

Anchor Retailers and their Connection
to Mall REIT Returns

by

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Introduction

A real estate investment trust (REIT) is a company, most often publicly traded, that directly invests in real estate. As an investment vehicle, they allow shareholders to gain access to various real estate markets in a professionally managed, diversified, and liquid manner. Property holdings information is fully disclosed and the vast majority of taxable income is paid to investors through dividends. This transparency makes REITs an excellent area with which to examine portfolio theory. This section gives an overview of the asset class before specifically examining mall REITs, the focus of this study.

REIT Basics

To qualify for REIT status, a REIT must, among other things, pay out at least ninety-five percent (95%) of its taxable profits to shareholders as dividends, derive at least seventy-five percent (75%) of its gross income from rents on real property or mortgage income, and must not derive more than thirty percent (30%) of its gross income from the sale of real property held for less than four years. With this status come favorable tax considerations (specifically, income is not taxed on the REIT level) that have implications on the type of investor REITs attract. As described below, a REIT can be categorized as one of three types: mortgage, equity, or hybrid of the two.

Mortgage REITs invest in real estate through financial obligations collateralized by physical property. They typically purchase existing mortgages and mortgage-back securities thereby generating cash flows from property owner mortgage payments. This study does not examine mortgage REITs.

Equity REITs invest directly in real estate through ownership and (most often) active management of income-generating properties in the commercial, industrial,

or residential sectors. Cash flows are produced principally through tenant rent payments, and to a much lesser extent through the buying and selling of properties.

This study focuses on regional mall REITs- equity or hybrid REITs that own, develop, continually redevelop, and lease regional and community shopping centers. Regional centers consist of enclosed shopping malls that provide a full depth and variety of goods, general merchandise, apparel, home furnishings, and a variety of dining opportunities. These malls are typically anchored by two or more department stores, have 50 to 100 smaller stores, and contain food court style eateries. Community shopping centers, in comparison, are typically open-air, have fewer retailers than malls, and usually have only one or two junior department stores or discounters as major tenants.¹

The department stores in regional malls along with the major tenants of community centers comprise a REIT's set of anchor retailers. Anchor retailers are most often the largest part (in terms of square footage) of shopping malls or other shopping centers. Anchors are largely attributed with setting the public image of a shopping center and tend to appeal to a wide range of shoppers.² Whereas mall REITs usually collect rent from smaller mall stores in proportion to their monthly revenue, anchors traditionally enter into fixed long-term lease contracts with favorable terms. Thus, mall REITs derive most of their revenue from smaller mall stores. The foot traffic anchors draw to these

¹ Adapted from definitions listed with The American Marketing Association and Macerich's 2003 10-K SEC filing.

² General Growth Properties (GGP) 2002 10-K.

surrounding mall stores however, make anchor retailers a vital part of a shopping center's profitability.

Area of Examination

This study seeks to test the existence of a relationship between stock market performance of the mall REIT to the performances of its anchor tenants. To understand the possibility of such a relationship, it is vital to illuminate why such connections may exist and what the limitations of such links may be.

First, it is important to understand how a mall REIT sustains profitability and what investors seek when investing in this type of asset. On a basic level, a mall REIT's revenue comes from receiving rent payments from its retailer tenants. Although the net asset value (NAV), or liquidation value, of a REIT's portfolio of properties serves as a general indication of a REIT's market value, the general illiquidity of the real estate market among other economic factors allows its stock price to stray quite a bit from its NAV per share figure. It is important to remember that a mall REIT's normal line of business is not in realizing gains in property turnover, rather it is in the active management and development of shopping center properties. If managed properly, a mall REIT offers investors a steady stream of dividends, and therefore it seeks to serve a certain investor clientele.

REITs have, especially recently,³ become extremely popular with institutional investors, and mall REITs are no different. Currently, institutions own approximately

³ In 1992, to address tax considerations related to the formation of a REIT when various partnerships owning multiple properties are involved, a new form of REITs emerged: the "umbrella partnership REIT" which continue to attract institutional investors seeking tax benefits.

