Capital Allocation. Optimal Captial Allocation using Maixum Utility

Capital Allocation > Asset Classes Allocation > Security Selection

Risky Pf (P) only	
rf: rate of return of risk-free asset	5%
E(Rp): expected return of risky pf	30.23%
p: SD of risky pf	14.96%

Complete Pf (C). Risk free + Risky Pf	
y: weight of risky pf	89.48%
1-y: weight of risk free asset	10.52%
E(rc): expected return of the Complete pf	27.58%
σ c: SD of Complete pf	13.39%
Slope: Capital Allocation Line (Sharpe)	1.6866
Risk Tolerance Score	64
Risk Aversion Index (A: 1~20)*	12.6
Utility at the risk aversion level	16.29%

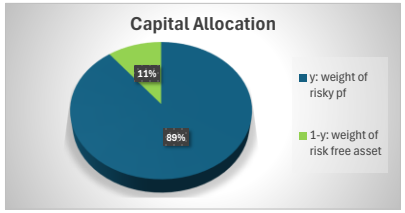
Bear (1~5), Normal (1~10), Bull (1~20)

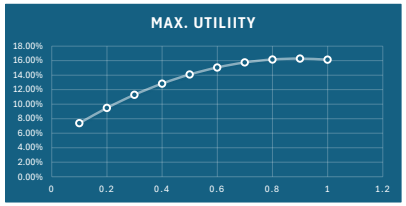
$$y^* = \frac{E(r_P) - r_f}{A\sigma_P^2}$$

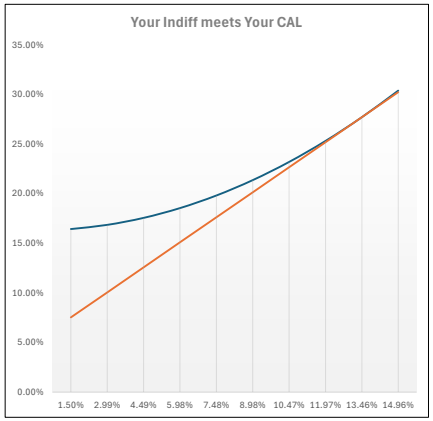
$$\max_y U = E(r_c) - 1/2A\sigma_c^2 = r_f + y[E(r_P) - r_f] - 1/2Ay^2\sigma_P^2$$

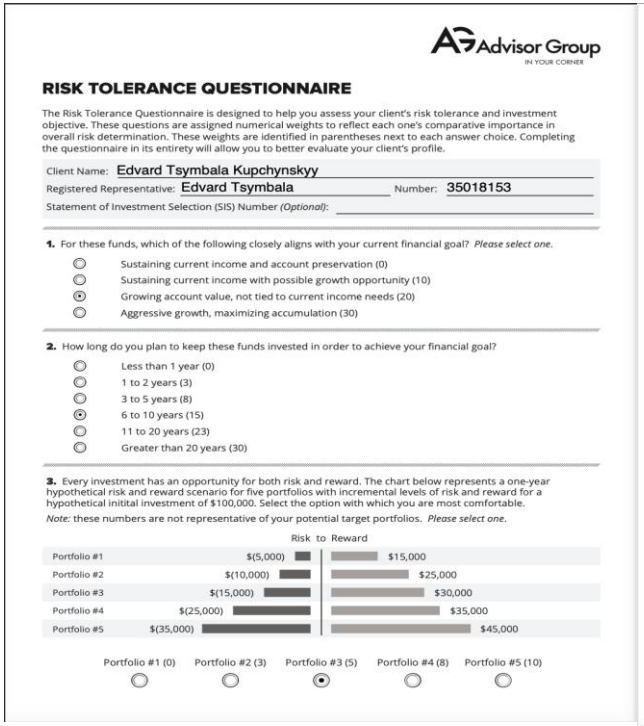
16.29%

W of risky pf: y	E(rc) on CAL	σ c	Utiliity	E(rc) on Indiff.
Max. U	27.58%	13.39%	16.29%	27.58%
0.1	7.52%	1.50%	7.38%	16.43%
0.2	10.05%	2.99%	9.48%	16.85%
0.3	12.57%	4.49%	11.30%	17.56%
0.4	15.09%	5.98%	12.84%	18.54%
0.5	17.62%	7.48%	14.09%	19.81%
0.6	**20.14%**	**8.98%**	**15.06%**	21.36%
0.7	**22.66%**	**10.47%**	**15.75%**	23.20%
0.8	**25.19%**	**11.97%**	**16.16%**	25.31%
0.9	27.71%	13.46%	16.29%	27.71%
1.0	30.23%	14.96%	16.13%	30.39%









Advisor Group
IN YOUR CORNER

RISK TOLERANCE QUESTIONNAIRE

The Risk Tolerance Questionnaire is designed to help you assess your client's risk tolerance and investment objective. These questions are assigned numerical weights to reflect each one's comparative importance in overall risk determination. These weights are identified in parentheses next to each answer choice. Completing the questionnaire in its entirety will allow you to better evaluate your client's profile.

Client Name: Edvard Tsymbala Kupchynskyy

Registered Representative: Edvard Tsymbala Number: 35018153

Statement of Investment Selection (SIS) Number *(Optional)*:

1. For these funds, which of the following closely aligns with your current financial goal? *Please select one.*

- ○ Sustaining current income and account preservation (0)
- ○ Sustaining current income with possible growth opportunity (10)
- ◉ Growing account value, not tied to current income needs (20)
- ○ Aggressive growth, maximizing accumulation (30)

2. How long do you plan to keep these funds invested in order to achieve your financial goal?

- ○ Less than 1 year (0)
- ○ 1 to 2 years (3)
- ○ 3 to 5 years (8)
- ◉ 6 to 10 years (15)
- ○ 11 to 20 years (23)
- ○ Greater than 20 years (30)

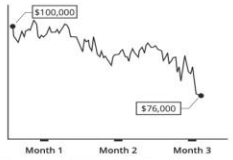
3. Every investment has an opportunity for both risk and reward. The chart below represents a one-year hypothetical risk and reward scenario for five portfolios with incremental levels of risk and reward for a hypothetical initital investment of $100,000. Select the option with which you are most comfortable.

Note: these numbers are not representative of your potential target portfolios. *Please select one.*

	Risk	Reward
Portfolio #1	$(5,000)	$15,000
Portfolio #2	$(10,000)	$25,000
Portfolio #3	$(15,000)	$30,000
Portfolio #4	$(25,000)	$35,000
Portfolio #5	$(35,000)	$45,000

Portfolio #1 (0) ○ Portfolio #2 (3) ○ Portfolio #3 (5) ◉ Portfolio #4 (8) ○ Portfolio #5 (10) ○

4. How would you react to a significant fall in the value of the stock market?



If your hypothetical investment of **$100,000** experienced a sudden and unexpected drop of **24%** over a three-month period, what would your reaction be?

