

Analysis of a Real Estate Investment Trust (REIT)

Objective: The objective of this assignment is to introduce students to how to analyze and value real estate investment trusts aka REITs (pronounced R-E-E-T-s) using several methods commonly used by Wall Street analysts. As part of the analysis process, students will learn how to use of information from a firm's Conference Call and a REIT's 10-K¹.

Subject Firm: [Feldman Mall Properties](#), Inc. (Pink Sheet: FMLP), was formed to continue the business of Feldman Equities of Arizona, LLC founded in 1985 by Larry and Edward Feldman. The REIT completed its IPO on December 15, 2003 but effectively started operations in January 2005 . FMP priced its initial public offering of 10,666,667 shares of its common stock at \$13.00 per share for total net proceeds, after payment of expenses related to the offering, of approximately \$124.8 million. The REIT's underwriters were granted an option to purchase, within 30 days, up to 1,600,000 additional shares (additional \$19.3 million of net proceeds) for the purpose of covering over allotments, if any. The shares were offered through Friedman, Billings, Ramsey & Co. as sole bookrunning manager and RBC Capital Markets Corporation and BB&T Capital Markets, a division of Scott & Stringfellow, Inc., as co-managers. Given its micro market capitalization, Feldman was regarded as the smallest public REIT offering when it started trading on the NYSE (ticker: FMP). Proceeds from the IPO were used to fund the firm's initial property acquisitions. The REIT is a fully integrated company with in-house property management, leasing and redevelopment capabilities.



Colonie Center Mall, Albany, NY

Feldman's growth strategy involves opportunistically acquiring underperforming², well-located Class B regional malls in major markets or strong secondary markets with strong demographics, and improving their performance through redevelopment, renovation, re-tenanting and repositioning to a Class A mall. Techniques to achieve this include architectural redesign, creative layout, enlarging footage, increasing tenant quality and converting the mall into a dining and entertainment "town center". Once redevelopment is completed, FMP intends to cash out its equity at a profit by

¹A 10-K report is similar to the annual report, except that it contains more detailed information about the company's business, finances, and management. It also includes the bylaws of the company, other legal documents, and information about any lawsuits in which the company is involved. All publicly traded companies are required to file a 10-K report each year to the SEC.

²For dead malls waiting to be revitalized, visit <http://www.deadmalls.com/>. According to Feldman Mall Properties "one-half or approximately 550 of the 1,100 enclosed shopping malls in the U.S. are underperforming due to passive ownership and intense retail competition. As a result, there is an opportunity to acquire well-located underperforming malls at favorable pricing."



Foothills Mall, Tucson, AZ

contributing its malls into joint ventures or sell them outright while maintaining the management and leasing platform to enhance equity returns. Any gain from cashing out its equity may be either passed on to the REIT stockholders as a special dividend, or it may be reinvested into new acquisitions thus recycling Feldman's capital by harvesting mature assets.

The REIT's acquisition strategy targets malls having more than 500,000 square feet and typically one million square feet that can be acquired at significant discounts to replacement costs. Malls are acquired at average going in unleveraged yields of 7.00% to 7.75%. The mall must be located in a densely populated (500,000+) major market with excellent access to transportation arteries. They selectively plan to use joint ventures to enhance equity returns through fees and "promoted" interest. The format used for acquisitions requires more significant redevelopment capital. Feldman intends to sell the stabilized malls at yields below 7% or refinance the mortgage at a larger level and maintain full mall ownership.

According to management, Feldman Mall Properties is unique in that it plans to offer above average dividend yields achieved through a "hands on" management approach to each asset. In contrast to other mall REITs, income growth occurs not from acquisitions but rather through an exclusively focus on redevelopment and cap rate compression on asset disposition. Disposition is used to monetize assets and recycle capital. In summary, FMP is not an acquisition-driven company; it is a redevelopment driven company focused on creating value one mall at a time and in the process growing net asset value (NAV) per share.

The Company's current portfolio, including non-owned anchor tenants, consists of seven regional malls aggregating approximately 7.1 million square feet of which the Company owns approximately 4.7 million square feet. The seven malls are located in the following states: Arizona, Florida, Illinois, New York, Ohio, Pennsylvania and Texas.

Mall	Market	Total S.F.⁽¹⁾	Built	Date Acquired
Foothills Mall	Tucson, AZ	700,000	1983	April 2002
Harrisburg Mall ⁽²⁾	Harrisburg, PA	900,000	1969	October 2003
Stratford Square	Chicago Suburb	1,300,000	1966	December 2004
Colonie Center	Albany, NY	1,300,000	1969	February 2005
Tallahassee Mall ⁽³⁾	Tallahassee, FL	960,000	1971	June 2005
Northgate Mall	Cincinnati Suburb	1,100,000	1972	July 2005
Golden Triangle Mall	Dallas Suburb	765,000	1980	April 2006
		7,025,000		

(1) Total s.f. includes rentable square feet and the square feet occupied by non-owned anchor tenants.

