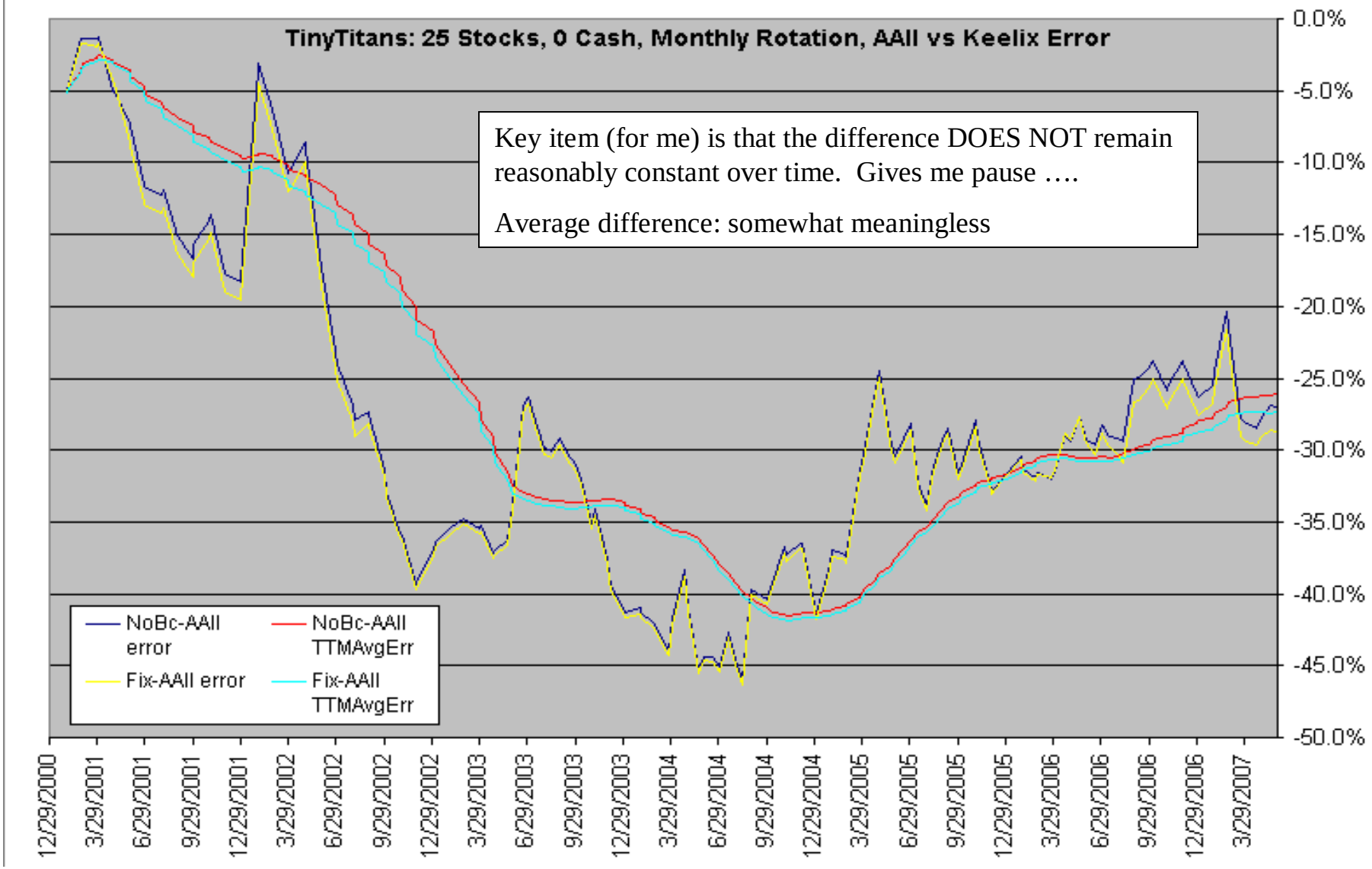
Keelix vs. AAII: Zweig (2)



Keelix: Tiny Titans Screen

```
Define {TinyTitans}
;
;definition and blanking
;
Deblank [SI Country] [SI Exchange] [SI Market Cap Q1] [SI Price/Sales] [SI Relative
Strength 52 week]
;
;screen
;
Keep : [SI Country] = "UnitedStates"
Keep : [SI Exchange] <> "Over the counter"
Keep : [SI Market Cap Q1] >= 25
Keep : [SI Market Cap Q1] <= 250
Keep : [SI Price/Sales] < 1
Sort Descending [SI Relative Strength 52 week]
Top : 25
End
```

Keelix vs. AAII: Tiny Titans (1)



Keelix vs. AAII: Tiny Titans (2)