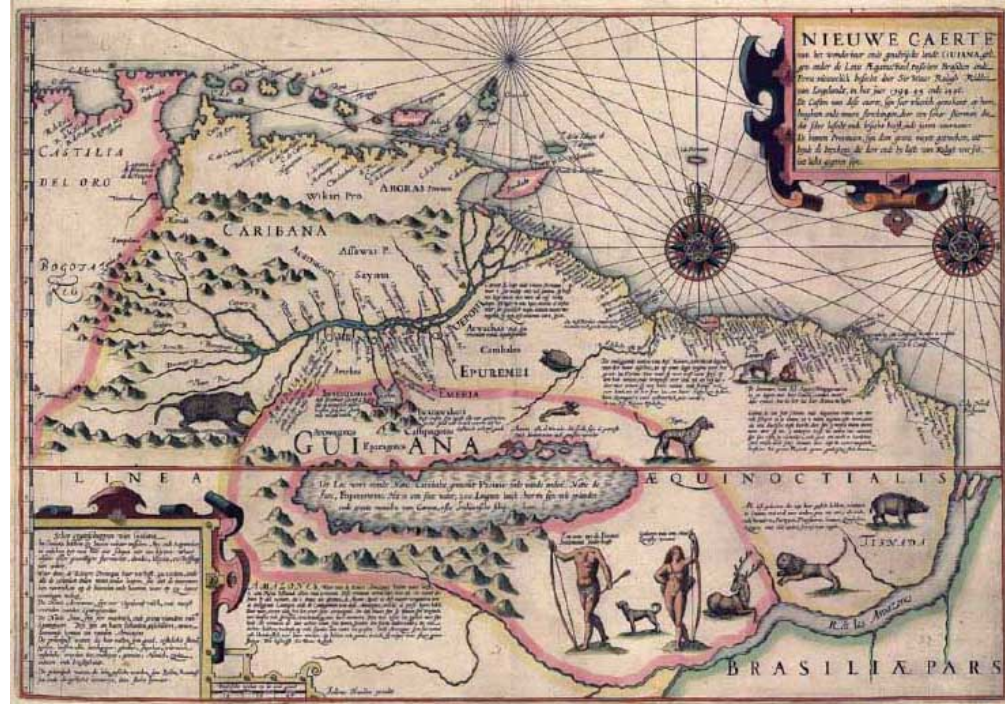


Closed End Funds – Investing Around Retirement



Closed End Fund Primer

- Mutual funds that trade throughout the day
- Can trade at discount or premium to NAV
 - Often trade at discounts
- Can employ leverage
- Often offer high yields
- Niche market
- No redemption/creation features
 - Don't need to hold cash for potential redemptions

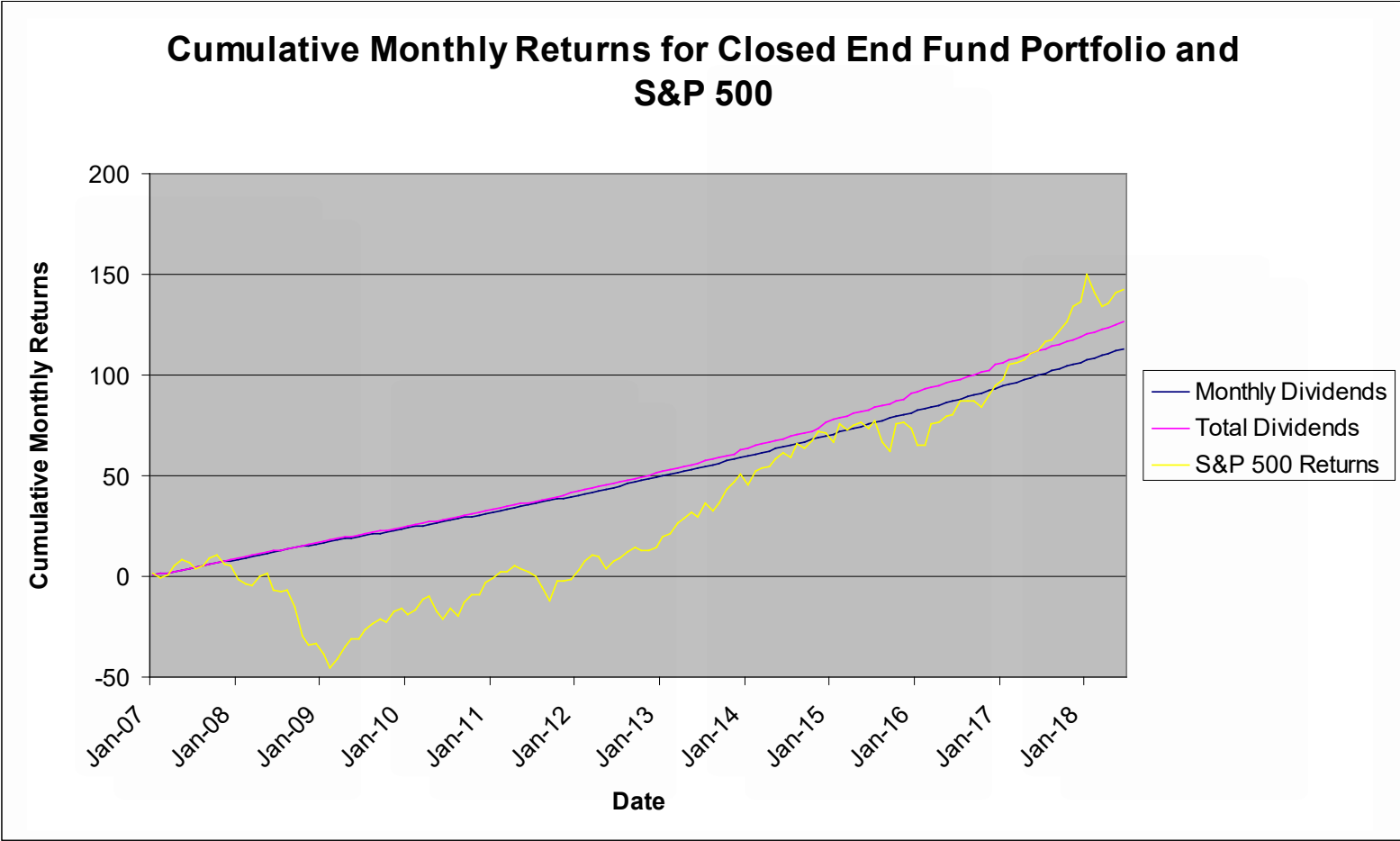
Closed End Fund Primer

• Total Equity	204	\$110,478
– US Equity	29	20,642
– Non-US equity	47	12,793
– Hybrid	14	5,770
– Specialty	114	71,274
• Total Bond	315	129,139
– Taxable	147	64,664
– National Muni	89	46,442
– Single State	79	18,033
• Totals	519	\$239,617
• Closed End Fund Advisors		

Overview of Strategy

- Portfolio of CEFs can provide long term steady income
- High yields in a low yield environment
- CEF income streams can exhibit very low volatility
- Disciplined strategy provides method to defease consumption needs
- Infrequent trading to implement strategy
- Investors become indifferent to underlying fund prices
- Initial yield environment determines long term results
- Create diversified portfolio of funds

Strategy Results



Why Focus on Retirees?

- Consumption needs are well known
 - Probably less volatility in consumption patterns for retirees than earlier in life
- There is enough time to accumulate assets
 - CEF strategy requires a large enough asset base for dividend stream to meet consumption needs
- With sufficient dividends focus on principal maintenance is reduced

Strategy/Analysis Rules

- All dividends received monthly
 - Quarterly dividends spread over three months
 - Double December dividends split
 - No supplemental dividends
- Positions changed when dividends cut
 - CEF market is somewhat inefficient
- Replacement fund ranking
- Maintain diversification

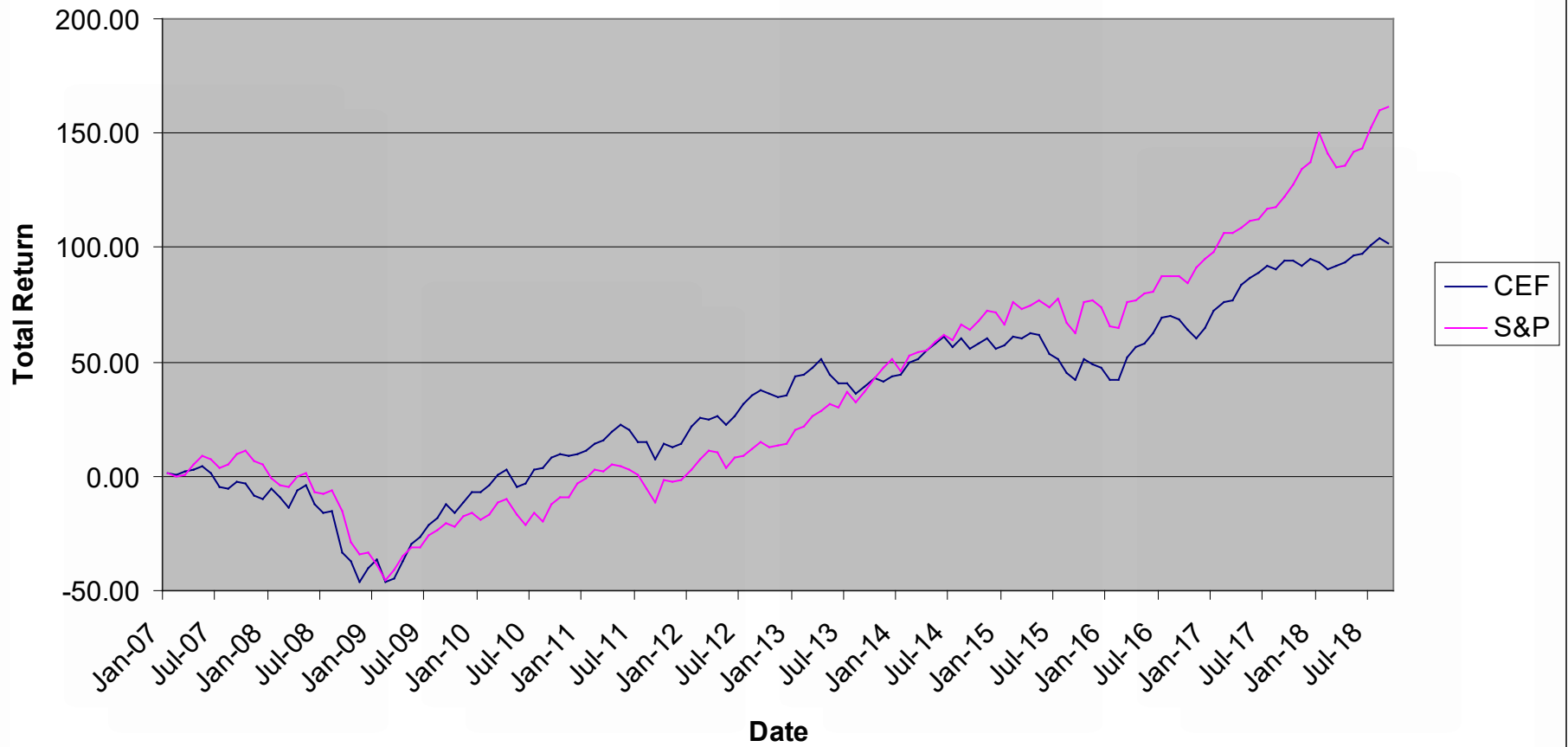
Fund Ranking

- Payment sources
 - Income
 - Capital gains
 - Return of capital
- Dividend consistency
 - Time since last cut
 - Percent of total horizon covered
- Market yield