(2) Company's effective ownership percentage is 25% and may be increased up to 47.5% subject to the achievement of certain property operating performance criteria.

(3) Leaseholder interest.

Competitors: Mall competitors include Glimcher Realty Trust (GRT), Pennsylvania Real Estate Investment Trust (PEI), CBL & Associates Properties (CBL), Macerich (MAC), General Growth Properties (GGP), and Simon Property Group (SPG).

Assignment: Download the real estate data from my website (REITVal2009.xls). Use the downloaded spreadsheet to answer the following questions. Since you will most likely use this case as an example of what you can do for a firm, please use a Wall Street Investment Banking format/presentation style for your report. Please attach the applicable portion of your spreadsheet results in an appendix to your report in addition to reporting the salient results in the main section of your report. ***This is an individual assignment.***

1. Ratio Analysis of REITs (15 points). Calculate and analyze the ratios for Feldman Mall Properties relative to its peer group using the "1. Ratio Analysis (Annual)" worksheet. Fill in the cells highlighted in yellow. Please read Key Ratios for Rating REITs and Other Commercial Property Firms, April 2007 by Moody's Investor Service, Chapter 14, Financial Analysis of REIT Securities by Louis Taylor, and Industry Surveys: Real Estate Investment Trusts, December 11, 2008 by Standard and Poor's prior to doing your analysis. Financial information on each REIT is provided in the worksheets labeled "Feldman (Annual)", "Glimcher (Annual)", "PennREIT (Annual)", "CBL (Annual)", "Macerich (Annual)", "General Growth (Annual)", and "Simon Properties (Annual)". The peer group ratios represent the average ratios of the comparable Mall REITs. Use the AVERAGE command in Excel to calculate the mean³. Your analysis should include but not be limited to addressing the following questions.
 - a. Operating Efficiency: How efficiently is the management of Feldman managing its REIT relative to other Mall REITs on average?
 - b. Liquidity and Funding: Is Feldman's dividend payout policy prudent. Why or why not?
 - c. Adequacy of Cash Flows: When did Feldman become insolvent? How does the Default Point and Debt Service Coverage Ratio for Feldman compare with its peers? Please discuss what the implications of this are. Using the "Feldman (Quarterly)" worksheet prepare a graph showing a quarterly time series of the Recurring EBITDA/ Interest Expense + Pref. Dividends. Based on this graph, when did Feldman start to experience problems in meeting their debt obligations?
 - d. Leverage and Capital Structure: How does Feldman's capital structure compare to that of its peers e.g., is it more conservative or more aggressive? Which metric conveys more information about its debt structure? Would you prefer one over the other or should they be used in tandem? Please explain. What do these metrics portend in terms of its financial stability and Feldman's ability to raise additional

³Example: Rental Operating Expense/Rental Revenue ratio in cell H6 = AVERAGE(Z6,AF6,AL6,AR6,AX6) for the Peer Group Excluding Glimcher.

capital/access capital? Can Feldman access the line of credit/revolver (see Credit Lines Drawn/Available under Liquidity and Funding) for financing in the short run? (Hint: For conditions involved with using the Line of Credit please read the applicable portion of the 10-K). In looking at the amount of debt that REITs will need to de-lever by (reduce their debt by) when their loans are up for renegotiation, analyst frequently use the inverse of the cap rate ($1/\text{cap rate}$) which is known as the net income multiplier and multiply this multiplier by the anticipated loan to value ratio (LTVR) to obtain the Imputed Debt to EBITDA multiple in the real asset market. They then compare this multiple to the Debt to EBITDA multiple in the capital market to see to what extent a REIT or an industry sector must reduce their debt levels by. Use the "Regional Mall CapRates" worksheet and calculate the average of the cap rates located in column N for the period from June 2006 through February 2008. Assuming that banks will require a lower LTVR of 50% going forward, how much will Feldman have to reduce its total debt by so that Total Debt/EBITDA in the capital market is equal to Total Debt/EBITDA in the real asset market (Use FMLP's ratio for 2007 since 2008 is NMF)? Is there any mall REIT that does not have to reduce its total debt? A worksheet labeled "1a. Debt to EBITDA Analysis" is provided to help you calculate Total Debt/EBITDA in the real asset market.