79% of the nine major publicly traded U.S. mall REITs considered in this discussion.⁴

Due to the aforementioned regulations which stipulate that the majority of a REIT's net income be paid to investors, the associated regular dividend schedules complement the needs of large pension and "value" funds well. The question of whether REIT returns are more closely linked to their underlying property values or to general macroeconomic factors has been the topic of much research.

Review of Existing Literature

There is much debate regarding whether REITs actually provide any exposure to the unsecuritized real estate market or whether they act mainly in accordance with common stock. Recent literature suggests that within a portfolio, there exists little substitutability among private real estate and REITs (Seck, 1996; and Seiler et al., 2001). Additionally, many studies have shown that the same macroeconomic variables which explain stock and bond returns have significant power in explaining REIT returns (Ling and Naranjo, 1997; Peterson and Hsieh, 1997; Karolyi and Sanders, 1998; and Chan et al., 1998). However, Giliberto, in his 1990 study, found significant, positive correlations between private unsecuritized real estate market returns⁵ and REIT returns⁶ once the influences of the above-mentioned macroeconomic factors were removed from the data.

It seems then, that REIT returns are influenced to some extent by the underlying private real estate market and by economic factors that affect the stock and bond markets.

⁴ Data taken from Yahoo.com, is current as of 4/21/05, and was calculated by multiplying the percentage of shares held by institutional investors for each REIT by its market capitalization. Mall REITs included in figure are: CBL & Associates Properties (CBL), Developers Diversified (DDR), Glimcher Realty (GRT), Kimco Realty (KIM), Macerich Company (MAC), Mills Corporation (MLS), Simon Property Group (SPG), Taubman Centers (TCO), and General Growth Partners (GGP).

⁵ As shown by the National Council of Real Estate Investment Fiduciaries (NCREIF) index.

⁶ As shown by the National Association of Real Estate Investment Trusts (NAREIT) index.

In their 2003 study, Clayton and Mackinnon sought to determine the extent of the role each of these factors play in REIT returns. They found that in the 1970s and early 1980s, a REIT's performance was linked significantly positively to the returns to large cap stocks, small cap stocks, and bond performance in decreasing order. However, during this time frame, the private real estate market was insignificantly negatively correlated with REIT returns. Very similar results were found in examining the period from 1984 to 1991. From 1992 to 1998 however, significantly positive strong correlations between the private real estate sector and REITs emerged.

Interestingly, Clayton and Mackinnon took examined REITs invested only in retail properties. Contrary to overall findings for the 1990s, these REITs have recently maintained a negative sensitivity to the underlying real estate market while showing the most exposure to the bond, large cap, and small cap markets respectively. Thus, I examine mall REIT returns within the context of their having very little to do with their underlying physical properties. By examining the mall REIT and its sensitivity to its specific public anchors' returns, I will be exploring the connection between commercial real estate portfolios, and the securitized companies that occupy the properties in such portfolios.

Study Specifics

Theoretically, anchor market values (as determined by stock prices) should have links to their respective mall REIT market values, however the degree of their applicability varies. Assuming an efficient market, the stock prices of a company should reflect investor expectations of future growth and profitability. Everyday fluctuations are a function of how the market continuously reacts to information (whether it relates to the

specific company, industry, or economy as a whole) as it is released to the public.

Normal fluctuations of an anchor's stock price then, will not be an accurate gauge as to whether these tenants can make regular lease payments to the REITs that house them.

The link between anchor and mall REIT returns might exist however, within the context of general macroeconomic factors that affect the retail industry. Econometrics such as consumer confidence levels or unemployment rates are usually good indicators of how the retail sector is performing overall. Changes in these economic indicators definitely affect anchor revenues. Thus, fluctuations of anchor retailer market values on an aggregate level might be a good predictor of changes in anchor profitability, foot traffic attracted to malls in general, and subsequently, mall REIT revenue. I expect this line of reasoning to explain the majority of any connection found between the two sets of returns.