- ○ Sell All, Avoid Further Risk (0)
- ○ Sell Some, Reduce Exposure to Risk (3)
- ○ Sell Nothing, Remain Invested (7)
- ◉ Buy More, Opportunity is Present (10)

5. How soon would you need these funds to recover after experiencing a sudden meaningful loss in value?

- ○ 0 to 6 months (0)
- ○ 6 months to 1 year (3)
- ◉ 1 to 3 years (7)
- ○ 3 years or more (10)

6. How would you respond to the following statement: I am comfortable investing during times of uncertainty.

- ○ Strongly disagree (0)
- ○ Disagree (3)
- ◉ Agree (7)
- ○ Strongly agree (10)

YOUR SCORE	POINT SCALE	RISK TOLERANCE
64	0 THROUGH 20 21 THROUGH 40 41 THROUGH 60 61 THROUGH 80 81 THROUGH 100	CONSERVATIVE MODERATELY CONSERVATIVE MODERATE MODERATELY AGGRESSIVE AGGRESSIVE

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Asset Classes Allocation Analysis: Optimal Complete Pf Model

Capital Allocation > Asset Classes Allocation > Security Selection

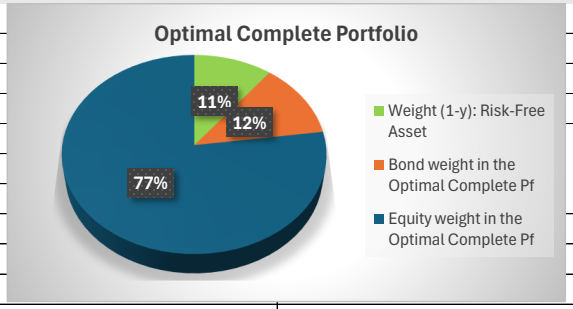
Securities	Expected Return	Standard Deviation	Corr. Coefficient B,E	Covariance B,E
Bond Pf (B)	9.74%	7.72%	0.2998	0.0039
Equity Pf (E)	33.50%	16.93%		
T-Bill	5.00%	0.00%		

Risky Asset Portfolio: Weights				Reward to Variability
Bond weight	Equity weight	Expected Return	Standard Deviation	(Sharpe ratio)
1.0	0.0	0.0974	0.0772	0.6133
0.9	0.1	0.1211	0.0763	0.9321
0.8	0.2	0.1449	0.0788	1.2033
0.7	0.3	0.1686	0.0845	1.4032
0.6	0.4	0.1924	0.0928	1.5341
0.5	0.5	0.2162	0.1031	1.6124
0.4	0.6	0.2399	0.1147	1.6556
0.3	0.7	0.2637	0.1274	1.6770
0.2	0.8	0.2874	0.1409	1.6854
0.1	0.9	0.3112	0.1549	1.6863
0.0	**1.0**	**0.3350**	**0.1693**	**1.6827**

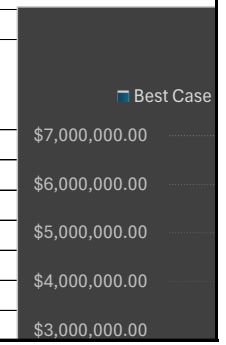
A. Minimum Variance Portfolio of Risky Assets		Expected Return	Min. Standard Deviation	*Sharpe Ratio*	
1.00	0.00	0.0974	**0.0772**	0.6133	***short-not allowed***

B. Optimal Risky Portfolio. Maximum of Sharpe ratio		Expected Return	Standard Deviation	*Max. of Sharpe Ratio*	
0.14	0.86	0.3023	0.1496	**1.6866**	***short-not allowed***

C. Optimal Complete Portfolio with U w/ Risk-Free Asset	
Weight y: Optimal Risky Portfolio	89.48%
Weight (1-y): Risk-Free Asset	10.52%
Bond weight in the Optimal Complete Pf	12.29%
Equity weight in the Optimal Complete Pf	77.18%
E(rc): expected return of the Overall Complete pf	0.2758
σ c: SD of Overall Complete pf	0.1339
Sharpe Ratio (Max. Slope of CAL)	1.6866



D. Optimal Complete Portoflio Investment Allocation		
Total Investment		$ 1,000,000.00
Risk-Free Asset Investment		$ 105,221.50
Bond Pf Investment		$ 122,949.63



Index Portfolio Model. SPDR + Active Portfolio (Large Growth)

Panel A. Risk Parameters of Pf A (annualized)	RXI	DHI	TJX	NVR	CMG	HD
Beta	1.0000	-0.1097	0.0561	0.9606	-0.3610	0.8453
SD of Excess Return	0.2217	0.4081	0.2383	0.2855	0.3392	0.2529
SD of Residual (e), Firm specific Component	0.0000	0.4074	0.2380	0.2887	0.3297	0.1699
SD of Systematic Component	0.2217	-0.0243	0.0124	0.2129	-0.0800	0.1874
Correlation with the Market Index	1.0000	-0.0596	0.0522	0.7459	-0.2359	0.7408

Panel B. Correlation Matrix	RXI	DHI	TJX	NVR	CMG	HD
RXI	1.0000					
DHI	-0.0596	1.0000				
TJX	0.0522	-0.0031	1.0000			
NVR	0.7459	-0.0445	0.0389	1.0000		
CMG	-0.2359	0.0141	-0.0123	-0.1760	1.0000	
HD	0.7408	-0.0442	0.0387	0.5526	-0.1748	1.0000

Panel C. The Index Model Covariance Matrix	RXI	DHI	TJX	NVR	CMG	HD
RXI	0.0491					
DHI	-0.0054	0.1665				
TJX	0.0028	-0.0003	0.0568			
NVR	0.0472	-0.0052	0.0026	0.0815		
CMG	-0.0177	0.0019	-0.0010	-0.0177	0.1151	
HD	0.0415	-0.0046	0.0023	0.0399	-0.0150	0.0640

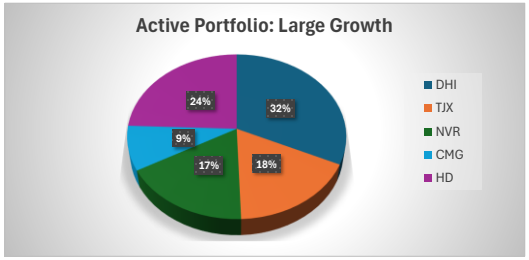
Panel D. Correlation of Residuals in Pf A	RXI	DHI	TJX	NVR	CMG	HD
RXI						
DHI		1.0000				
TJX		0.5984	1.0000			
NVR		(0.0530)	0.1087	1.0000		
CMG		0.6455	0.3944	(0.0384)	1.0000	
HD		0.0852	0.2326	0.2908	(0.0888)	1.0000

Panel E. Macro Forecast and Forecasts of Alpha	RXI	DHI	TJX	NVR	CMG	HD
Adjusted Alpha	**0.0000**	**0.6000**	**0.1122**	**0.1649**	**0.1075**	**0.0797**
Beta	1.0000	-0.1097	0.0561	0.9606	-0.3610	0.8453
Total Equity Risk Premium *E(R)*	0.0509	0.5944	0.1150	0.2138	0.0891	0.1228
Adjusted Market risk premium =	**0.0509**					