Tallahassee Mall, Florida

- e. Profitability: How does Feldman's profitability compare to its peers in terms of its profit margin and market-based return on equity? Both Feldman's profit margin and market-based return on equity have declined over time in contrast to its peer group which has experienced relatively constant profit margins and an increasing market-based return on equity.

What happened in 2007 that is consistent with/tends to support your ratio analysis? (Hint: See Feldman Mall Properties 2007Q2 Conference Call)

2. Debt Maturity (20 points): Using the 10-K for the fiscal year ending December 31, 2007 in conjunction with the "2a. Debt Maturity (Feldman)" worksheet, fill in the cells **highlighted in yellow**. Next, complete the "2b. Comparative Debt Maturities" worksheet using the information provided in the "REIT Debt Maturities" worksheet⁴. Compare the debt maturity of Feldman Mall Properties with debt maturity structure of its Mall Peer Group. Is FMLP's debt maturity comparable? Why or why not? What does the debt maturity structure of FMLP relative to its Peer Group suggest from a financing standpoint? What will happen if Feldman is unable to obtain financing. Can they finance their debt internally? If not, what is their likely strategy?
3. Relative Wealth (5 points): Calculate and graph the relative wealth index for Feldman Mall Properties and the other Mall REITs using the worksheets labeled "3a. Rel Wealth Calc (EREIT)" and "3b. Rel Wealth Calc (RTLREIT)". In constructing your

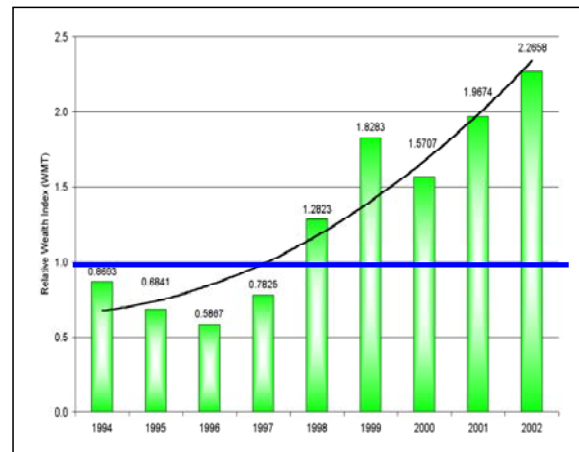
⁴This information was obtained from the various mall REIT 10-Ks to expedite this analysis.

Column graph, show the values of your Data Labels. Next, add a trendline to this Column graph. To add a trendline, right click on mouse after positioning the cursor over a bar in the bar chart and click on the Trend/ Regression Type. Here we will use a polynomial regression. An example for WalMart (WMT) follows:

Illustration of Relative Wealth Graph for Wal-Mart:

DATE	WalMart	SP500	DATE	1+ r(WMT)	1+ r(SP500)	Cum(1+r(WMT))	Cum(1+r(SP500))	Ratio Cum(1+r(WMT))/ Cum(1+r(SP500))
19940131	0.06	0.0325	19940131	1.06	1.0325	1	1	1.0000
19940228	0.07075	-0.03005	19940228	1.07075	0.96995	1.134995	1.001473375	1.1333
19940331	-0.08661	-0.04575	19940331	0.91339	0.95425	1.036693083	0.955655968	1.0848
19940429	-0.02415	0.01153	19940429	0.97585	1.01153	1.011656945	0.966674681	1.0465
19940531	-0.06931	0.01242	19940531	0.93069	1.01242	0.941539002	0.978680781	0.9620
19940630	0.03372	-0.02681	19940630	1.03372	0.97319	0.973287697	0.952442349	1.0219
19940729	0.03093	0.03147	19940729	1.03093	1.03147	1.003391486	0.98241571	1.0214
19940831	-0.0133	0.03764	19940831	0.9867	1.03764	0.990046379	1.019393837	0.9712
19940930	-0.05076	-0.0269	19940930	0.94924	0.9731	0.939791625	0.991972143	0.9474
19941031	0.00535	0.02083	19941031	1.00535	1.02083	0.94481951	1.012634923	0.9330
19941130	-0.00883	-0.0395	19941130	0.99117	0.9605	0.936476754	0.972635843	0.9628
19941230	-0.08602	0.0123	19941230	0.91398	1.0123	0.855921023	0.984599264	0.8693
19950131	0.07647	0.02428	19950131	1.07647	1.02428	0.921373304	1.008505334	0.9136
19950228	0.03825	0.03607	19950228	1.03825	1.03607	0.956615833	1.044882122	0.9155
19950331	0.08105	0.02733	19950331	1.08105	1.02733	1.034149546	1.07343875	0.9634
19950428	-0.07317	0.02796	19950428	0.92683	1.02796	0.958480824	1.103452098	0.8686
19950531	0.04737	0.03631	19950531	1.04737	1.03631	1.003884061	1.143518443	0.8779
19950630	0.07739	0.02128	19950630	1.07739	1.02128	1.081574648	1.167852516	0.9261
19950731	-0.00467	0.03178	19950731	0.99533	1.03178	1.076523694	1.204966869	0.8934
19950831	-0.07793	-0.00032	19950831	0.92207	0.99968	0.992630203	1.204581279	0.8240
19950929	0.0102	0.0401	19950929	1.0102	1.0401	1.002755031	1.252884989	0.8004
19951031	-0.12626	-0.00498	19951031	0.87374	0.99502	0.876147181	1.246645621	0.7028
19951130	0.11214	0.04105	19951130	1.11214	1.04105	0.974398326	1.297820424	0.7508
19951229	-0.07292	0.01744	19951229	0.92708	1.01744	0.9033452	1.320454412	0.6841