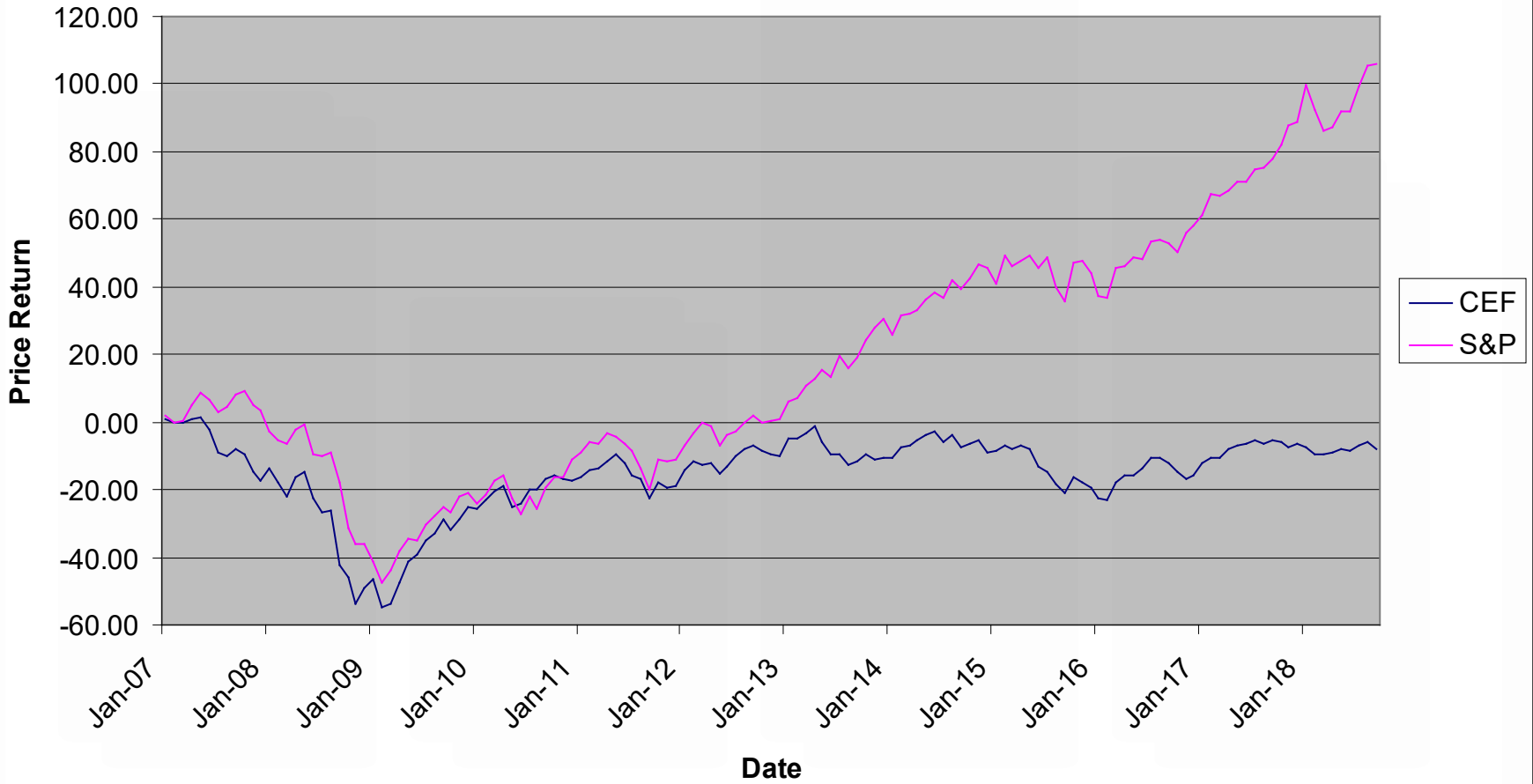
Dividend Cuts

- Threshold determined by investor
- Monitor dividend announcements
- Threshold levels are cumulative
- Trade at open following cut announcement

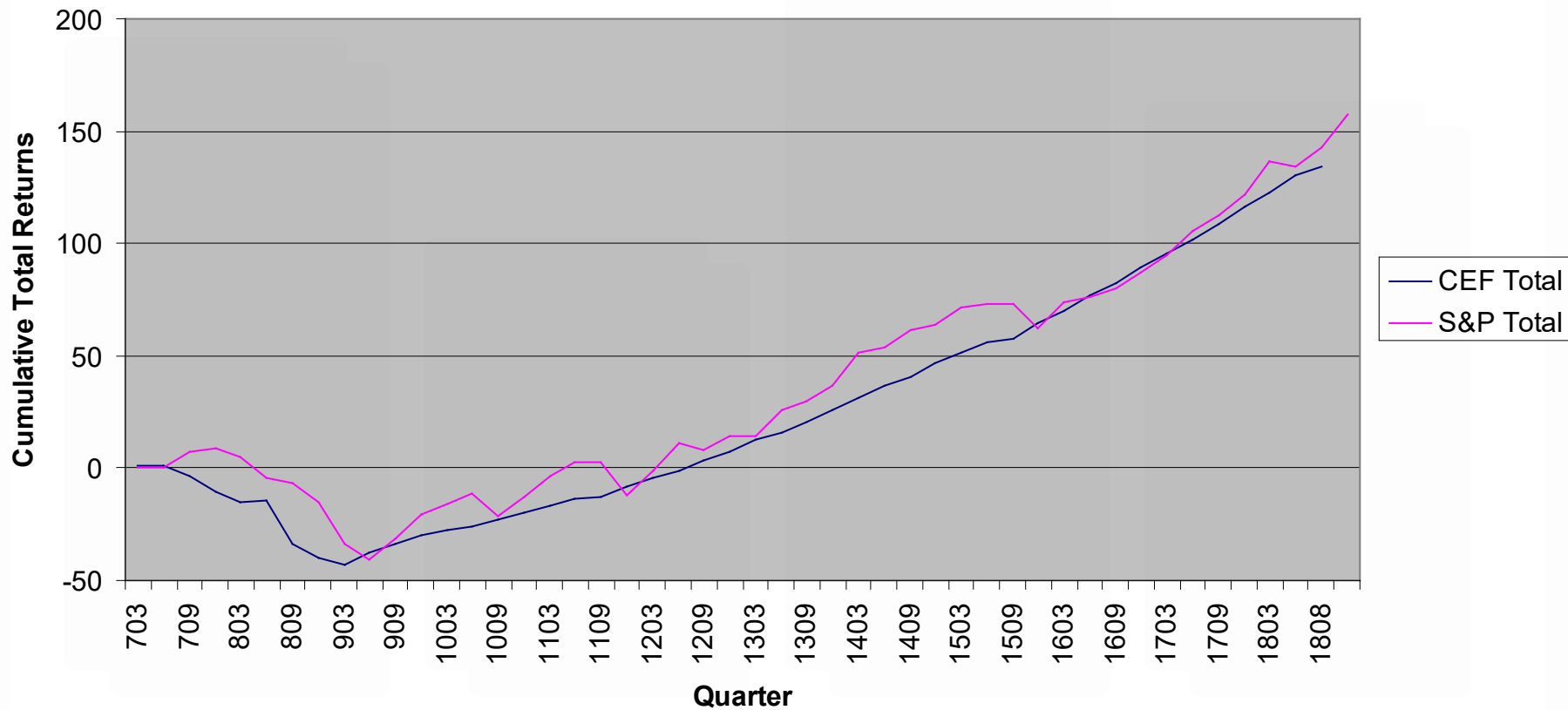
Cumulative Total Return for CEF Portfolio and S&P 500



Cumulative Price Return for CEF Portfolio and S&P 500



Cumulative Quarterly Total Returns for Closed End Fund Portfolio and S&P 500



Total Return Tables 2007

	2007 Start						Quarterly Yields	
	CEF	CEF	CEF	S&P 500	S&P 500	CEF Log	CEF	CEF Log
	Price	Dividend	Total	Price	Total	Dividend	Dividend	Dividend
	Returns	Yields	Returns	Returns	Returns	Yield	Yields	Yield
Average	0.05	6.66	0.60	0.60	0.77	1.84	6.66	1.88
Standard Deviation	4.48	2.45	4.47	4.15	4.14	0.31	1.15	0.16
Sharpe Ratio	0.04	9.42	0.47	0.50	0.64	20.50	11.59	24.14