These links will first be tested on the individual anchor level before aggregating the study's results. To this end, an assumption must be made about how these anchors will comparatively influence REIT returns. The seemingly most robust method of consideration is that the influence each anchor has on REIT returns will depend on the relative amount of space each retailer leases from that REIT. Thus for benchmarking purposes, the percentage of space each public anchor leases for a particular year will serve as the assumed percentage of influence (API) that a particular anchor will have in explaining its mall REIT returns for any given period.

$$\text{API} = \frac{\text{space leased by a specific anchor}}{\text{total square footage of REIT}}$$

Hypotheses

The specific study will seek to test the following hypotheses:

- 1) On an anchor-specific level, the amount of influence a retailer's returns will have on the returns of its respective REIT will correspond with its API
- 2) Certain retailers will tend to have more API-adjusted influence on their respective mall REIT returns than others.
- 3) On an aggregate level, anchor retailer returns will be positively correlated with mall REIT returns in accordance with API.

Data

In order to test the existence of a connection between mall REIT returns and the returns of their anchor tenants in relationship to how much space they lease, I use daily returns on equity derived from stock market prices. This data was collected for two mall REITs: CBL & Associates Properties (CBL) and The Macerich Company (MAC) and ranges from January 1, 1995 to December 31, 2003 for CBL, and from March 11, 1994 to December 31, 2003 for MAC. Daily return data was also collected for every publicly traded anchor retailer within the CBL and MAC portfolios over these same time periods. To standardize which public retailers were included as anchors, an arbitrary minimum average of 40,000 square feet per store location was imposed.

The second set of data vital to the study was the API of each anchor. To derive these figures, property holdings information was extracted from annual 10-K filings of both CBL and MAC. Anchor retailers often own a portion of the land they occupy within regional and community shopping centers. These areas were not introduced into the

study due to the fact that regular mall REIT cash flow revenue is vastly more dependant on the lease payments they receive from tenants than from other sources. See *Appendix I* for API details for both of the mall REIT's public anchors.

The limitations of scope of the above datasets were significant. For my study, the holdings of only two mall REITs were examined due to the lack of available data on the specific amount of space anchors leased rather than occupied in total. Of the nine major mall REITs currently publicly traded in the U.S., only CBL & Associates and Macerich broke their anchor-occupied space data into leased and owned figures. For this reason, only these two REITs were considered in the study. In addition, due to the presentation methods of Macerich's 1997 10-K, specifically the exclusion of an anchor breakdown of 10.7M square feet of GLA (approximately 25% of total GLA) stemming from an acquisition in February of that year, I did not include this data in the study.

Methodology

The basis for the model I use to analyze my data stems from traditional portfolio weighting theory and from Sharpe's "Asset Allocation" model, a tool he developed to break down specific components of a portfolio manager's performance. Sharpe delves into the performance of portfolios consisting of more than one of twelve defined asset classes. Within this context, I suppose a REIT to act as such a portfolio and its anchor retailers to act as individual asset classes. Whereas traditional models such as this seek to explain the performance of portfolios that consist of the likes of stocks, bonds, and other conventional assets, my model will attempt to illuminate connections between

commercial real estate portfolios (of which the individual underlying assets are unsecuritized) and the securitized companies that lease these portfolio properties.

The model assigns weights derived from a quadratic programming procedure (implemented through EXCEL Solver) to each anchor retailer on a quarterly basis. These quarterly weights are multiplied by an anchor's daily return. This process is repeated to include all current public anchors in the REIT's portfolio. The individual anchor results are then aggregated and compared to actual daily returns of the REIT. The weights assigned through quadratic programming were determined by minimizing:

$$\sum [r_{(\text{REIT})t} - (\alpha_1 * r_{1t} + \alpha_2 * r_{2t} + \dots + \alpha_n * r_{nt} + \delta)]^2 \quad (1)$$

on a quarterly basis, where $r_{(\text{REIT})t}$ is the REIT's actual stock return on day t, α_1 is the model-assigned quarterly weight given to anchor 1, where r_{1t} is the stock return of anchor 1 on day t, and where δ is the portion of the REIT's actual stock return that cannot be explained by using this process.

The weights assigned in equation (1) were computed with certain restrictions. First, a portfolio weight is assumed to be non-negative, thus α was forced to be > 0 . Additionally, because the sum of weights cannot exceed 1, the following restriction was set in place:

$$\sum (\alpha_1 + \alpha_2 + \dots + \alpha_n) \leq 1$$

Once quarterly weights were computed for each public anchor within both CBL and MAC, the results were tabulated and compared with their API.