The relative wealth index is a performance measure of how well your stock (REIT) did relative to some benchmark such as the S&P500, Equity REIT index (EREIT) or Retail REIT Index (RTLREIT). Intuitively, it measures how much wealthier you'd be if you invested \$1 in a REIT (or other stock) versus investing \$1 in the benchmark index. Suppose for example, the returns on a REIT are 10% in period 1, 12% in period 2 and 11% in period 3. If you invested in the S&P500, assume that your returns would be 9%, 11%, and 10% respectively over the same time period. Then the cumulative returns for each period would be as follows (in Period 1 we set the cumulative return equal to 1 for both the REIT and S&P500 since this is the base index:



Period 2:

Cumulative REIT Return = $\$1 \cdot (1+0.10) \cdot (1+0.12) = \$1 \cdot 1.10 \cdot 1.12 = \1.23
 Cumulative S&P500 Return = $\$1 \cdot (1+0.09) \cdot (1+0.11) = \$1 \cdot 1.09 \cdot 1.11 = \1.21
 Relative Wealth: $\text{Cum REIT Return} / \text{Cum S\&P500 Return} = 1.23 / 1.21 = 1.016$

Since the relative wealth index is greater than 1, this means that you earned more wealth by investing in the REIT relative to the benchmark (S&P500) e.g., your wealth grew by 1.016 times the rate of the S&P500.

Period 3:

Cumulative REIT Return = $\$1 * 1.10 * 1.12 * 1.11 = \1.367

Cumulative S&P500 Return = $\$1 * 1.09 * 1.11 * 1.10 = \1.331

Relative Wealth: Cum REIT Return/Cum S&P500 Return = $\$1.367 / 1.331 = 1.027$

Once again, since the relative wealth index not only exceeds one but also increases from period 2 to period 3, this indicates that the investor continues to increase his or her wealth by investing in the REIT relative to the benchmark. In our example above, returns on WalMart exceeded that of the S&P500 in 1998 (blue line = 1.0). Thus if you had invested in WalMart from 1994 and held onto the stock until 2002, your wealth would have been greater than that obtained by investing in the S&P500 especially after 1998.



Stratford Square, Bloomington, IL

How does Feldman Mall Properties compare to its peer group (Mall REITs) and individual Mall REITs from a Relative Wealth Index perspective over time? Which Mall REIT is it the most comparable to? Does it matter if we use the cumulative wealth of all Equity REITs or alternatively the cumulative wealth of all Retail REITs? Did investors in Feldman have cumulative wealth in terms of compounded returns $[(1+r_1)(1+r_2)...(1+r_{N-1})(1+r_N)]$ that exceeded either investing in a value weighted all Equity REIT portfolio (EREIT) or alternatively investing in a value weighted all Retail REIT fund? If you had to choose two mall REITs based on relative wealth, which two mall REITs would you choose. What would be your top pick and your second choice?

4. Rental Analysis of Top Ten Tenants. (5 points) Using the information provided on annualized base rents for Feldman's top 10 tenants each year in the "Feldman (Annual)" worksheet, complete the "4. Top 10 Tenants (Feldman)" worksheet. Please observe that the top 10 tenants by annualized base rent changes from year to year as tenants vacate malls and relocate to other malls or close their stores. What does your analysis of annualized rent per square foot reveal to you about Feldman Mall properties? Does management appear to make good on its investment strategy of opportunistically acquiring underperforming malls and transforming them into physically attractive and profitable Class A or near Class A malls through comprehensive renovation and re-tenanting efforts aimed at increasing shopper traffic and tenant sales. According to their various conference calls which are provided as part of this case, what reasons has management given to explain this rent pattern? From management statements in the conference calls, is there any reason for concern regarding rents and thus property net operating income (NOI)

going forward? Have any of their top 10 Tenants by Annualized Base Rent experienced financial difficulties? What impact will these firms have on our REIT if they shutter all of their stores nationwide? Please discuss.