Total Return Tables 2010

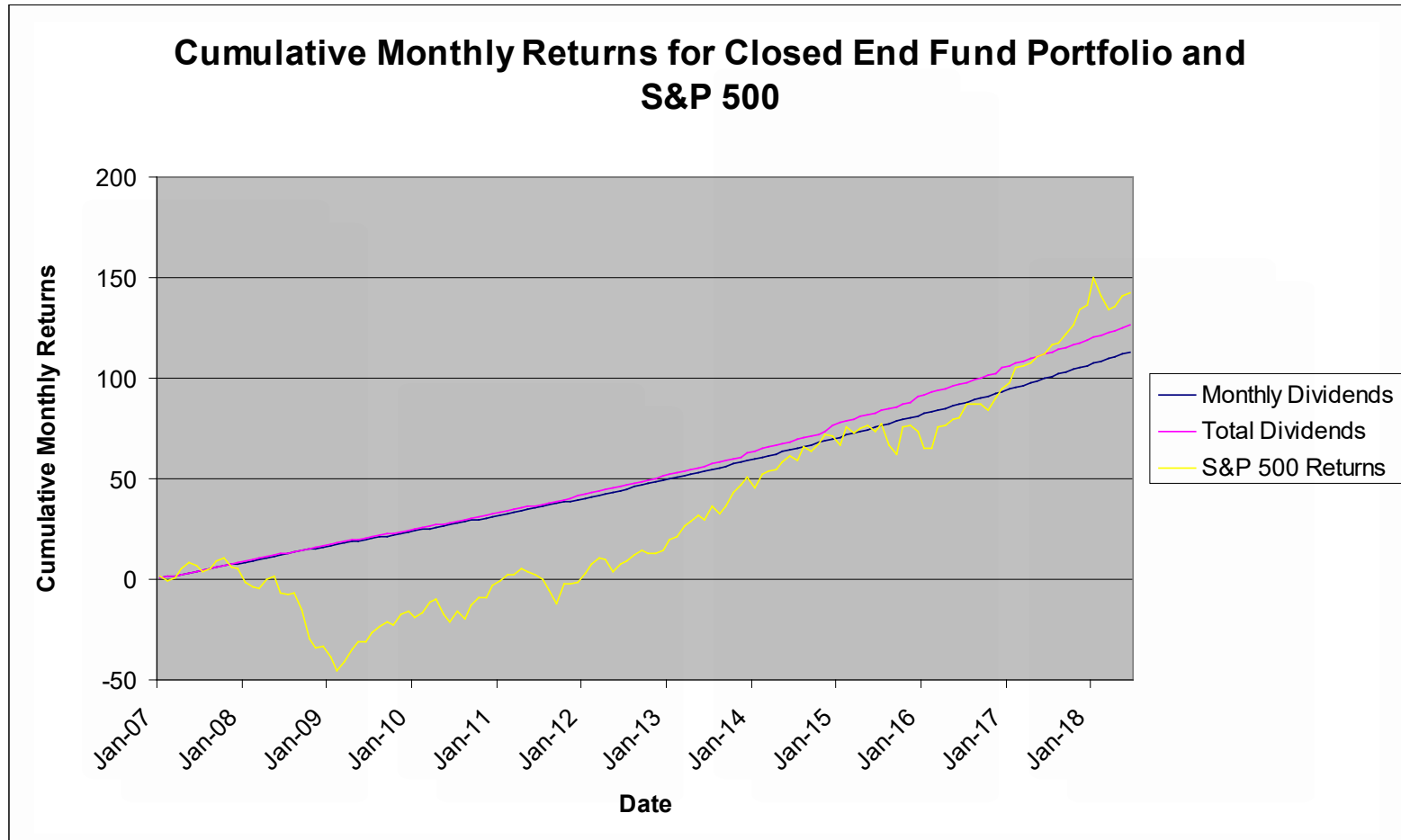
2010 Start

	CEF	CEF	CEF	S&P 500	S&P 500	CEF Log
	Price	Dividend	Total	Price	Total	Dividend
	Returns	Yields	Returns	Returns	Returns	Yield
Average	0.21	10.15	1.06	0.96	1.13	2.29
Standard Deviation	2.75	3.11	2.72	3.43	3.42	0.24
Sharpe Ratio	0.27	3.26	1.35	0.97	1.14	9.69

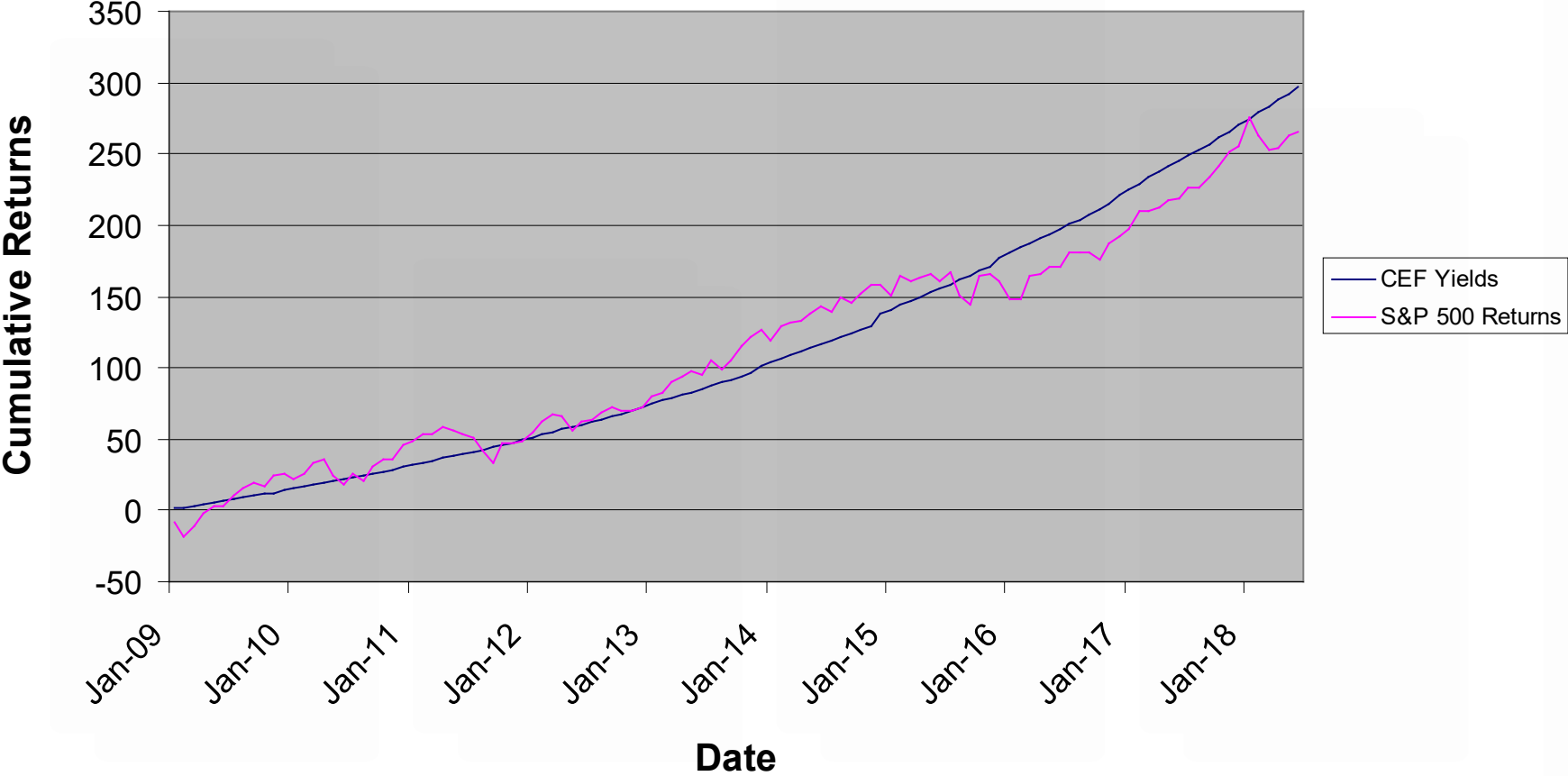
Two Sets of Analysis

- Set A – 49 funds
 - Some look ahead bias
 - Portfolios initiated 1/2007, 1/2009, 1/2010
 - Based on personal investing
- Set B – 48 funds
 - Less attractive funds
 - Portfolios initiated 1/2003, 1/2007, 1/2010
 - Used in hedge fund
 - No muni funds