Panel F. Active Portfolio			Active Pf	DHI	TJX	NVR	CMG	HD
Residual Variance of each security	$\sigma^2(e)$			0.1659	0.0566	0.0834	0.1087	0.0289
Initial position of each security	$w_i(0) = \alpha_i/\sigma^2(e)$		11.3262	3.6158	1.9806	1.9777	0.9887	2.7634
Scaled initial position of each security	w_i		1.0000	0.3192	0.1749	0.1746	0.0873	0.2440
Squared scaled initial position of each security	$[w_i(0)]^2$			0.1019	0.0306	0.0305	0.0076	0.0595
Alpha of the Active Pf	α_A		0.2688					
Residual Variance of Active Pf	$\sigma^2(e_A)$		0.0237					
Active Pf information ratio (APIR)	$\alpha A / \sigma^2(e_A)$		11.3262					
Index Pf information ratio (IPIR)	$E(R_M)/\sigma^2(M)$		1.0369					
Initial position in Active Pf (APIR/IPIR)	$w_A(0)$		10.9237					
Beta of the Active Pf	β_A		0.3172					

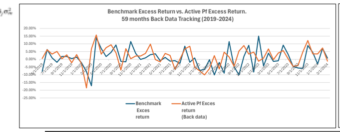
$$w_A^* = \frac{w_A^0}{1+(1-\beta_A)\times w_A^0}$$

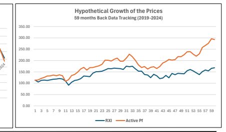
Panel G. Optimal Risky Portfolios	Overall Risky Pf	RXI	Active Pf	DHI	TJX	NVR	CMG	HD
w*(Optimal Pf): Short not allowed	**1.0000**	**0.0000**	**1.0000**	**0.3192**	**0.1749**	**0.1746**	**0.0873**	**0.2440**
Beta	**0.3172**	**1.0000**	**0.3172**					
Risk Premium	**0.2850**	**0.0509**	**0.2850**					
Standard Deviation	**0.1693**	**0.2217**	**0.1693**					
Sharpe Ratio	**1.6827**	**0.2298**	**1.6827**					
Performance Measures								
Treynor Measure (*T*)	**0.8982**	**0.0509**	**0.8982**					
Jensen Measure (α)	**0.2688**	**0.0000**	**0.2688**					
Information Ratio Measure (*IR*)	**1.3819**	**0.0000**	**1.3819**					
Overall Performance	**0.2850**	**0.0509**	**0.2850**					
CAPM	**0.0662**	**0.1009**	**0.0662**					
Ratio of total risk ($\sigma p/\sigma m$)	**0.7640**	**1.0000**	**0.7640**					
CML	**0.0889**	**0.1009**	**0.0889**					
Selectivity (%)	**0.2688**	**0.0000**	**0.2688**					
Diversification Effect (%)	**-0.0228**	**0.0000**	**-0.0228**					
Net Selectivity (%)	**0.2916**	**0.0000**	**0.2916**					
net Risk Premium of Pf	**0.0162**	**0.0509**	**0.0162**					

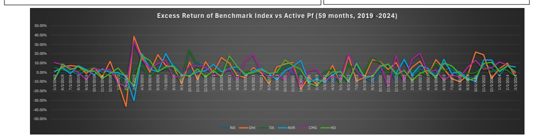


Data. Security Index Model

$$\text{Corr}(r_i, r_j) = \frac{\beta_i\beta_j\sigma_M^2}{\sigma_i\sigma_j} = \frac{\beta_i\sigma_M^2}{\sigma_i\sigma_M} \times \frac{\beta_j\sigma_M^2}{\sigma_j\sigma_M} = \text{Corr}(r_i, r_M) \times \text{Corr}(r_j, r_M) \qquad \text{Cov}(r_i, r_j) = \text{Cov}(\beta_i m + e_i, \beta_j m + e_j) = \beta_i\beta_j\sigma_m^2$$







Panel 1. Risk & Return Parameters in the Security Index Model

Estimates annualized		T-bill	RXI	DHI	TJX	NVR	CMG	HD	IEF
Expected excess return		0.0500	0.0534	0.3125	0.1265	0.1848	0.3085	0.1342	-0.0612
SD of Excess Return		0.0000	0.2217	0.4081	0.2383	0.2855	0.3392	0.2529	0.0772
Sharpe Ratio			0.2408	0.7657	0.5310	0.6474	0.9094	0.5308	-0.7920
SD of Residuals (e)			0.0000	0.4074	0.2380	0.2887	0.3297	0.1699	
SD of Systematic component			0.2217	0.0243	0.2380	0.0433	0.0800	0.1874	
Covariance			0.0491	-0.0054	0.0028	0.0472	-0.0177	0.0415	
Alpha (Non-market risk premium in the index model)			0.0000	0.3183	0.1235	0.1335	0.3278	0.0891	
Adjusted Alpha (a x avg. Market PE / Stock PE)			**0.0000**	**0.6000**	0.1058	0.1676	**0.1075**	0.0806	
Alpha in CAPM (10 yrs market premium)			0.0000	0.3275	0.1309	0.1313	0.3396	0.0882	
Adjusted Alpha in CAPM (a x avg. Market PE / Stock PE)			0.0000	0.6173	**0.1122**	**0.1649**	0.1113	**0.0797**	
Beta			1.0000	-0.1097	0.0561	0.9606	-0.3610	0.8453	
Correlation with Index			1.0000	-0.0596	0.0522	0.7459	-0.2359	0.7408	-0.1169
R Squared (Market Determination)			1.0000	0.0036	0.0027	0.5564	0.0556	0.5488	
1-R Squared (Firms Specific)			0.0000	0.9964	0.9973	0.4436	0.9444	0.4512	
Pf Style.	Value / Blend / Growth		Large Growth	Growth	Growth	Growth	Growth	Growth	
	Small / Medium / Large			Large	Large	Large	Large	Large	
	Sector (industry)			Consumer Disc	Consumer Disc	Consumer Disc	Consumer Disc	Consumer Disc	
	Themes			Construction	Retail	Construction	Restaurants	Home Retail	
Stock Info.	Current Stock Price (as of April 1)		167.6100	158.0000	96.6000	7907.8900	2907.0000	357.8700	
	EPS (TTM)			13.8900	3.8600	463.1200	44.4500	15.1000	
	PE Ratio (TTM) 20.4600		21.4400	11.3751	25.0259	17.0753	65.3993	23.7000	
	1y Forward Dividend ($)			1.2000	1.5000	0.0000	0.0000	9.0000	
	1y Forward Dividend Yield (%)			0.76%	1.55%	0.00%	0.00%	2.51%	
	1y Target Est. (Consensus)			163.62	111.6	7982.5	2811	385.91	
	1y Target return `			3.56%	15.53%	0.94%	-3.30%	7.84%	
Active Pf Weights* (Index model)			0.0000	0.3192	0.1749	0.1746	0.0873	0.2440	