5. Built-Up Beta for Feldman? (10 points). Calculate the built-up beta (also known as bottom-up beta) for Feldman Mall Properties using the “6. BuiltUp Beta” worksheet. To calculate the levered betas for its competitors using 60 months of return data, you will need to use the returns for each REIT and the market (EQREIT) located in the “REIT Returns” worksheet. Appendix A contains an example of how to use the SLOPE function in Excel to calculate the levered beta using returns for a particular REIT as the dependent variable (Y) and EQREIT monthly returns as the independent variable (X). To calculate the unlevered beta (β_U), the following formula is used:

$$\beta_U = \beta_L / (1 + ((1 - \tau)D/E))$$

where β_L = average levered beta for the **peer group/competitors**

τ = marginal tax rate which in our case is zero (0)

D/E = average debt (D) to equity (E) ratio for the **peer group/competitors**

To calculate the built-up beta for Feldman, use the following formula which is the same formula as above except with different inputs

$$\beta_L = \beta_U (1 + ((1 - \tau)D/E))$$

where β_U = unlevered beta that you have calculated

τ = marginal tax rate which in our case is zero (0)

D/E = debt to equity ratio for **Feldman**

Observe that this technique is especially useful in calculating the beta when a firm is either a private⁵ company or a publicly traded company that has only been a short time (as in the case of Feldman Mall Properties) or only infrequently. In order to implement this technique, the firms (REITs) should be comparable in terms of business risks and operating leverage (amount of fixed operating costs as opposed to fixed financial costs). The advantage to using a built-up (bottom-up) beta has over using a firm's historical beta is that by eliminating the need for historical stock prices to estimate the firm's beta, the standard error, created by regression betas, is reduced. Besides this, the levered beta is computed from the firm's **current financial leverage**, rather than from the **average leverage** over the period of the regression.

⁵In adjusting the unlevered betas for financial leverage, a problem exists with private firms since the debt-to-equity ratio used should be a market value ratio. Many analysts use the book value debt-to-equity ratio as a substitute. However, one can alternatively assume the private firm's market leverage will resemble the average for the industry. Another approach is to use the private firm's target debt-to-equity ratio if management specifies a target or if its optimal debt ratio can be estimated.

6. Risk Premium for REITs (5 points). Calculate the geometric average for equity REITs and the 10 year treasury bond over the periods from 1972-2008, 1980-2008, and 1990-2008 using the “6. Calc RiskPremium” worksheet. Calculate the risk premium using the 10 year treasury bond as the riskfree rate based on geometric averages. (**Hint:** Use the Geomean function. Before using the Geomean function, you must first transform the given returns e.g., let the $R = 1 + \text{return}$ to avoid an error sign #NUM in taking the nth root of a negative product). Round your answers to 4 decimal places. As an example of how to use the Geomean function, the geometric mean of equity REITs over the 1972-2008 period in cell E42 is =GEOMEAN(E2:E38)-1. From your finance class, recall that the risk premium is

$$(R_M - R_F)$$

where R_M = market proxy; we use Equity REITs (EQREIT) as our market proxy
 R_F = risk free yield; we use the yield on 10 year Treasury bond

7. Economic Value Added (EVA)? (30 points). Calculate EVA also known as Economic Profit⁶ for Feldman Mall Properties and its competitors using the “7. Economic Value Added” worksheet. Information on each firm can be found in the REIT (Annual) worksheets e.g., Feldman (Annual), Glimcher (Annual), , General Growth (Annual), Simon Properties (Annual). To calculate the cost of equity, use your results from the “5. Calc (Eqty REIT Risk Prem)” and “6. Built-Up Beta” worksheets. EVA is useful as a measure for understanding a company’s yearly performance. Economic Profit is the difference between revenues and costs, where costs include expenses and the cost of capital. Stated differently, profits, per se, don’t increase value if they don’t represent a return on the invested capital that’s greater than the cost of capital. Formally, EVA is defined as follows

$$\text{EVA} = (\text{ROIC} - \text{WACC}) * \text{Invested Capital}$$

where ROIC = Return on Invested Capital
WACC = Weighted Average Cost of Capital

Management is deemed to do a good job if the EVA of the firm is positive (>0). Intuitively, this means that the firm’s rate of return is greater than its borrowing cost (from all sources both debt and equity)⁷. EVA is closely related to the concept of Net Present Value (NPV). Firm value increases if firm invests in NPV>0 projects. EVA is based on the concept of maximizing the value of the firm (value of debt + value of equity) rather than the maximizing shareholders (equity) value.