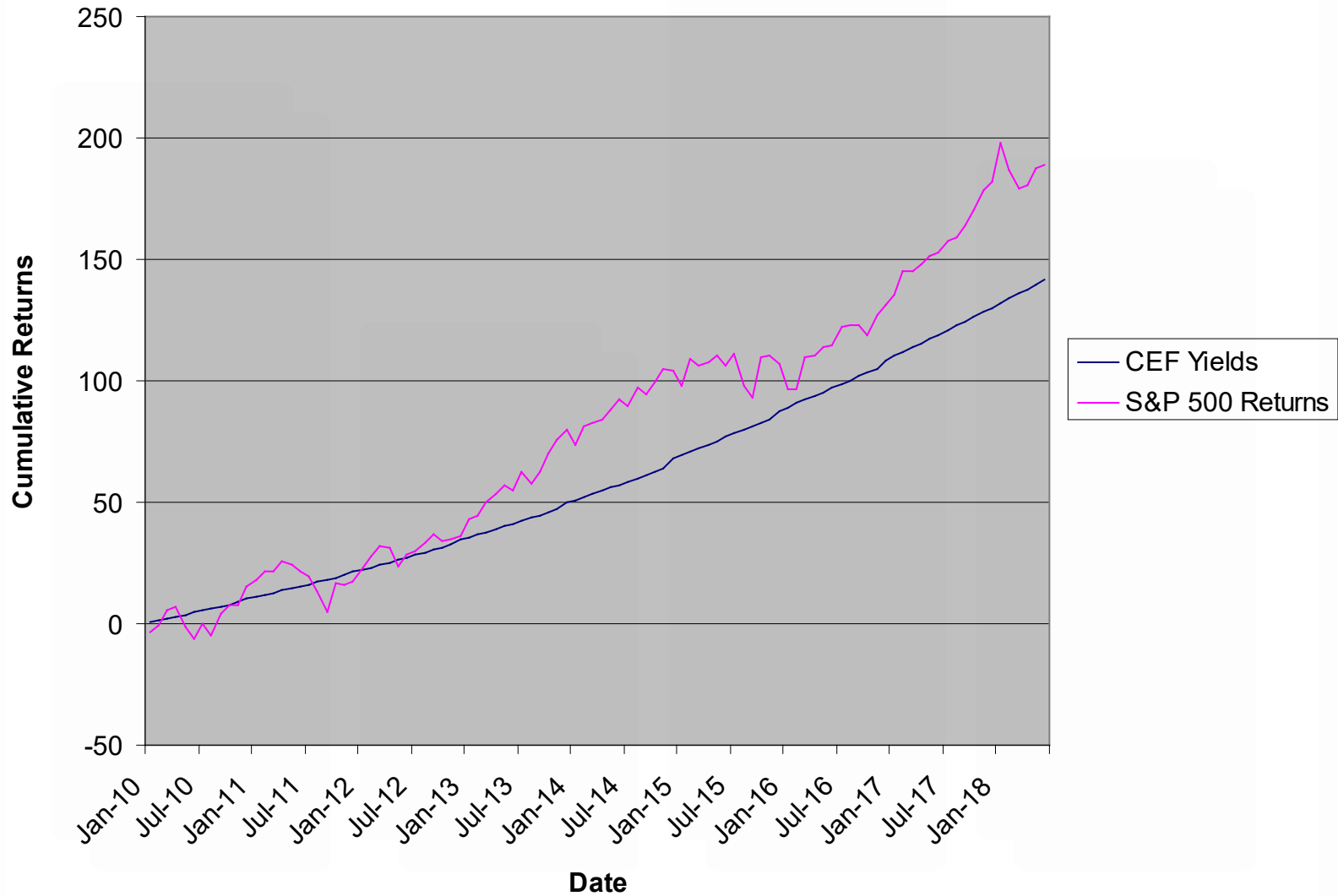
Investment Results – Set A



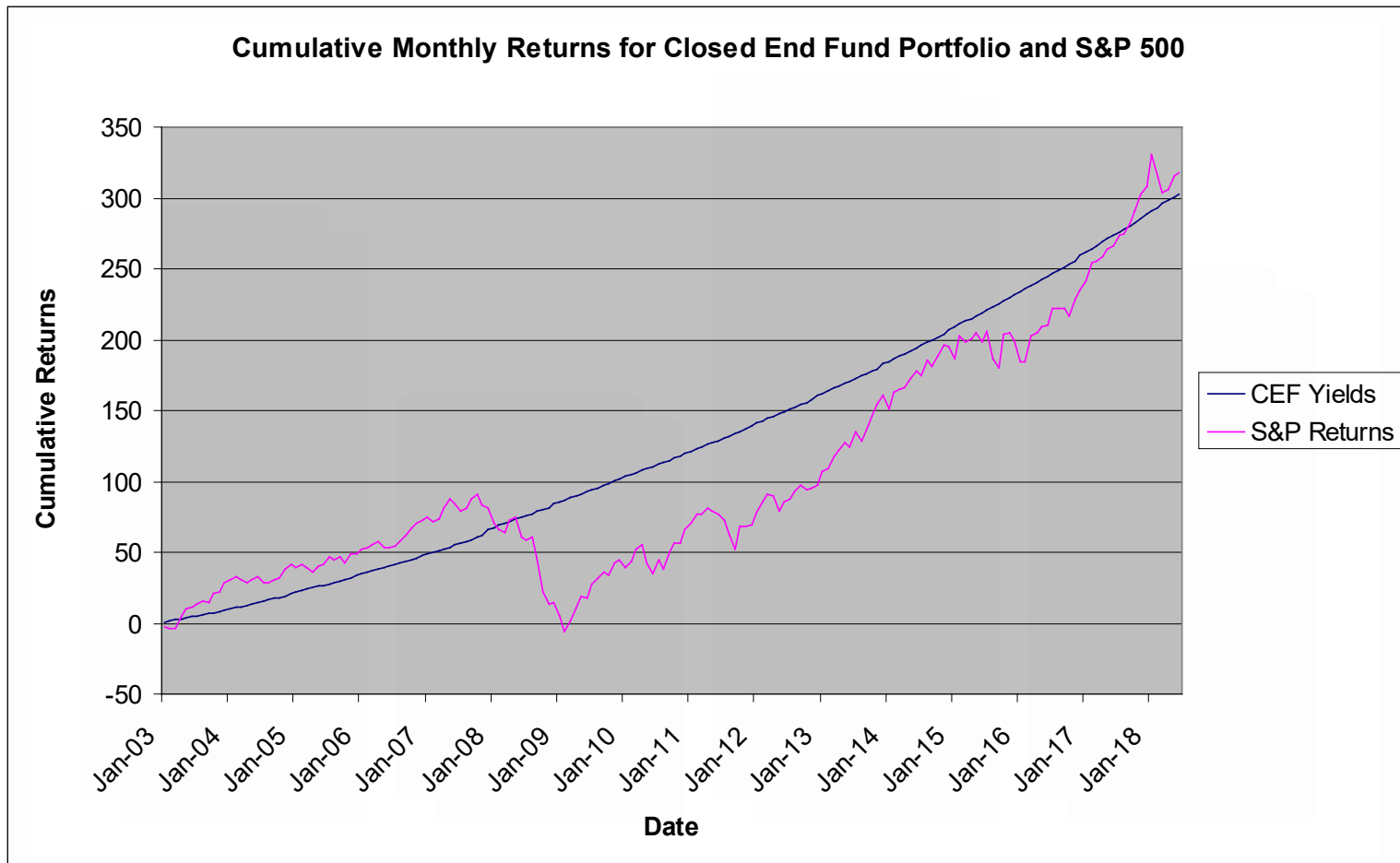
Cumulative Monthly Returns for Closed End Fund Portfolio and S&P 500



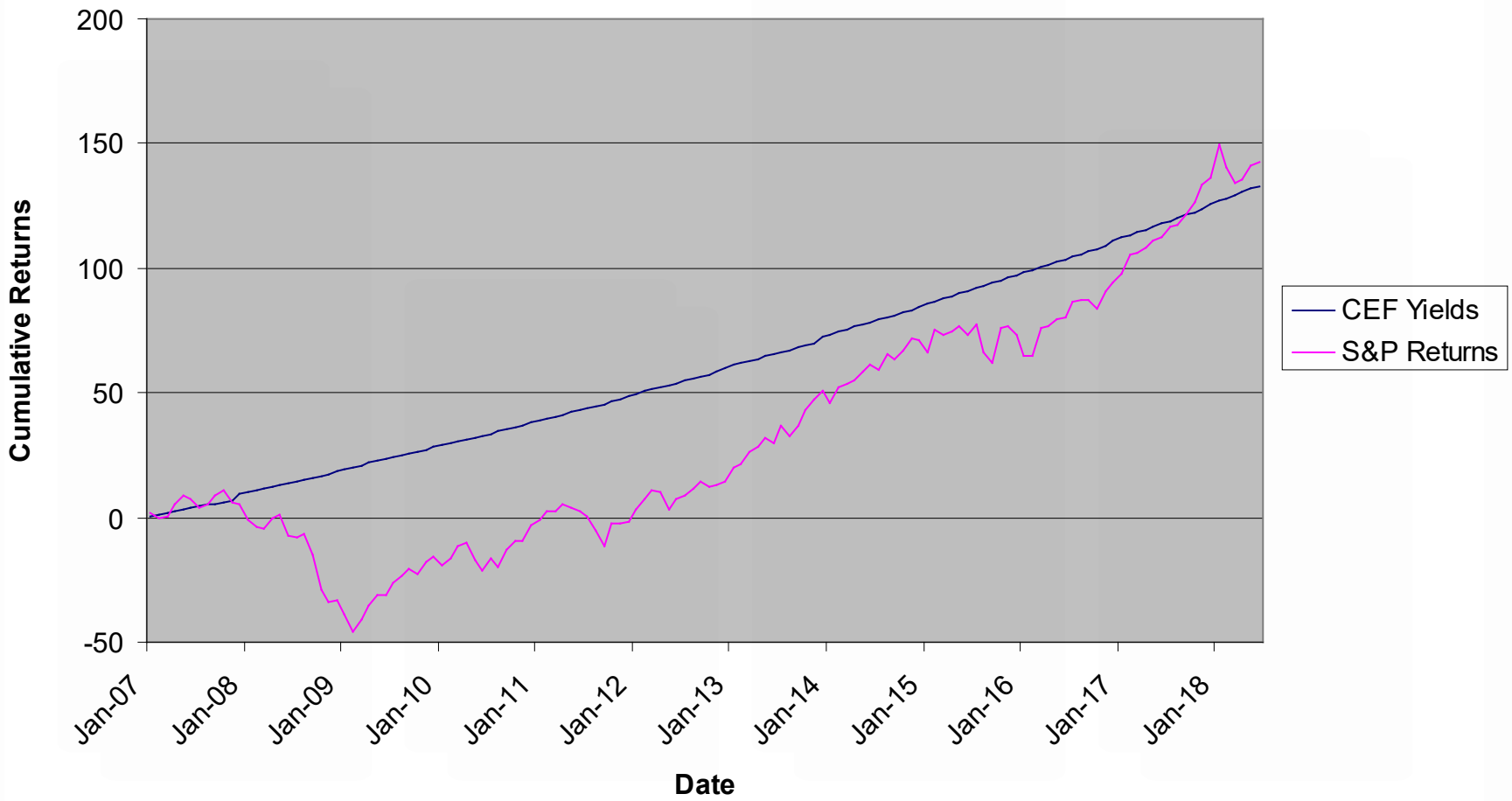
Cumulative Monthly Returns for Closed End Fund Portfolio and S&P 500