Panel 2. Correlation and Covariance Matrixs in the Security Index Model

Correl (via Index)	RXI	DHI	TJX	NVR	CMG	HD
RXI	1.0000					
DHI	(0.0596)	1.0000				
TJX	0.0522	(0.0031)	1.0000			
NVR	0.7459	(0.0445)	0.0389	1.0000		
CMG	(0.2359)	0.0141	(0.0123)	(0.1760)	1.0000	
HD	0.7408	(0.0442)	0.0387	0.5526	(0.1748)	1.0000

Covariance (via Index)	RXI	DHI	TJX	NVR	CMG	HD
RXI	0.0491					
DHI	(0.0054)	0.1665				
TJX	0.0028	(0.0003)	0.0568			
NVR	0.0472	(0.0052)	0.0026	0.0815		
CMG	(0.0177)	0.0019	(0.0010)	(0.0177)	0.1151	
HD	0.0415	(0.0046)	0.0023	0.0399	(0.0150)	0.0640

Correl of Residuals	RXI	DHI	TJX	NVR	CMG	HD
RXI						
DHI		1.0000				
TJX		0.5984	1.0000			
NVR		(0.0530)	0.1087	1.0000		
CMG		0.6455	0.3944	(0.0384)	1.0000	
HD		0.0852	0.2326	0.2908	(0.0888)	1.0000

Panel 3. Price information. monthly rate of return and excess returns

60 months	Global Consumer Discretionary (RXI ETF)			D.R. Horton (DHI)					The TJX Companies (TJX)				
Dates	Prices	Monthly rate	Benchmark Exces return	Prices	Monthly rate	Exces return	Mkt Prem. Systematic component	Residuals. Unsystematic component	Prices	Monthly rate	Exces return	Mkt Prem. Systematic component	Residuals. Unsystematic component
4/1/19	113.81			40.53					46.99				
5/1/19	105.39	-7.39%	-7.81%	41.02	1.21%	0.80%	0.86%	-2.71%	49.63	5.61%	5.20%	-0.44%	2.98%
6/1/19	112.51	6.76%	6.34%	43.69	6.49%	6.08%	-0.70%	4.12%	51.21	3.18%	2.76%	0.36%	-0.25%
7/1/19	114.08	1.39%	0.97%	47.05	7.71%	7.29%	-0.11%	4.74%	51.59	0.75%	0.33%	0.05%	-2.37%
8/1/19	112.35	-1.51%	-1.93%	50.29	6.88%	6.47%	0.21%	3.60%	52.54	1.84%	1.42%	-0.11%	-1.12%
9/1/19	114.92	2.29%	1.87%	49.97	-0.65%	-1.06%	-0.21%	-3.51%	54.34	3.43%	3.01%	0.10%	0.25%
10/1/19	117.50	2.24%	1.83%	52.81	5.69%	5.27%	-0.20%	2.82%	57.62	6.04%	5.62%	0.10%	2.86%
11/1/19	118.48	0.83%	0.42%	50.49	-4.39%	-4.81%	-0.05%	-7.42%	57.78	0.28%	-0.14%	0.02%	-2.81%
12/1/19	120.72	1.89%	1.48%	56.67	12.23%	11.81%	-0.16%	9.32%	55.87	-3.31%	-3.72%	0.08%	-6.46%
1/1/20	118.45	-1.88%	-2.30%	50.99	-10.02%	-10.43%	0.25%	-13.34%	56.59	1.29%	0.87%	-0.13%	-1.65%
2/1/20	109.52	-7.54%	-7.96%	32.64	-35.99%	-36.41%	0.87%	-39.93%	45.41	-19.75%	-20.17%	-0.45%	-22.38%
3/1/20	91.22	-16.70%	-17.12%	45.33	38.88%	38.47%	1.88%	33.93%	46.59	2.59%	2.18%	-0.96%	0.48%
4/1/20	104.38	14.42%	14.00%	53.09	17.11%	16.69%	-1.54%	15.58%	50.11	7.56%	7.15%	0.79%	3.71%
5/1/20	112.12	7.42%	7.00%	53.43	0.64%	0.23%	-0.77%	-1.66%	48.02	-4.17%	-4.59%	0.39%	-7.63%
6/1/20	114.61	2.22%	1.80%	63.75	19.31%	18.90%	-0.20%	16.44%	49.38	2.83%	2.41%	0.10%	-0.34%
7/1/20	120.24	4.92%	4.50%	68.77	7.87%	7.46%	-0.49%	5.30%	52.04	5.39%	4.97%	0.25%	2.06%
8/1/20	131.87	9.67%	9.26%	73.06	6.24%	5.82%	-1.02%	4.18%	52.86	1.57%	1.15%	0.52%	-2.02%
9/1/20	130.68	-0.90%	-1.32%	64.54	-11.66%	-12.08%	0.14%	-14.88%	48.25	-8.72%	-9.13%	-0.07%	-11.71%
10/1/20	129.10	-1.21%	-1.62%	71.96	11.51%	11.09%	0.18%	8.26%	60.32	25.02%	24.60%	-0.09%	22.04%
11/1/20	144.51	11.94%	11.52%	66.57	-7.49%	-7.91%	-1.26%	-9.30%	64.86	7.53%	7.11%	0.65%	3.81%
12/1/20	150.65	4.25%	3.83%	74.40	11.76%	11.34%	-0.42%	9.11%	60.83	-6.22%	-6.64%	0.22%	-9.51%
1/1/21	151.17	0.34%	-0.07%	74.47	0.09%	-0.33%	0.01%	-2.99%	62.68	3.04%	2.63%	0.00%	-0.02%
2/1/21	153.23	1.36%	0.95%	86.55	16.22%	15.80%	-0.10%	13.25%	63.07	0.62%	0.20%	0.05%	-2.50%
3/1/21	158.43	3.39%	2.98%	95.45	10.29%	9.87%	-0.33%	7.55%	67.69	7.33%	6.92%	0.17%	4.10%