⁶The concept of EVA or Economic Profit goes back to the late economist Alfred Marshall who defined it as “What remains of his (the owner or manager’s) profits after deducting interest on his capital at the current rate may be called his earnings of undertaking or management”.

⁷Real estate pitchmen frequently extol the virtues of using credit card debt to purchase real estate for no money down. The problem with this approach is that credit card debt (annual percentage rate or APR) is frequently has interest rates of 15% or higher. This means that your annual return from real estate has to be greater than 15% for you to make an economic profit.

Based on your EVA analysis, is the management of Feldman Mall Properties adding value to the REIT? Why or why not? Please discuss. How does Feldman's EVA compare to its competitors? Is Feldman's management doing a better or worse job? Which Mall REITs are the best managed REITs? Which Mall REITs are the worst managed REITs? In terms of capital structure, please discuss the general trend in the debt, preferred equity, and common equity among Mall REITs over time. In hindsight, was the change in the capital structure for most REITs the correct decision? Please explain. To aid in your analysis, you should prepare a graph(s) of Feldman's EVA performance relative to their competitors. Also prepare a graph of the percentage of debt in the capital over time to compare Feldman's use as debt compared to each of its competitors.

8. Net Asset Value (NAV) (20 points). When evaluating public companies, investors generally focus on price-to-book ratios as one valuation measure. However, price-to-book ratios are inappropriate for REITs since a REIT's book value, which is based on historic cost figures, might not accurately reflect the earnings capacity of otherwise well-maintained assets. Thus, many analysts prefer to use net asset value as a surrogate for book value, which is appropriate given that book value is meant to represent an entity's liquidation value. Using the "8a. Net Asset Value" worksheet together with assumptions listed on the last page of this case, calculate the NAV per Share for Feldman Mall Properties.



Golden Triangle Mall, Dallas

Note: In our calculation of NAV, recurring capital expenditures (capex) is subtracted from expected NOI since capex is necessary for the property to continue to generate and maintain the current level of cash flow. Most analysts on Wall Street do not subtract recurring capex in calculating NAV nor do they recognize the impact of tenant allowances and leasing commissions in their NAV estimates. We include both of these line items as well as straight line and FAS 141/142 adjustments which analysts do include since these represent the typical cash flow underwriting adjustments for a commercial property (see, for example, Salomon Smith Barney Guide to Mortgage-Backed and Asset-Backed Securities by Lakhbir Hayre). Hence, we use net cash flow rather than net operating income to calculate NAV. The valuation obtained thus represents the value for underwriting purposes.

- a. What does the NAV suggests about the financial health of the REIT? What does the closing price suggest about the REIT? What accounts for the difference in signals between the NAV and the closing price? Please discuss.
- b. For the NAV per share to be equal to the Closing Price as of 6/30/2008, approximately what cap rate is this equal to? How realistic is this in terms of the

REIT disposing of properties at this cap rate given the cap rate that Mall properties are trading at (cell C9) in the real asset market all other things being equal (ceteris paribus)? Please discuss. Note: An alternative way to think of this which could yield further insights is to consider the inverse of the cap rate which is known in real estate as the net income multiplier. For example, a cap rate of 8% suggests that the property is selling for 12.5x their NOI (\$1/.08). What cap rate must the FMLP real estate portfolio sell for in order for the NAV to exceed the closing price?

- c. Is our calculation of NAV correct? The late Professor Graaskamp used to quip that "you buy the assumptions that create the yield rather than the yield itself". Are there any assumptions that are faulty? Please discuss.
- d. Calculate the implied cap rate that is reflected in the closing price of FMLP (6/30/200*) using the "8b. Imputed PptyVal & CapRate" worksheet. what is the market anticipating that FMLP properties will obtain if sold on the open market? Why is the Imputed Market Value of Properties based on capital markets different from the Market Value of Properties in the "Net Asset Value" worksheet (cell C14) based on real asset market e.g., product market? Please discuss.
9. Relative Valuation of REITs (25 points). Calculate the justified price for Feldman (FMLP) using the worksheet labeled "9. Relative Valuation" together with information provided in the "Prices & Est Rev (Sep 30, 2008)" and the various 10-K REIT worksheets. Is relative valuation analysis relevant for Feldman Mall Properties? Is it appropriate to use Revenue multiples (Firm Value/Rental Revenue) to value the equity of the REIT? Why or why not? Is the R.E. NOI multiple or EBITDA more appropriate? Please explain and provide some economic intuition. If your answer is that none of these multiples provide a reliable value estimate, discuss which valuation method is more appropriate for this situation?
10. Dividend Discount Model for Feldman (10 points). Calculate the 10 year geometric average growth rate in FFO per share for the Retail Mall REIT Industry. The data and template for this calculation are provided in the "10a. Mall Indus FFO (per Share)" worksheet. We will assume that in the long run, Feldman Mall Properties' growth rate will equal that of the Retail Mall REIT Industry as a consequence of mean reversion⁸. Next, calculate the justified price per share for Feldman using the "10b. DCF Model (FMLP)" worksheet for the dividend discount model together with information from the "Feldman (Annual)", "5. Built-Up Beta", "6. Calc (Eqty REIT Risk Prem)", and "10a. Mall Indus FFO (per Share)" worksheets. Is FMLP undervalued, overvalued or correctly priced according to the constant growth model for 2005 and 2006 when compared to its closing price? A REIT is underpriced (overpriced) if its justified value is greater (less) than its closing price per share.