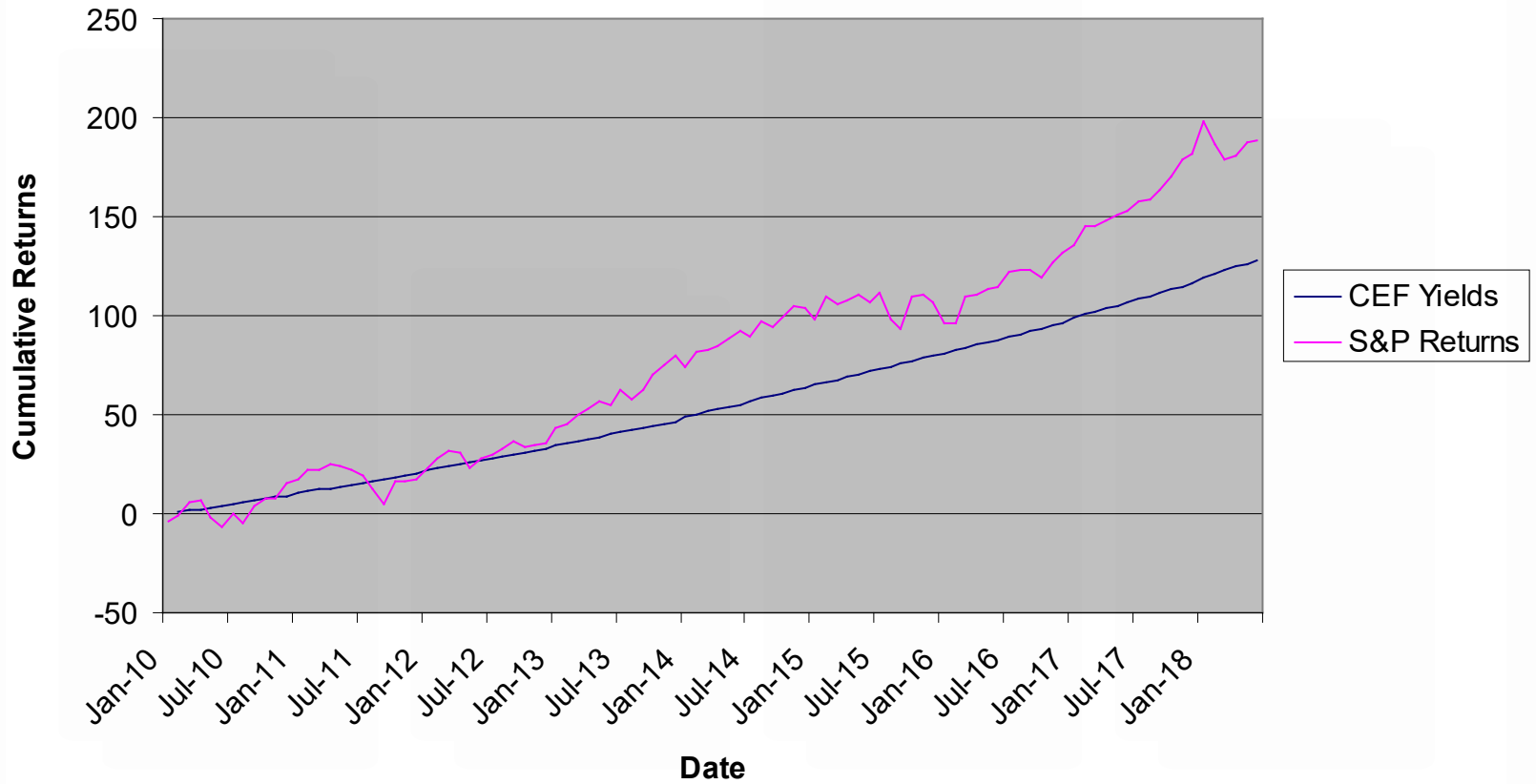
Investment Results – Set B



Cumulative Monthly Returns for Closed End Fund Portfolio and S&P 500



Cumulative Monthly Returns for Closed End Fund Portfolio and S&P 500



Statistics

- Assume yields are log normal
- Supplemental dividends are not spread
- Supplemental dividends reduce Sharpe ratios (non-intuitively)
- Yields with supplemental dividends are highly skewed (positively)
- Sharpe ratios for CEF portfolios are highly significant, those for the S&P are not
 - Risk adjusted reward for CEF portfolios is significantly better than it is for the S&P

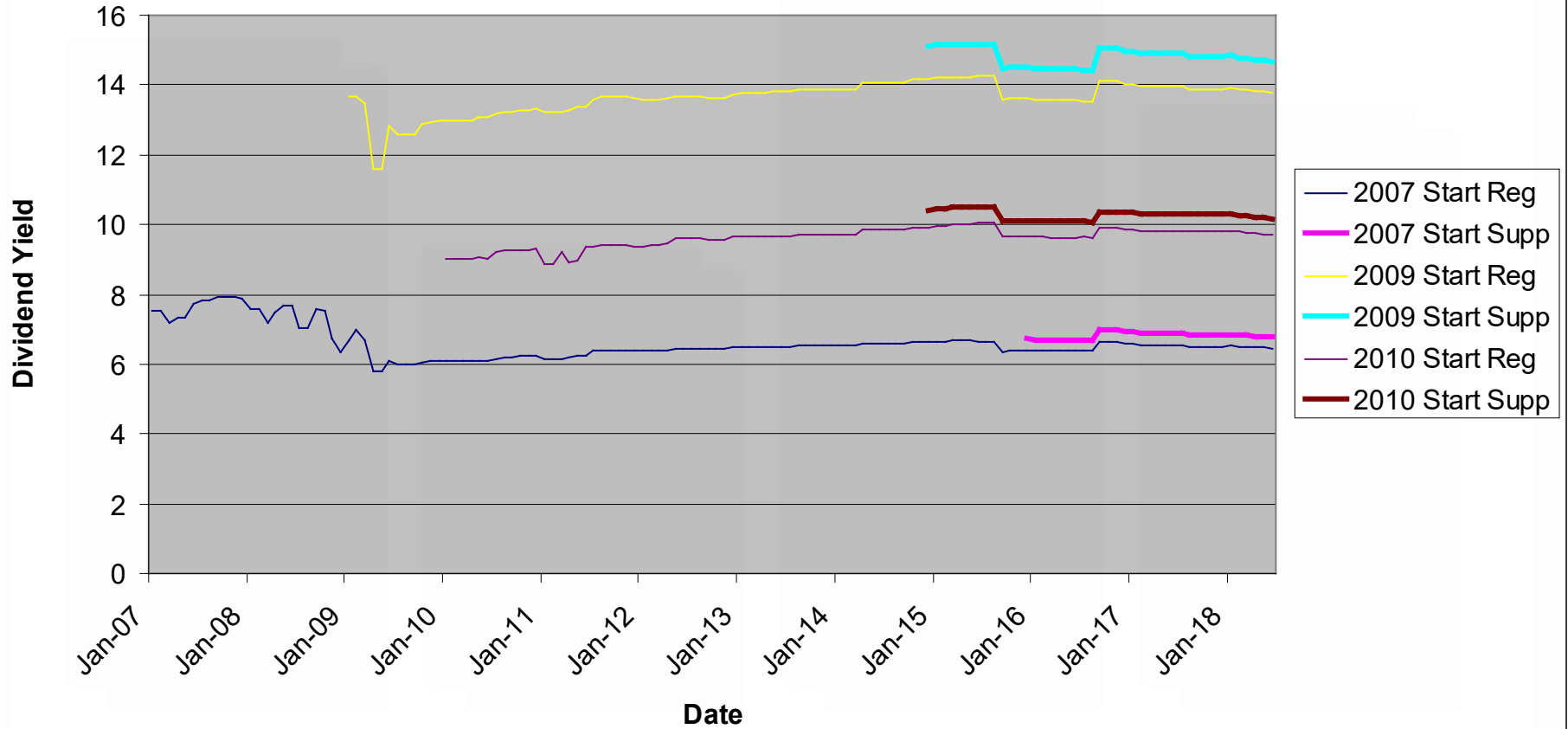
	Log of Annualized Monthly CEF Yield				S&P Annualized Monthly Total Returns		
	2007	2007	2009	2010	2007	2009	2010
	Reg	Supp	Supp	Supp			
	Divs	Divs	Divs	Divs			
Mean	1.88	1.93	2.66	2.32	0.09	0.15	0.13
Standard Deviation	0.07	0.21	0.19	0.21	0.50	0.46	0.41
Sharpe Ratio	27.54	9.28	14.15	11.19	0.18	0.32	0.32
Skewness	1.21	3.94	4.35	3.88	-0.75	-0.32	-0.13
Mean Annualized CEF Yield					0.07	0.15	0.10

	Log of Annualized Monthly CEF Yield				S&P Annualized Monthly Total Returns		
	2003	2003	2007	2010	2003	2007	2010
	Reg	Supp	Supp	Reg			
	Divs	Divs	Divs	Divs			
Mean	2.13	2.18	1.97	2.27	0.10	0.09	0.13
Standard Deviation	0.09	0.20	0.21	0.16	0.46	0.50	0.41
Sharpe Ratio	22.72	11.09	9.52	14.45	0.22	0.18	0.32
Skewness	0.04	3.32	3.54	3.45	-0.75	-0.75	-0.13
Mean Annualized CEF Yield					0.09	0.07	0.10