4/1/21	164.75	3.99%	3.57%	92.54	-3.05%	-3.47%	-0.39%	-5.73%	64.40	-4.87%	-5.29%	0.20%	-8.14%
5/1/21	163.90	-0.51%	-0.93%	87.93	-4.98%	-5.39%	0.10%	-8.15%	64.51	0.18%	-0.23%	-0.05%	-2.83%
6/1/21	166.58	1.64%	1.22%	92.86	5.60%	5.18%	-0.13%	2.66%	65.84	2.06%	1.65%	0.07%	-1.08%
7/1/21	165.30	-0.77%	-1.18%	93.04	0.20%	-0.22%	0.13%	-3.00%	69.59	5.68%	5.27%	-0.07%	2.68%
8/1/21	164.52	-0.47%	-0.89%	81.88	-12.00%	-12.41%	0.10%	-15.16%	63.37	-8.94%	-9.35%	-0.05%	-11.96%
9/1/21	160.94	-2.18%	-2.59%	87.05	6.31%	5.90%	0.28%	2.96%	62.90	-0.74%	-1.16%	-0.15%	-3.67%
10/1/21	175.29	8.92%	8.50%	95.27	9.44%	9.03%	-0.93%	7.31%	66.65	5.97%	5.55%	0.48%	2.42%
11/1/21	172.70	-1.48%	-1.90%	105.75	11.00%	10.59%	0.21%	7.73%	73.18	9.80%	9.39%	-0.11%	6.84%
12/1/21	174.91	1.28%	0.87%	87.19	-17.55%	-17.97%	-0.09%	-20.53%	69.38	-5.20%	-5.62%	0.05%	-8.32%
1/1/22	163.11	-6.75%	-7.17%	83.46	-4.28%	-4.70%	0.79%	-8.14%	63.72	-8.16%	-8.57%	-0.40%	-10.82%
2/1/22	153.08	-6.14%	-6.56%	73.01	-12.52%	-12.94%	0.72%	-16.31%	58.61	-8.01%	-8.43%	-0.37%	-10.71%
3/1/22	153.30	0.14%	-0.28%	68.19	-6.60%	-7.02%	0.03%	-9.70%	59.29	1.16%	0.74%	-0.02%	-1.90%
4/1/22	138.44	-9.69%	-10.11%	73.64	7.99%	7.57%	1.11%	3.81%	61.51	3.74%	3.32%	-0.57%	1.23%
5/1/22	136.20	-1.62%	-2.04%	65.06	-11.64%	-12.06%	0.22%	-14.94%	54.32	-11.68%	-12.10%	-0.11%	-14.64%
6/1/22	124.53	-8.57%	-8.98%	76.70	17.89%	17.47%	0.99%	13.83%	59.49	9.51%	9.09%	-0.50%	6.94%
7/1/22	139.31	11.87%	11.46%	69.94	-8.82%	-9.23%	-1.26%	-10.63%	60.64	1.95%	1.53%	0.64%	-1.77%
8/1/22	133.19	-4.40%	-4.81%	66.40	-5.05%	-5.47%	0.53%	-8.65%	60.71	0.10%	-0.31%	-0.27%	-2.70%
9/1/22	120.27	-9.70%	-10.11%	75.80	14.15%	13.73%	1.11%	9.97%	70.46	16.07%	15.65%	-0.57%	13.56%
10/1/22	122.99	2.26%	1.84%	84.79	11.86%	11.45%	-0.20%	9.00%	78.23	11.03%	10.61%	0.10%	7.85%
11/1/22	134.64	9.47%	9.05%	87.89	3.65%	3.23%	-0.99%	1.57%	78.11	-0.15%	-0.57%	0.51%	-3.73%
12/1/22	124.10	-7.83%	-8.25%	97.59	11.04%	10.62%	0.90%	7.06%	80.33	2.84%	2.42%	-0.46%	0.23%
1/1/23	143.23	15.42%	15.00%	91.45	-6.29%	-6.71%	-1.65%	-7.72%	75.17	-6.43%	-6.84%	0.84%	-10.34%
2/1/23	137.66	-3.89%	-4.31%	96.84	5.90%	5.48%	0.47%	2.36%	77.18	2.68%	2.26%	-0.24%	-0.15%
3/1/23	143.68	4.37%	3.95%	108.87	12.42%	12.00%	-0.43%	9.78%	77.63	0.59%	0.17%	0.22%	-2.70%
4/1/23	142.36	-0.92%	-1.33%	105.91	-2.71%	-3.13%	0.15%	-5.93%	75.63	-2.58%	-2.99%	-0.07%	-5.57%
5/1/23	141.56	-0.56%	-0.98%	120.91	14.16%	13.75%	0.11%	10.99%	83.87	10.89%	10.47%	-0.05%	7.87%
6/1/23	155.10	9.56%	9.15%	126.21	4.38%	3.96%	-1.00%	2.31%	85.59	2.05%	1.64%	0.51%	-1.53%
7/1/23	160.70	3.61%	3.20%	118.26	-6.30%	-6.71%	-0.35%	-9.02%	91.47	6.88%	6.46%	0.18%	3.63%
8/1/23	154.03	-4.15%	-4.57%	107.00	-9.52%	-9.94%	0.50%	-13.09%	88.25	-3.52%	-3.94%	-0.26%	-6.33%
9/1/23	145.98	-5.23%	-5.64%	103.94	-2.86%	-3.27%	0.62%	-6.55%	87.45	-0.91%	-1.33%	-0.32%	-3.66%
10/1/23	138.10	-5.40%	-5.81%	127.11	22.29%	21.87%	0.64%	18.58%	87.49	0.05%	-0.37%	-0.33%	-2.70%
11/1/23	150.97	9.32%	8.90%	151.67	19.32%	18.90%	-0.98%	17.23%	93.49	6.86%	6.44%	0.50%	3.29%
12/1/23	158.43	4.94%	4.52%	142.62	-5.97%	-6.38%	-0.50%	-8.54%	94.59	1.17%	0.76%	0.25%	-2.15%
1/1/24	154.35	-2.58%	-2.99%	149.13	4.57%	4.15%	0.33%	1.17%	98.80	4.46%	4.04%	-0.17%	1.56%
2/1/24	165.92	7.50%	7.08%	164.55	10.34%	9.92%	-0.78%	8.04%	101.42	2.65%	2.23%	0.40%	-0.82%
3/1/24	167.88	1.18%	0.76%	157.82	-4.09%	-4.51%	-0.08%	-7.08%	97.28	-4.08%	-4.50%	0.04%	-7.19%