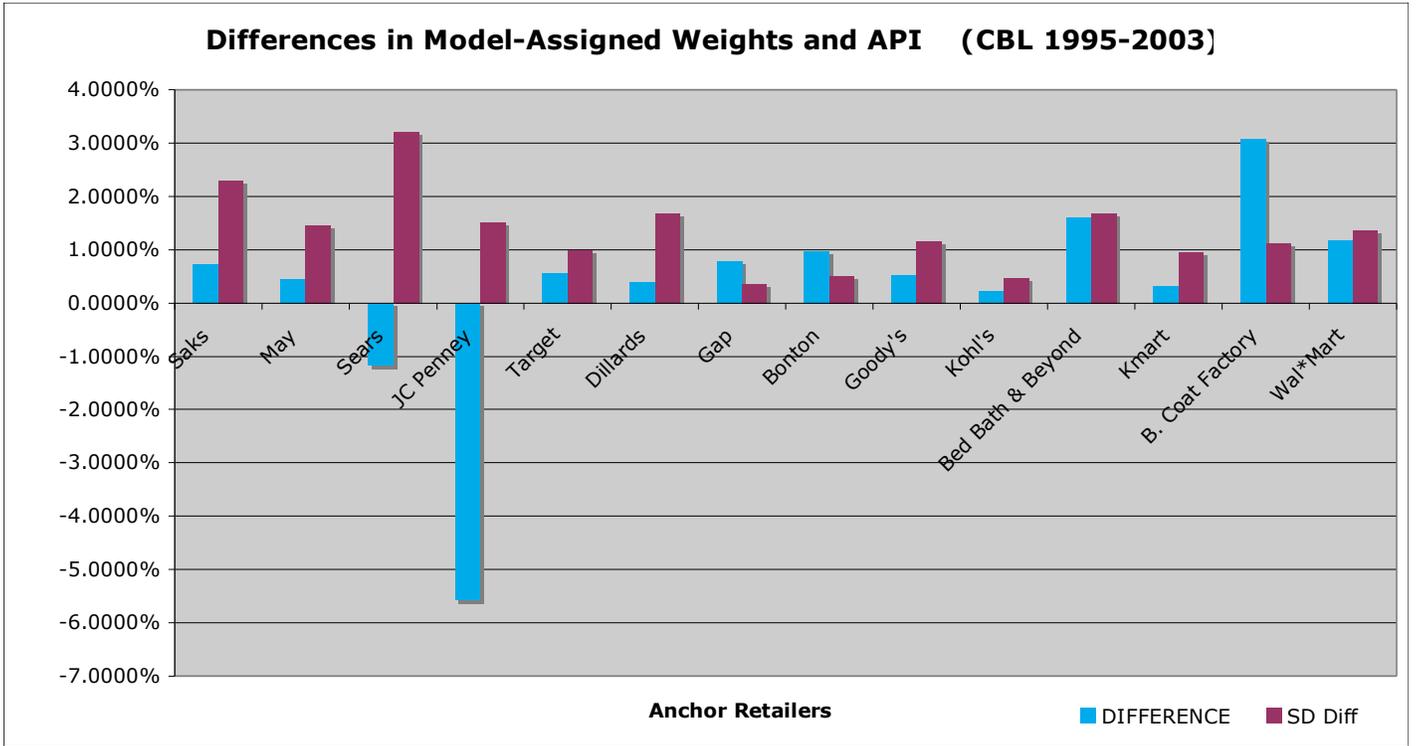
Results

To interpret the output of the model, anchor API is subtracted from its assigned α in order to detect whether a particular anchor has influenced its mall REIT returns to a greater-than-expected extent. A positive difference ($\alpha > \text{API}$) indicates an anchor indeed influences its mall REIT returns in a magnitude greater than the relative space it leases. In contrast, a negative difference ($\alpha < \text{API}$), indicates the anchor influences REIT returns in a magnitude less than the relative space it leases. Due in large part to the nature of quadratic programming outputs,⁷ significant quarterly fluctuations in the difference between an anchor's α and its API exist in the model's output. In order to present the data in a thoughtful manner, those anchor tenants that were not included in a particular REIT's portfolio for a significant number of quarters (16) were not included in the graphs below. Please note however, that such anchors were included when running the model and full detailed model outputs can be found in **Appendix 1**.