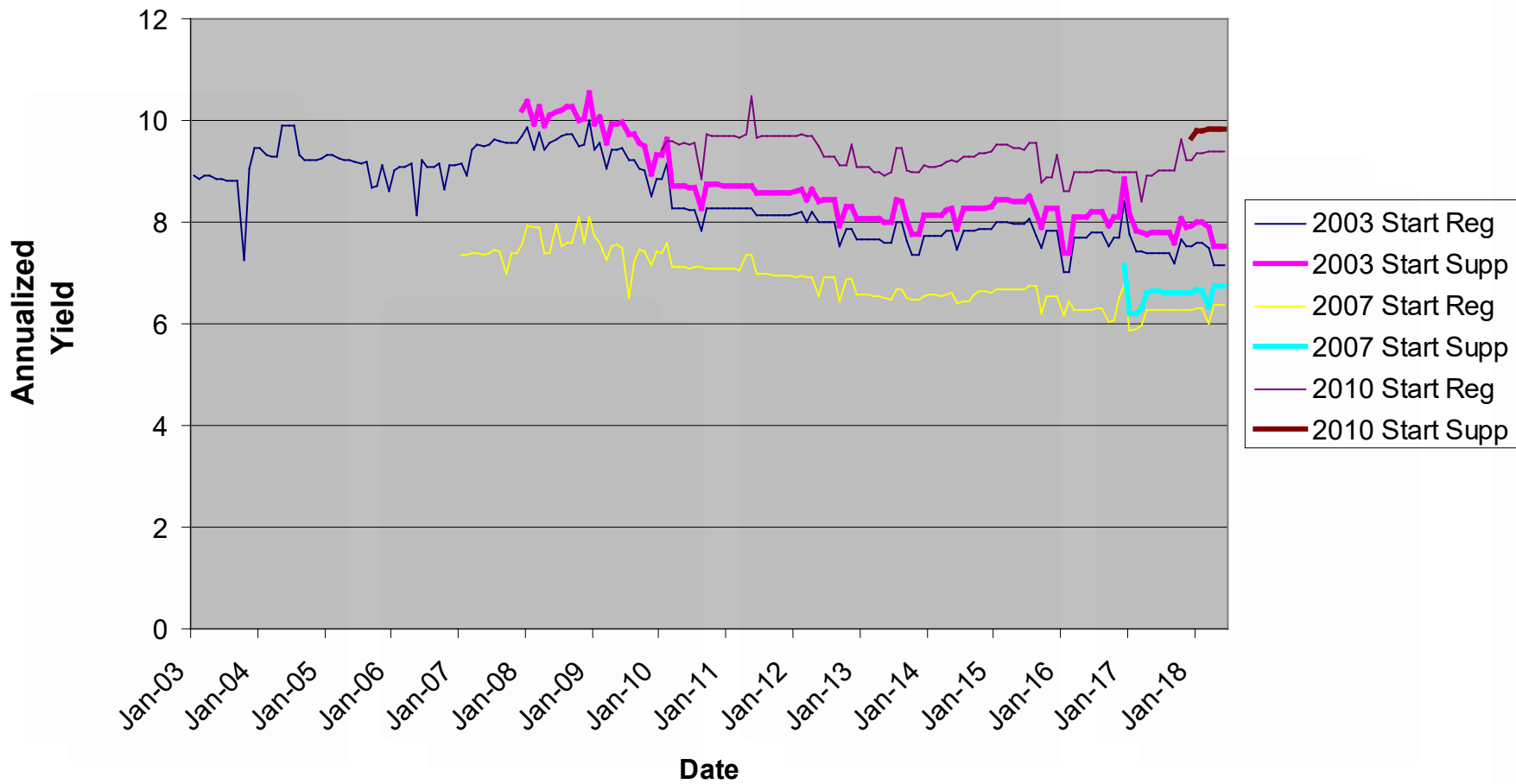
Yield Consistency

- Starting point determines initial and subsequent yields on CEF portfolios
- Spikes are associated with quarterly dividend timings
- Maximum yield decline is about 150 basis points for some portfolios started before 2008.
 - Supplemental dividends about 20 – 30 basis points in yield
 - Some yield boost can be obtained if early portfolios generate higher yields than initial portfolio
- 2010 portfolios maintain yield consistency throughout

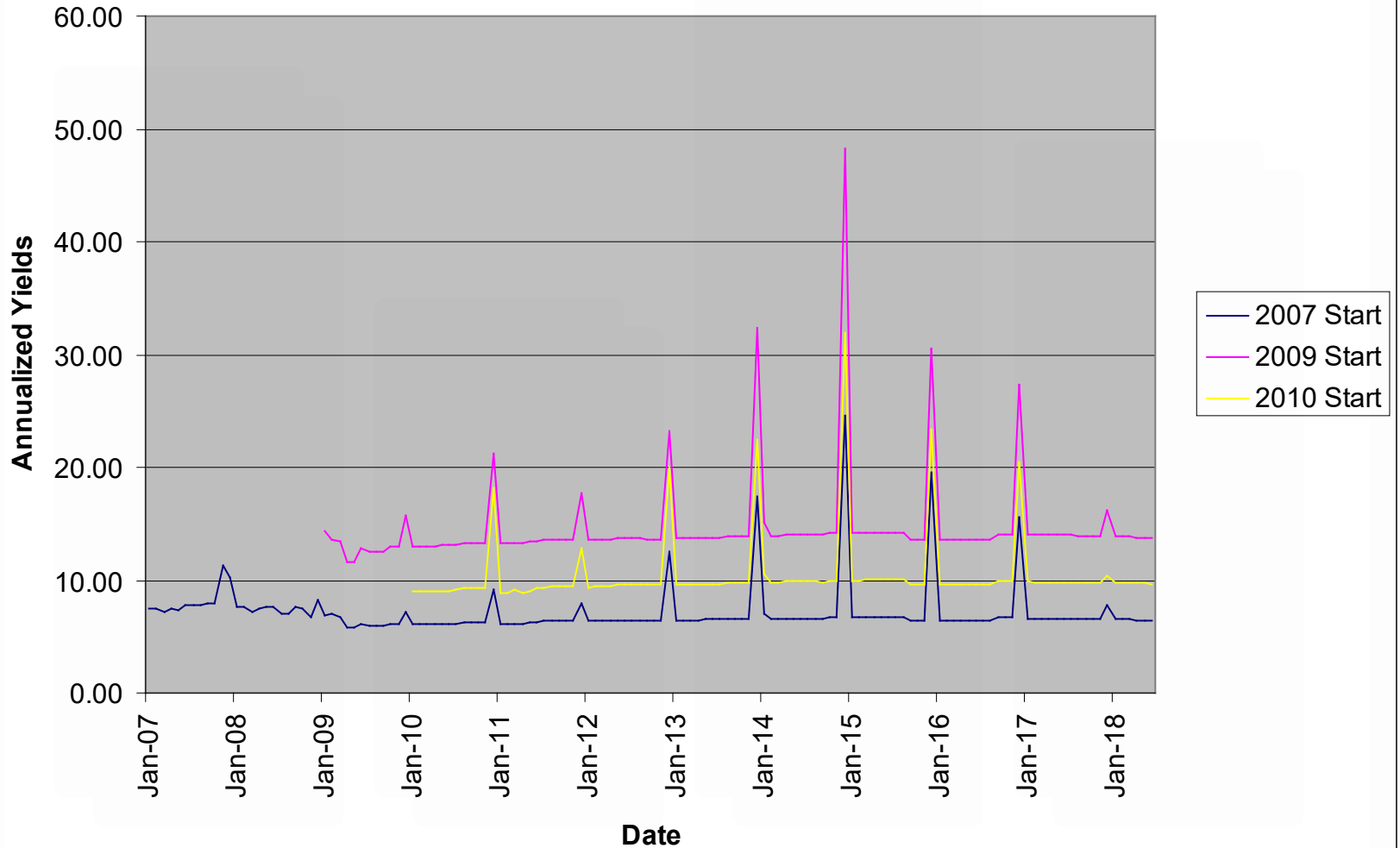
Annualized Monthly Dividend Yields for Closed End Fund Portfolios



Annualized Monthly Dividend Yields for Closed End Funds



Annualized Monthly Dividend Yields for Closed End Fund Portfolios



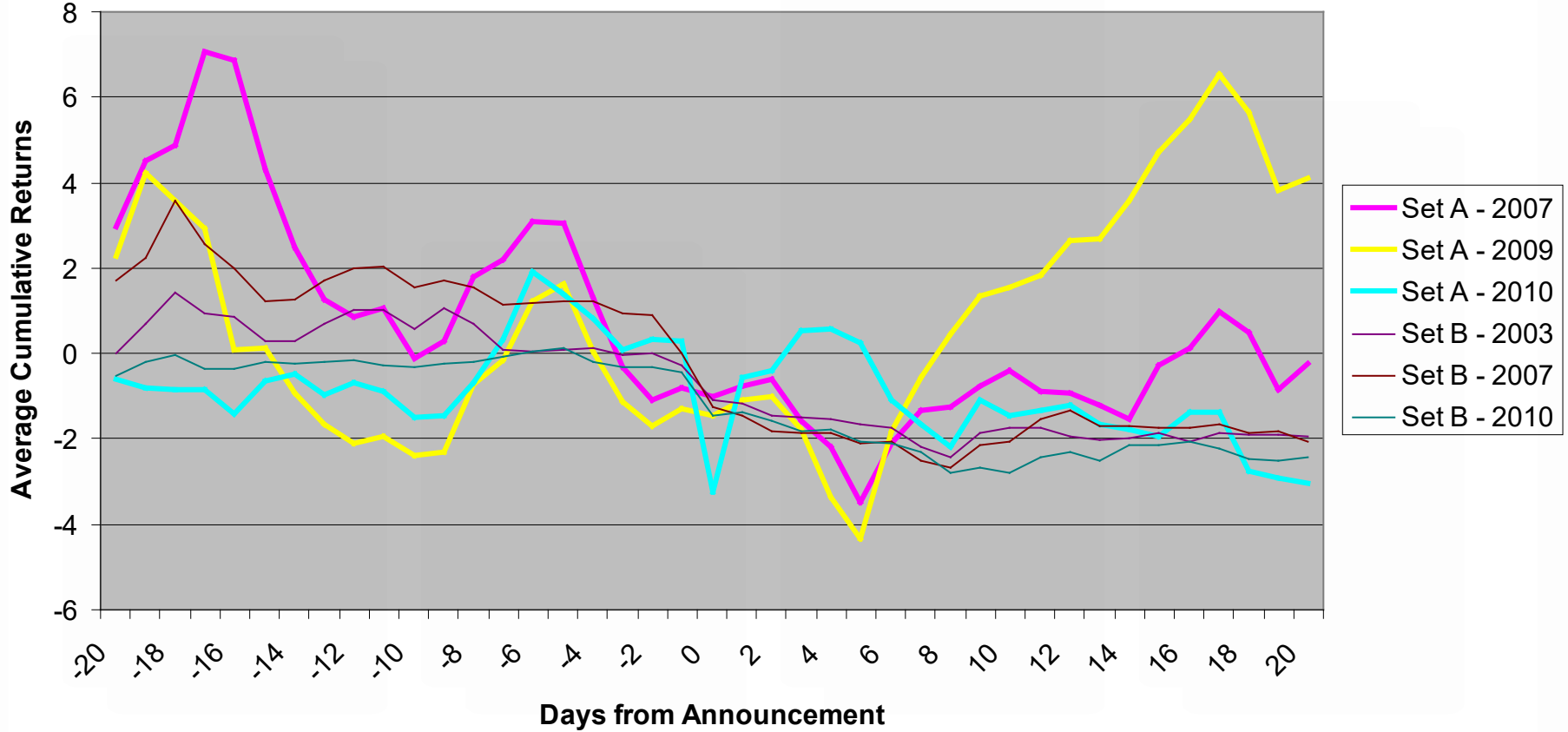
Trading Perspective

- Trade at open after any dividend cuts above threshold amount
 - Threshold is a cumulative measure
- Add new fund positions as cut funds are sold
- CEF market seems relatively inefficient
 - Seems to be almost no off hours trading
 - Responses to cuts seem to unfold over time
- There do not seem to be expectations of cuts before they are made
- For bottom quintile portfolios there does seem to be a persistent decline in price after the announcement
 - Bottom quintile portfolios will need fastest trading response