60 months	NVR, Inc. (NVR)					Chipotle Mexican Grill (CMG)				
Dates	Prices	Monthly rate	Exces return	Mkt Prem. Systematic component	Residuals. Unsystematic component	Prices	Monthly rate	Exces return	Mkt Prem. Systematic component	Residuals. Unsystematic component
4/1/19	3152.48					659.97				
5/1/19	3201.57	1.56%	1.14%	-7.50%	7.53%	732.88	11.05%	10.63%	2.82%	5.08%
6/1/19	3370.25	5.27%	4.85%	0.03%	3.71%	795.53	8.55%	8.13%	-2.29%	7.69%
7/1/19	3344.14	-0.77%	-1.19%	0.26%	-2.56%	838.42	5.39%	4.97%	-0.35%	2.59%
8/1/19	3599.00	7.62%	7.20%	0.12%	5.97%	840.47	0.24%	-0.17%	0.70%	-3.60%
9/1/19	3717.35	3.29%	2.87%	-0.03%	1.79%	778.16	-7.41%	-7.83%	-0.68%	-9.89%
10/1/19	3636.59	-2.17%	-2.59%	-0.31%	-3.39%	813.92	4.60%	4.18%	-0.66%	2.11%
11/1/19	3791.89	4.27%	3.85%	0.31%	2.43%	837.11	2.85%	2.43%	-0.15%	-0.15%
12/1/19	3808.41	0.44%	0.02%	0.71%	-1.80%	866.76	3.54%	3.13%	-0.53%	0.93%
1/1/20	3816.97	0.22%	-0.19%	0.18%	-1.49%	773.58	-10.75%	-11.17%	0.83%	-14.73%
2/1/20	3667.18	-3.92%	-4.34%	2.46%	-7.91%	654.40	-15.41%	-15.82%	2.87%	-21.43%
3/1/20	2569.11	-29.94%	-30.36%	-0.05%	-31.42%	878.55	34.25%	33.84%	6.18%	24.92%
4/1/20	3100.00	20.66%	20.25%	-0.41%	19.54%	1003.91	14.27%	13.85%	-5.05%	16.18%
5/1/20	3221.61	3.92%	3.51%	0.84%	1.56%	1052.36	4.83%	4.41%	-2.53%	4.21%
6/1/20	3258.75	1.15%	0.74%	0.04%	-0.41%	1155.16	9.77%	9.35%	-0.65%	7.27%
7/1/20	3930.15	20.60%	20.19%	-0.23%	19.30%	1310.28	13.43%	13.01%	-1.62%	11.90%
8/1/20	4168.34	6.06%	5.64%	0.22%	4.31%	1243.71	-5.08%	-5.50%	-3.34%	-4.89%
9/1/20	4083.12	-2.04%	-2.46%	1.28%	-4.86%	1201.48	-3.40%	-3.81%	0.48%	-7.02%
10/1/20	3953.09	-3.18%	-3.60%	-2.42%	-2.30%	1289.43	7.32%	6.90%	0.59%	3.59%
11/1/20	3997.18	1.12%	0.70%	-0.42%	0.00%	1386.71	7.54%	7.13%	-4.16%	8.56%
12/1/20	4079.86	2.07%	1.65%	1.04%	-0.50%	1480.00	6.73%	6.31%	-1.38%	4.96%
1/1/21	4446.48	8.99%	8.57%	0.00%	7.45%	1442.00	-2.57%	-2.98%	0.03%	-5.74%
2/1/21	4500.84	1.22%	0.81%	0.27%	-0.58%	1420.82	-1.47%	-1.89%	-0.34%	-4.28%
3/1/21	4710.93	4.67%	4.25%	-0.45%	3.59%	1492.03	5.01%	4.60%	-1.07%	2.94%
4/1/21	5018.10	6.52%	6.10%	0.89%	4.10%	1371.98	-8.05%	-8.46%	-1.29%	-9.91%
5/1/21	4887.23	-2.61%	-3.02%	0.31%	-4.45%	1550.34	13.00%	12.58%	0.34%	9.52%
6/1/21	4973.30	1.76%	1.34%	0.12%	0.11%	1863.44	20.20%	19.78%	-0.44%	17.49%
7/1/21	5222.60	5.01%	4.60%	-0.29%	3.78%	1903.33	2.14%	1.72%	0.43%	-1.44%
8/1/21	5179.94	-0.82%	-1.23%	1.31%	-3.66%	1817.52	-4.51%	-4.93%	0.32%	-7.98%
9/1/21	4794.08	-7.45%	-7.87%	0.40%	-9.38%	1779.03	-2.12%	-2.53%	0.94%	-6.20%
10/1/21	4894.80	2.10%	1.68%	-0.27%	0.84%	1643.41	-7.62%	-8.04%	-3.07%	-7.70%
11/1/21	5225.34	6.75%	6.34%	-0.75%	5.97%	1748.25	6.38%	5.96%	0.68%	2.55%
12/1/21	5908.87	13.08%	12.66%	0.91%	10.64%	1485.58	-15.02%	-15.44%	-0.31%	-17.86%
1/1/22	5327.22	-9.84%	-10.26%	1.19%	-12.56%	1523.35	2.54%	2.13%	2.59%	-3.19%
2/1/22	4958.44	-6.92%	-7.34%	1.18%	-9.63%	1582.03	3.85%	3.44%	2.37%	-1.66%
3/1/22	4467.27	-9.91%	-10.32%	0.21%	-11.64%	1455.61	-7.99%	-8.41%	0.10%	-11.24%
4/1/22	4376.21	-2.04%	-2.46%	-0.14%	-3.43%	1402.55	-3.65%	-4.06%	3.65%	-10.44%
5/1/22	4450.62	1.70%	1.28%	1.61%	-1.43%	1307.26	-6.79%	-7.21%	0.74%	-10.68%
6/1/22	4004.14	-10.03%	-10.45%	-0.76%	-10.80%	1564.22	19.66%	19.24%	3.24%	13.26%
7/1/22	4393.10	9.71%	9.30%	0.19%	7.99%	1596.80	2.08%	1.67%	-4.14%	3.07%
8/1/22	4140.06	-5.76%	-6.18%	0.30%	-7.59%	1502.76	-5.89%	-6.31%	1.74%	-10.78%
9/1/22	3987.08	-3.70%	-4.11%	-1.49%	-3.74%	1498.33	-0.29%	-0.71%	3.65%	-7.09%
10/1/22	4237.75	6.29%	5.87%	-0.86%	5.62%	1626.96	8.58%	8.17%	-0.67%	6.10%
11/1/22	4639.01	9.47%	9.05%	0.41%	7.53%	1387.49	-14.72%	-15.14%	-3.27%	-14.60%
12/1/22	4612.58	-0.57%	-0.99%	-0.03%	-2.07%	1646.38	18.66%	18.24%	2.98%	12.53%
1/1/23	5270.00	14.25%	13.84%	1.13%	11.59%	1491.08	-9.43%	-9.85%	-5.42%	-7.16%
2/1/23	5173.62	-1.83%	-2.25%	0.02%	-3.37%	1708.29	14.57%	14.15%	1.55%	9.86%
3/1/23	5572.19	7.70%	7.29%	0.30%	5.88%	2067.62	21.03%	20.62%	-1.43%	19.31%
4/1/23	5840.00	4.81%	4.39%	0.61%	2.67%	2076.49	0.43%	0.01%	0.48%	-3.20%
5/1/23	5554.22	-4.89%	-5.31%	-0.86%	-5.56%	2139.00	3.01%	2.59%	0.35%	-0.49%
6/1/23	6350.62	14.34%	13.92%	0.17%	12.64%	1962.28	-8.26%	-8.68%	-3.30%	-8.11%
7/1/23	6306.44	-0.70%	-1.11%	-0.40%	-1.83%	1926.64	-1.82%	-2.23%	-1.15%	-3.81%
8/1/23	6377.33	1.12%	0.71%	0.70%	-1.10%	1831.83	-4.92%	-5.34%	1.65%	-9.72%
9/1/23	5963.30	-6.49%	-6.91%	0.40%	-8.42%	1942.20	6.03%	5.61%	2.04%	0.84%
10/1/23	5412.62	-9.23%	-9.65%	0.30%	-11.06%	2202.25	13.39%	12.97%	2.10%	8.14%
11/1/23	6155.39	13.72%	13.31%	-0.36%	12.55%	2286.96	3.85%	3.43%	-3.21%	3.91%
12/1/23	7000.45	13.73%	13.31%	0.24%	11.96%	2408.77	5.33%	4.91%	-1.63%	3.81%
1/1/24	7075.29	1.07%	0.65%	-0.17%	-0.29%	2688.77	11.62%	11.21%	1.08%	7.40%
2/1/24	7625.57	7.78%	7.36%	0.09%	6.16%	2906.77	8.11%	7.69%	-2.56%	7.52%
3/1/24	8099.96	6.22%	5.80%	0.79%	3.90%	2895.58	-0.38%	-0.80%	-0.28%	-3.26%