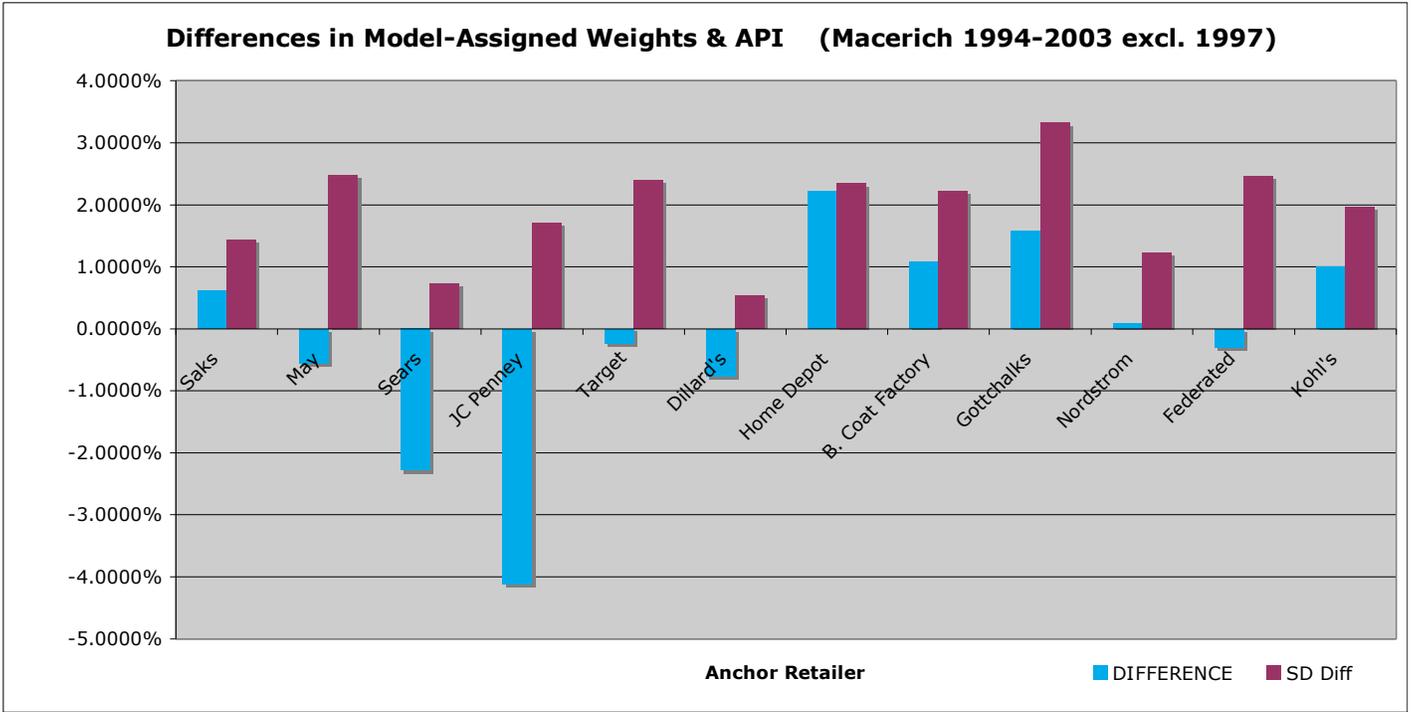
The two charts below present total (all years of the study included) average anchor differences in α and API for all anchors significantly present in a mall REIT's portfolio.

⁷ Using the model's quadratic programming feature produced a sizable number of instances in which a particular anchor was said to have zero (0) influence on its corresponding REIT's return for a quarter. This leads to high standard deviations in the differences between assigned weights and an anchor's API. To this end, yearly averages (which include the zeros) are presented in order to smooth the fluctuations associated with quarterly figures. Note however, that the overall stated standard deviations remain unchanged regardless of how the data is aggregated in presentation.