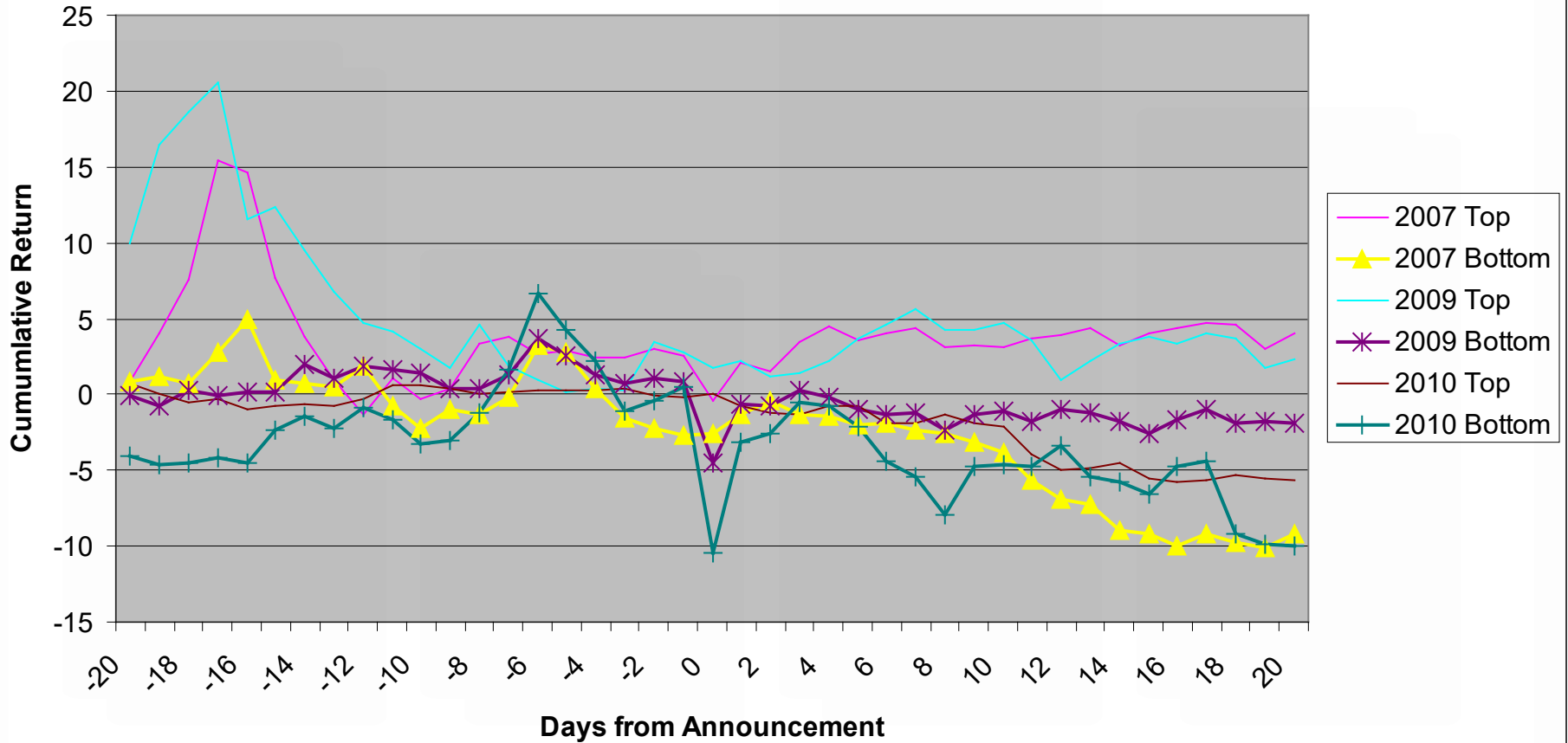
Number of Cuts and Trades

- Set A
 - 2007 – 39 cuts – about 7 trades per year on average
 - 2009 – 19 cuts – about 4 trades per year on average
 - 2010 – 7 cuts – about 2 trades per year on average
- Set B
 - 2003 – 64 cuts – about 8 trades per year on average
 - 2007 – 43 cuts – about 8 trades per year on average
 - 2010 – 22 cuts – about 6 trades per year on average
- Strategy has very low commission expenses

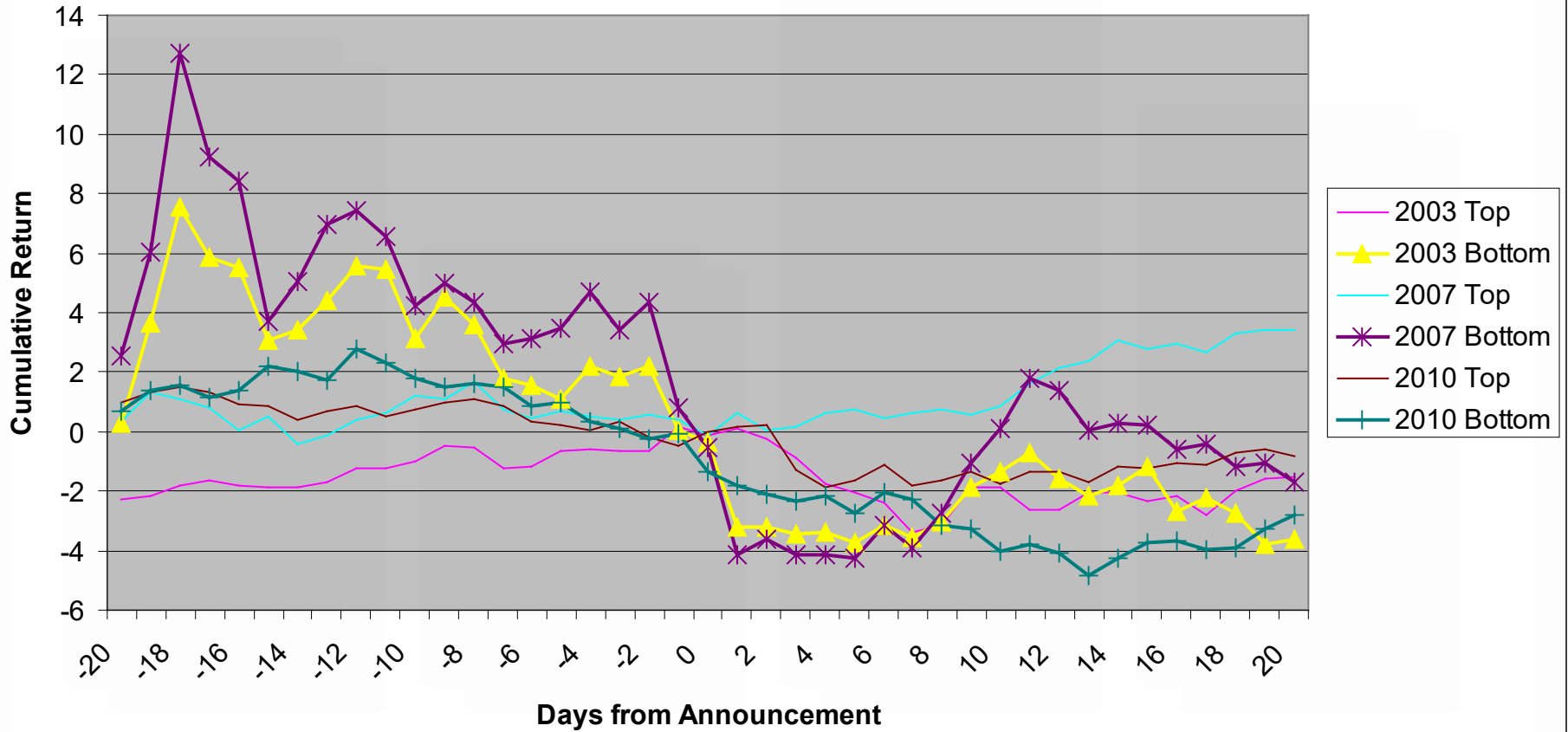
Average Cumulative Total Returns for Closed End Funds around Announcement Date



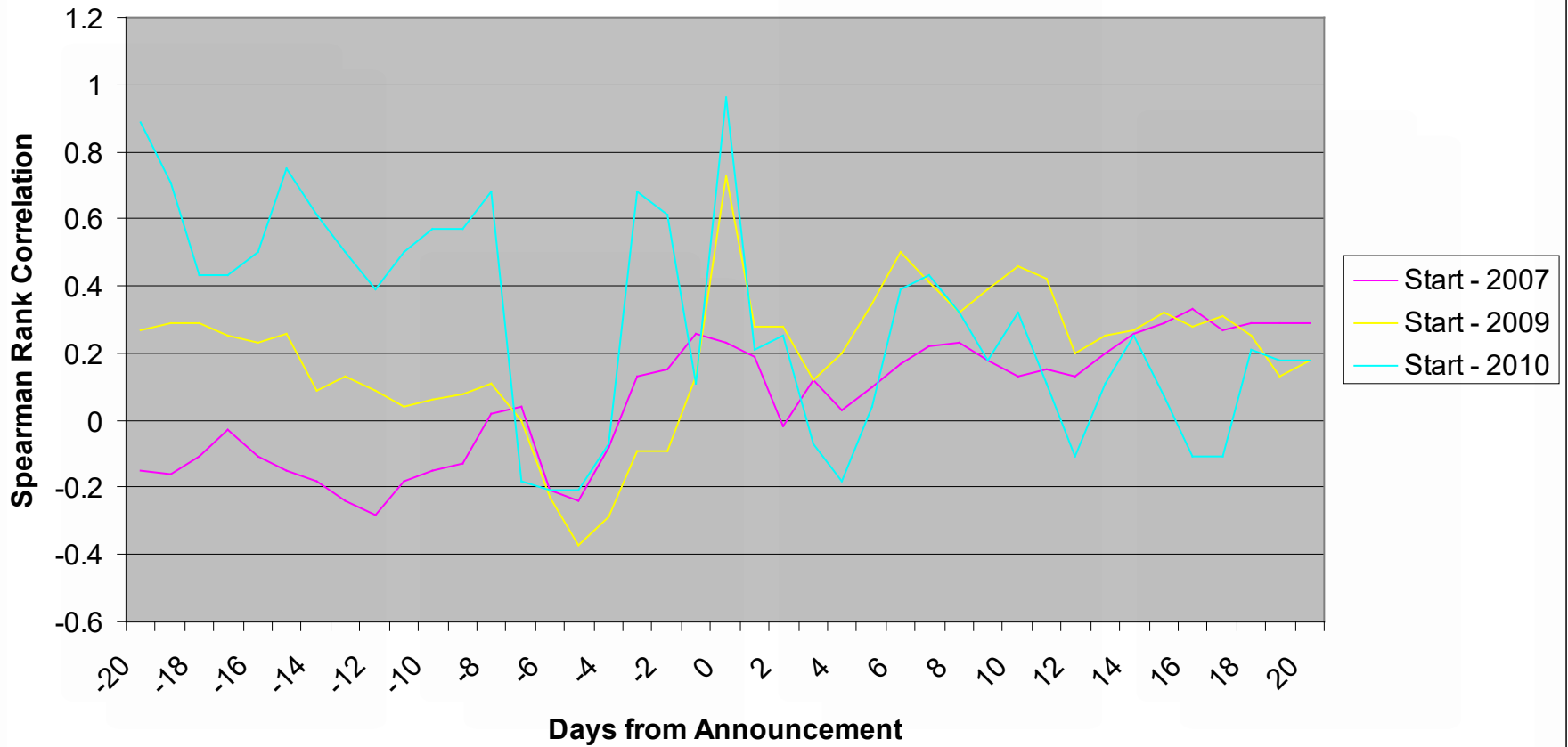
Cumulative Total Returns for Closed End Funds around Announcement Date