60 months	The Home Depot (HD)					Equity Pf		Bond Pf (IEF)		
Dates	Prices	Monthly rate	Exces return	Mkt Prem. Systematic component	Residuals. Unsystematic component	Adjusted Price of Equity Pf (Back data)	Active Pf Exces return (Back data)	Prices	Monthly rate	Exces return
4/1/19	180.36					113.81		99.53		
5/1/19	168.09	-6.80%	-7.22%	-6.60%	-1.36%	114.41	0.53%	100.74	1.22%	0.81%
6/1/19	184.14	9.54%	9.13%	5.36%	3.03%	121.51	6.21%	100.80	0.06%	-0.36%
7/1/19	190.53	3.47%	3.05%	0.82%	1.49%	125.59	3.36%	104.79	3.95%	3.53%
8/1/19	203.21	6.65%	6.24%	-1.63%	7.13%	131.97	5.08%	103.55	-1.18%	-1.59%
9/1/19	206.87	1.80%	1.39%	1.58%	-0.94%	132.42	0.34%	103.76	0.20%	-0.21%
10/1/19	210.43	1.72%	1.30%	1.54%	-0.98%	136.26	2.90%	103.05	-0.68%	-1.10%
11/1/19	197.81	-6.00%	-6.41%	0.35%	-7.51%	133.21	-2.24%	101.96	-1.06%	-1.48%
12/1/19	195.90	-0.97%	-1.38%	1.25%	-3.37%	137.28	3.06%	105.79	3.76%	3.34%
1/1/20	205.93	5.12%	4.70%	-1.95%	5.91%	133.11	-3.04%	108.78	2.82%	2.41%
2/1/20	196.67	-4.50%	-4.91%	-6.72%	1.07%	108.50	-18.49%	112.85	3.74%	3.32%
3/1/20	168.56	-14.29%	-14.71%	-14.47%	-0.98%	115.79	6.72%	113.16	0.28%	-0.14%
4/1/20	199.79	18.53%	18.11%	11.84%	5.53%	134.02	15.74%	113.54	0.34%	-0.08%
5/1/20	225.83	13.03%	12.62%	5.92%	5.95%	138.51	3.35%	113.60	0.05%	-0.37%
6/1/20	227.67	0.82%	0.40%	1.52%	-1.87%	148.89	7.50%	114.58	0.86%	0.45%
7/1/20	242.73	6.61%	6.20%	3.80%	1.65%	162.92	9.42%	113.48	-0.96%	-1.38%
8/1/20	260.60	7.36%	6.95%	7.83%	-1.62%	169.86	4.26%	113.86	0.34%	-0.08%
9/1/20	253.90	-2.57%	-2.99%	-1.12%	-2.62%	158.06	-6.94%	112.30	-1.37%	-1.79%
10/1/20	245.13	-3.45%	-3.87%	-1.37%	-3.24%	168.93	6.87%	112.68	0.34%	-0.08%
11/1/20	254.96	4.01%	3.60%	9.74%	-6.88%	169.50	0.34%	112.34	-0.30%	-0.72%
12/1/20	244.13	-4.25%	-4.67%	3.24%	-8.65%	173.16	2.16%	111.25	-0.97%	-1.38%
1/1/21	250.27	2.51%	2.10%	-0.06%	1.42%	176.81	2.10%	108.55	-2.43%	-2.84%
2/1/21	238.73	-4.61%	-5.02%	0.80%	-6.57%	183.58	3.83%	105.97	-2.38%	-2.80%
3/1/21	282.08	18.16%	17.74%	2.52%	14.48%	201.63	9.83%	107.03	1.00%	0.58%
4/1/21	300.98	6.70%	6.28%	3.02%	2.52%	201.28	-0.17%	107.48	0.42%	0.01%
5/1/21	296.55	-1.47%	-1.89%	-0.79%	-1.84%	197.96	-1.65%	108.57	1.02%	0.60%
6/1/21	296.53	-0.01%	-0.42%	1.03%	-2.20%	205.48	3.80%	110.74	1.99%	1.58%
7/1/21	306.78	3.46%	3.04%	-1.00%	3.30%	210.71	2.55%	110.30	-0.39%	-0.81%
8/1/21	304.90	-0.61%	-1.03%	-0.75%	-1.02%	197.02	-6.50%	108.54	-1.60%	-2.02%
9/1/21	306.85	0.64%	0.22%	-2.19%	1.67%	197.30	0.14%	108.05	-0.44%	-0.86%
10/1/21	349.26	13.82%	13.40%	7.18%	5.48%	210.55	6.72%	109.23	1.09%	0.67%
11/1/21	376.38	7.77%	7.35%	-1.60%	8.21%	228.32	8.44%	108.56	-0.62%	-1.04%
12/1/21	389.91	3.59%	3.18%	0.73%	1.70%	216.72	-5.08%	106.44	-1.95%	-2.37%
1/1/22	346.21	-11.21%	-11.62%	-6.06%	-6.31%	200.59	-7.44%	106.01	-0.40%	-0.82%
2/1/22	297.96	-13.94%	-14.35%	-5.55%	-9.55%	180.36	-10.09%	101.72	-4.06%	-4.47%
3/1/22	282.39	-5.22%	-5.64%	-0.23%	-6.15%	169.49	-6.02%	97.39	-4.25%	-4.67%
4/1/22	285.11	0.96%	0.55%	-8.54%	8.35%	173.47	2.35%	97.99	0.61%	0.19%
5/1/22	287.34	0.78%	0.37%	-1.72%	1.35%	162.58	-6.28%	97.14	-0.87%	-1.28%
6/1/22	260.31	-9.41%	-9.82%	-7.59%	-2.97%	170.10	4.63%	99.99	2.93%	2.52%
7/1/22	287.43	10.42%	10.00%	9.68%	-0.43%	172.70	1.53%	96.11	-3.88%	-4.29%
8/1/22	275.47	-4.16%	-4.58%	-4.07%	-1.25%	164.84	-4.55%	91.56	-4.74%	-5.15%
9/1/22	265.27	-3.70%	-4.12%	-8.55%	3.69%	173.64	5.34%	90.21	-1.47%	-1.89%
10/1/22	284.68	7.32%	6.90%	1.56%	4.60%	189.15	8.93%	93.45	3.59%	3.17%
11/1/22	311.46	9.41%	8.99%	7.65%	0.60%	195.55	3.39%	91.90	-1.66%	-2.08%
12/1/22	305.48	-1.92%	-2.34%	-6.97%	3.89%	204.67	4.66%	95.56	3.99%	3.57%
1/1/23	313.52	2.63%	2.21%	12.68%	-11.21%	202.13	-1.24%	92.24	-3.48%	-3.89%
2/1/23	286.80	-8.52%	-8.94%	-3.64%	-6.04%	203.76	0.81%	95.68	3.73%	3.31%
3/1/23	285.42	-0.48%	-0.90%	3.34%	-4.98%	217.45	6.71%	96.47	0.82%	0.41%
4/1/23	292.77	2.57%	2.16%	-1.13%	2.54%	216.95	-0.23%	95.04	-1.48%	-1.90%
5/1/23	276.12	-5.69%	-6.10%	-0.83%	-6.02%	225.69	4.03%	93.85	-1.25%	-1.67%
6/1/23	304.79	10.38%	9.96%	7.73%	1.49%	238.46	5.66%	93.23	-0.66%	-1.07%
7/1/23	327.55	7.47%	7.05%	2.70%	3.61%	239.21	0.32%	92.54	-0.74%	-1.16%
8/1/23	324.08	-1.06%	-1.48%	-3.86%	1.64%	228.30	-4.56%	89.63	-3.14%	-3.56%
9/1/23	298.36	-7.94%	-8.35%	-4.77%	-4.33%	219.09	-4.03%	87.90	-1.93%	-2.35%
10/1/23	281.11	-5.78%	-6.20%	-4.91%	-2.03%	229.72	4.85%	91.89	4.54%	4.12%
11/1/23	309.55	10.12%	9.70%	7.52%	1.43%	257.64	12.15%	95.08	3.48%	3.06%
12/1/23	344.49	11.29%	10.87%	3.82%	6.30%	266.65	3.50%	95.69	0.64%	0.22%
1/1/24	350.86	1.85%	1.43%	-2.53%	3.22%	275.92	3.47%	93.47	-2.32%	-2.74%
2/1/24	378.35	7.83%	7.42%	5.98%	0.69%	296.12	7.32%	94.13	0.71%	0.30%
3/1/24	381.32	0.79%	0.37%	0.65%	-1.02%	292.59	-1.19%	92.87	-1.35%	-1.76%