⁸Mean reversion is the theory that a given value e.g., interest rates or the return on a given investment will continue to return to an average value over time, despite fluctuations above and below the average value. For example, if there is a shock in prices (unexpected jump, either up or down), prices will return or revert eventually to the level before the shock.

11. Qualitative Factors (15 points). Qualitative factors are just as important if not more important than merely crunching the numbers because as the late Professor James Graaskamp (my mentor) use to quip, “you must buy the assumptions that create the yield rather than the yield itself”. All forecasts are based on how likely salient assumptions such as FFO and revenue growth are to be realized since the difference between expectations and realizations represent an investor’s risk exposure.
- a. **Open-to-buys**: In retailing, national retailers do not approach new store openings on a one-by-one basis. Instead, they begin their year with a number of open-to-buys, meaning they'd like to open that many stores. They meet with big landlords each of whom will do deals on a number of these open-to-buys. How does this way to doing business mesh with Feldman's strategy of operating a few malls, renovating and re-tenanting them and then selling these malls once stabilized operations are achieved?
- b. **Niche Strategy**: Is it a good strategy to fly under the radar screen in a particular property sector such as malls looking for properties that other landlords simply miss? Please comment on how realistic and replicable this strategy is.
- c. **Organizational Form**: Has Feldman behaved more like a private REIT/publicly-registered, non-listed REIT or a public REIT? Please discuss after using various library resources such as Lexis and ABI Inform to research this organizational form. Be sure to include both the advantages and disadvantages relative to being a public REIT. Give one example of a private REIT or public unlisted REIT that is similar to Feldman Mall in the number of properties and property type (Note: it doesn't have to be a current REIT; it could be a REIT that was acquired). How successful has this public unlisted retail REIT been?

Assumptions Used in Valuing Feldman Mall Properties (FMLP):

Line Item	Assumption
Rental revenue	Includes minimum rents, tenant recoveries/ reimbursements, and overage rents
Rental expenses	Rental expenses include real estate taxes, repair and maintenance, marketing, other property operating costs and provision for doubtful accounts (recall that provision for doubtful accounts is part of vacancy). The provision for doubtful accounts is different from the provision for credit losses.
Anticipated Growth Rate in NOI	Assume that the growth rate will either remain constant or decline so using the NOI for 2008 FQ2 represents the upper bound on value. Input 0% as the anticipated growth rate in NOI.
Straight-line Rents	<p><u>2005 and 2006</u>: Assume that straight-line rents are \$1,849 and \$891 for 2005 and 2006 respectively. These amounts are already stated in 000s.</p> <p><u>2008 FQ2 LTM</u>: Please refer to page 82 of Feldman's 10K. The number reported is already stated in 000s. Use straight-line rents for the year ended December 31, 2007.</p>
FAS 141-142 Adjustments	Feldman's 10K is silent on FAS 141. Assume that it's zero.
Recurring capital expenditures (CapEx)	<p><u>Anticipated Recurring CapEx (2006)</u>: RBC Capital Markets Corporation, a co-manager of FMLP's IPO, forecasted that FMLP will incur \$3,349 (in 000s) in 2006 as of March 24, 2005. Assume that recurring capex remains constant in 2007 at the \$3,349 (in 000s).</p> <p><u>Recurring Capex (2008)</u>: Please refer to page 65 of Feldman's 10K. Caution: The 10-K states this number in millions so you will have to input it as 000s. As noted in the 10K, Feldman's recurring capital expenditures include tenant improvements (but not leasing commissions)</p>
Tenant allowances and leasing commissions	<p><u>2005 and 2006</u>: Assume that leasing commissions are \$14 and \$69 for 2005 and 2006 respectively. These amounts are already stated in 000s.</p> <p><u>2008 FQ2 LTM</u>: See above for tenant allowances/improvements. Please refer to pages 83-84 of Feldman's 10K under Deferred Charges for information on leasing commissions. The amount reported is already stated in thousands. Use leasing commissions for the year ended December 31, 2007.</p>