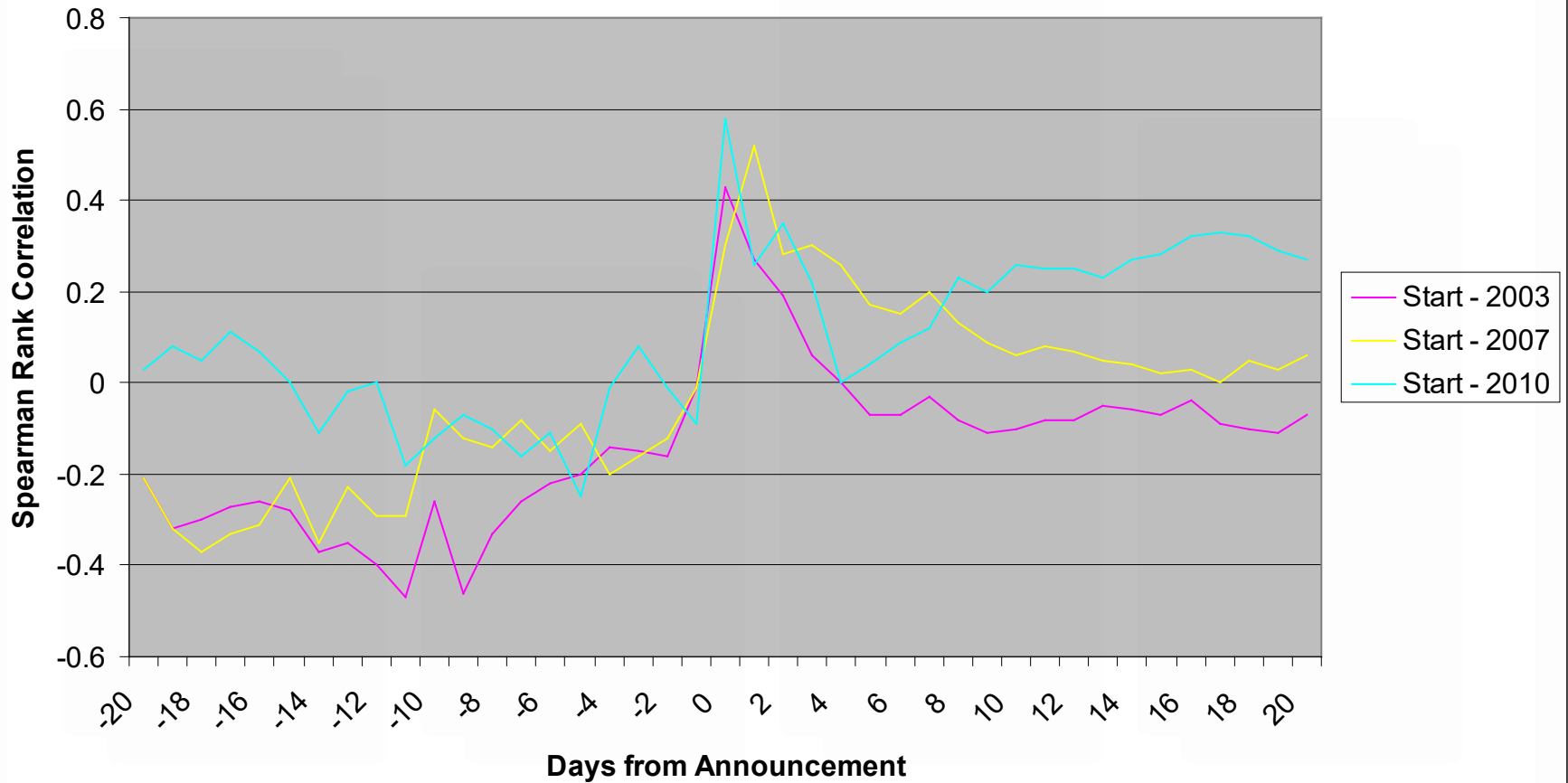
Cumulative Total Returns for Closed End Funds around Announcement Dates



Spearman Rank Correlation Coefficients around Announcement Dates



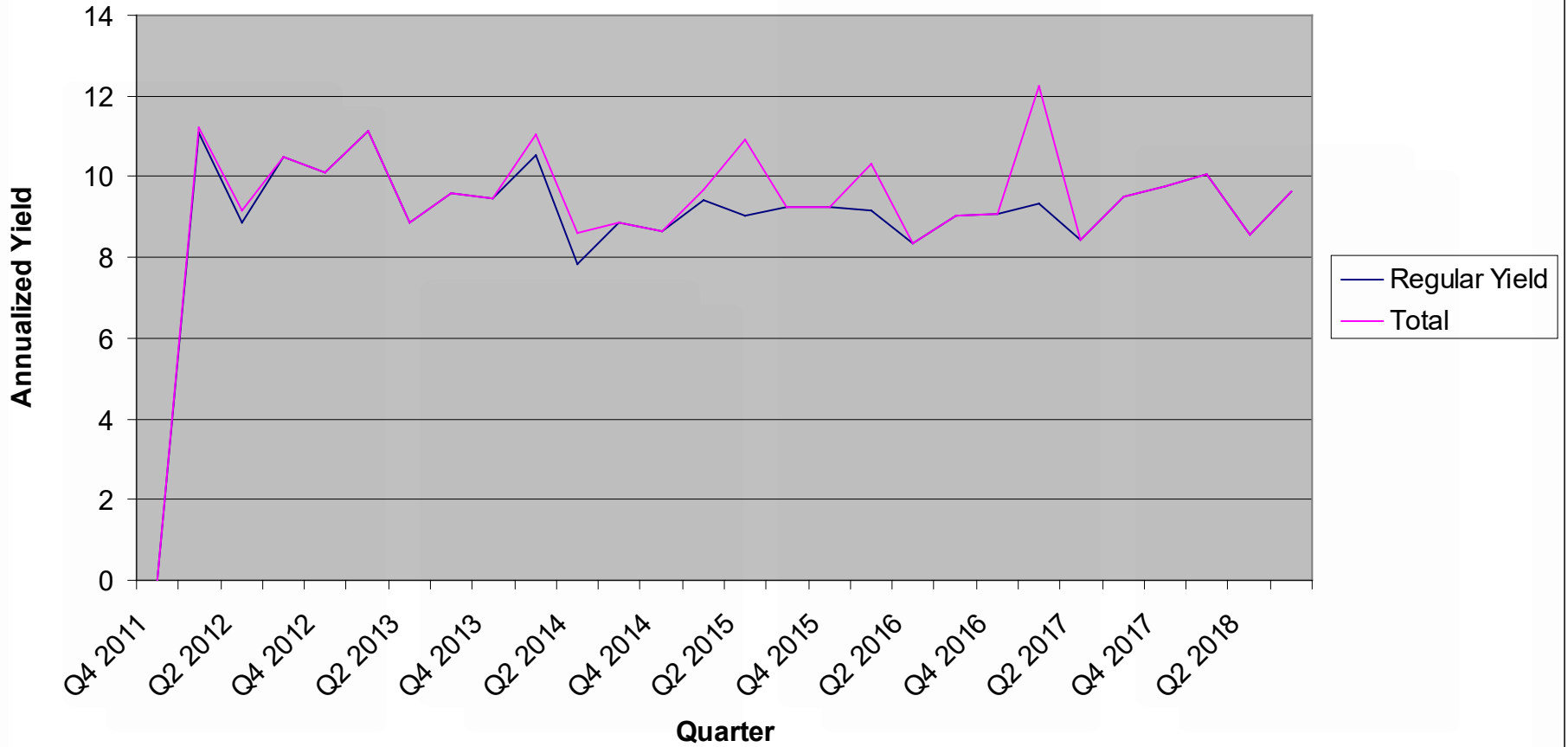
Spearman Rank Correlation Coefficients around Announcement Dates



Actual CEF Portfolio Results

- Started in Q4 2011
- Initial Investment \$65,000
- Current Investment \$140,000
- Currently 26 funds held
- 11 Positions eliminated in the life of the portfolio
- Followed rules outlined in presentation
- Maintains consistent annual yield of 9 – 10%
- Fluctuations due partly to dividend payments timing
- Reinvested supplemental dividends would boost yield

Annualized Quarterly Yield for Actual CEF Portfolio



Conclusions

- CEF portfolios can be a good investment vehicle around retirement age
- High yields can be sustained over extended time periods
- Risk measured in terms of income stream variability
- Very low risks associated with dividend yields
- Underlying asset prices are of secondary importance
- Long term yield a function of initial yield regime
- A diversified set of CEFs must be the basis of any portfolio
- Take advantage of CEF trading inefficiencies

Strategy Potential

- 2 – 3 Different taxable yield funds
 - Lower yield funds will be larger
- Large tax free fund
- Need well diversified portfolio with small positions in each fund
- Term funds using junk bonds
- REIT/MLP funds
- Potential for \$1 – 2B in total funds using underlying strategy