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.059595692
R Square	0.003551646
Adjusted R Squa	-0.013929904
Standard Error	0.118622538
Observations	59

ANOVA

	df	*SS*	*MS*	*F*
Regression	1	0.002858803	0.002858803	0.203165421
Residual	57	0.802064472	0.014071307	
Total	58	0.804923275		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.026501095	0.015480835	1.711864726	0.092358075
X Variable 1	-0.109718049	0.243418276	-0.45073875	0.653887828

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.052206004
R Square	0.002725467
Adjusted R Squa	-0.014770578
Standard Error	0.069302896
Observations	59

ANOVA

	df	*SS*	*MS*	*F*
Regression	1	0.000748176	0.000748176	0.155776174
Residual	57	0.273764807	0.004802891	
Total	58	0.274512983		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.010271784	0.009044375	1.135709645	0.260830932
X Variable 1	0.056129073	0.142212362	0.394684905	0.694548442

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.745926962
R Square	0.556407032
Adjusted R Squa	0.548624699
Standard Error	0.055364813
Observations	59

ANOVA

	df	*SS*	*MS*	*F*
Regression	1	0.219154545	0.219154545	71.49617585
Residual	57	0.174719961	0.003065262	
Total	58	0.393874506		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.011125639	0.007225385	1.53979868	0.129142964
X Variable 1	0.960641204	0.113610849	8.455541133	1.20997E-11

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.23588503
R Square	0.055641747
Adjusted R Squa	0.039074059
Standard Error	0.096000639
Observations	59

ANOVA

	df	*SS*	*MS*	*F*
Regression	1	0.030951884	0.030951884	3.358449599
Residual	57	0.525318995	0.009216123	
Total	58	0.556270879		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.027281285	0.012528564	2.177526909	0.033595139
X Variable 1	-0.361018545	0.196997219	-1.832607323	0.072086021

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.740835329
R Square	0.548836984
Adjusted R Squa	0.540921844
Standard Error	0.049466943
Observations	59

ANOVA

	df	*SS*	*MS*	*F*
Regression	1	0.169673839	0.169673839	69.34014322
Residual	57	0.139477774	0.002446978	
Total	58	0.309151613		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0.00742311	0.006455684	1.149856448	0.255004648
X Variable 1	0.845266025	0.101508181	8.327072909	1.97252E-11

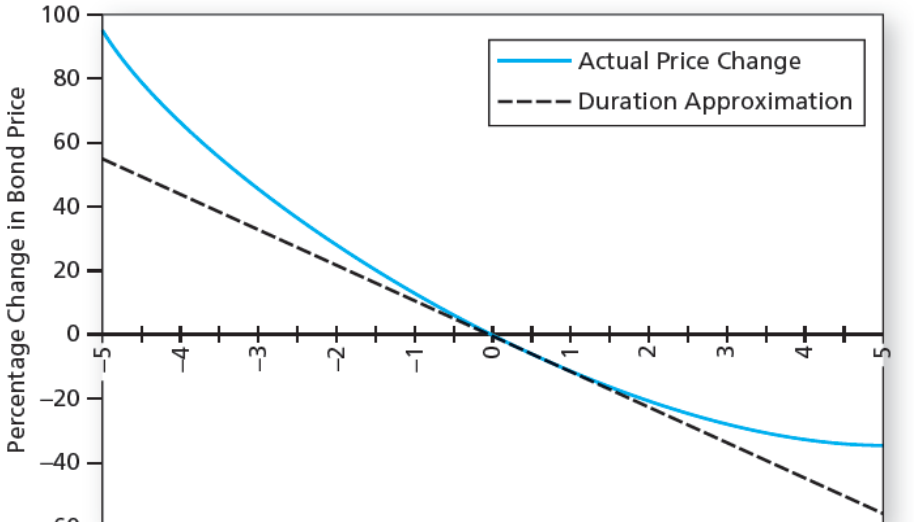
Calculate the approximate price change for a BOND Pf using only its D* and using D* and Convexity

LQD has the following characteristics:		
Maturity	8.47	
Coupon ($100 par)	2.75%	
Yield to maturity	4.31%	
Coupon (frequency)	Semiannual	
Convexity (C)	**0.62**	
Current Bond Price	**$89.03**	=PV(C7/2,C5*2,-C6/2*100,-100)
Modified Duration (D*)	**6.40063**	=MDURATION(DATE(2000,1,1),DATE(2007,4,3),C6,C7,2)

Changes in YTM	**-1%**	
with D* only	6.4006%	=-C11*-1%
Bond Price change	94.7260	=C10*(1+C14)
with D* and Convexity	**6.4037%**	=C14+1/2*C9*-1%^2
Bond Price change	**94.7288**	=C10*(1+C16)

$$\frac{\Delta P}{P} = -D^{*}\Delta y$$

$$\frac{DP}{P} = -D^{*}Dy + \frac{1}{2}\times \text{Convexity} \times (Dy)^{2}$$




−60
Change in Yield to Maturity (%)