Line Item	Assumption
Cap Rate(s)	<p><u>Cap Rate for Mall Properties</u>: Use the "Regional Mall CapRates" worksheet and take the average of the cap rates located in column N for the period from June 2006 through February 2008</p> <p><u>Cap Rate for Fee Income Business</u> (Mgmt, Dvmt & Leasing Business): Wall Street firms use a 15% cap rate for Fee Income Business of REITs.</p>
Unconsolidated JV NOI	According to FMLP's 10K, they have already capitalized the Unconsolidated JV NOI and have listed this capitalized amount as Intangible Assets under the Asset section of the Balance Sheet. To do this calculation therefore would be double counting in this case. So for the current case, we exclude this calculation.
Gross Asset Value (Discounted)	Since Feldman Mall Properties redevelops and renovates existing malls, these categories are irrelevant.
Funding Costs (Discounted)	
Undeveloped land/entitlement value	
Total Debt	Do NOT treat the credit facility as part of total debt. Rationale: revolvers otherwise known as lines of credit (LOC) are usually treated as working capital.
Marginal tax rate	0%;
Beta	Use the SLOPE command in Excel to calculate the levered beta. Use 60 months of returns. The Y variable is the return on the REIT and the X variable is the return on the market. We use the Equity REIT returns from NAREIT as the market proxy (X variable).
Equity REIT Risk Premium	Assume Equity REIT Risk Premium = 4% ($R_M - R_F$)
Equity Market Value a.k.a. Market Cap	<p>This is the number of shares outstanding multiplied by the closing price per share of stock. For purposes of this analysis, use fully diluted shares. Thus,</p> <p>Common Shares Outstanding (actual) <u>+ Convertible OP Units (actual)</u> Shares and Convertible OP Units (actual) <u>÷ 1000</u> Shares and Convertible OP Units Outstanding (000s) * <u>Closing Price per Share</u> Equity Market Value (Market Cap)</p>

Line Item	Assumption
Cash and Equivalents	Assume that Cash and equivalents doesn't include Total Securities. Total Securities are defined as total of all securities owned valued as shown on the balance sheet according to GAAP accounting standards. More specifically it includes all securities in the trading, available for sale, held to maturity and other securities categories.
EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization)	EBITDA = Revenue - Expense + Real Estate Depreciation & Amortization + Other Depreciation & Amortization + Interest Expense. Note: Set NA = 0.
Expected Annual Growth Rate in FFO (for Dividend Discount Model)	RBC Capital Markets Corporation, a co-manager of FMLP's IPO, forecasted that Feldman's anticipated growth rate in FFO is 43% from 2005 to 2006 in their March 24, 2005 report. In their August 25, 2006 report, RBC anticipated an -18.6% decline in FFO growth from 2006 to 2007.

Appendix A: Calculating Levered Beta (β_L)

The easiest method to calculate a levered beta in Excel is to use the SLOPE function. If you use Microsoft Help to look up SLOPE, the following information is provided:

Returns the slope of the linear regression line through data points in known_y's and known_x's. The slope is the vertical distance divided by the horizontal distance between any two points on the line, which is the rate of change along the regression line.

Syntax

SLOPE(known_y's,known_x's)

Known_y's is an array or cell range of numeric dependent data points.

Known_x's is the set of independent data points.

In our case, the Y variable is the return on the REIT and the X variable is the return on the market. We use the Equity REIT returns from NAREIT as the market proxy (X variable). For purposes of illustration, we will use returns for Camden Property Trust (Ticker: CPT) to show how to calculate the slope. To calculate the slope for this case, you will need to use **60 months** of return data rather than the 12 months shown here.

	A	B	C	D	E	F
1	DATE	CPT (Y)	EREIT (X)			
2	20050131	-0.11157	-0.08397			
3	20050228	0.024057	0.030669			
4	20050331	0.027263	-0.0155			
5	20050429	0.084414	0.053193			
6	20050531	0.011961	0.03466			
7	20050630	0.053769	0.050273			
8	20050729	0.028465	0.071366			
9	20050831	-0.05391	-0.03657			
10	20050930	0.078107	0.005958			
11	20051031	0.010762	-0.02366			
12	20051130	0.047028	0.042134			
13	20051230	-0.00754	-0.00199			
14						
15		Beta	0.96	=SLOPE(B2:B13,C2:C13)		
16						
17						