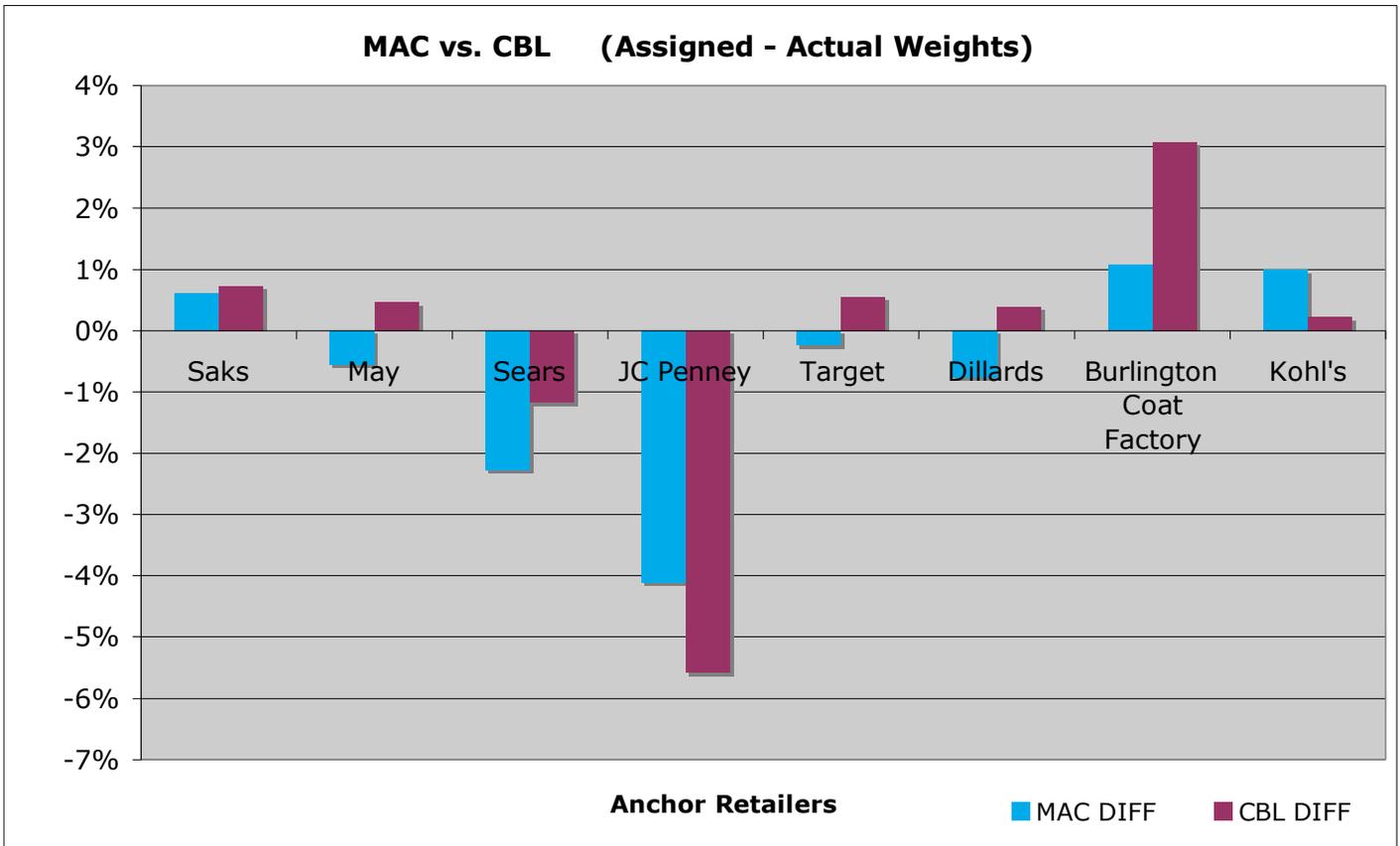
CBL & Associates:



Macerich Company:

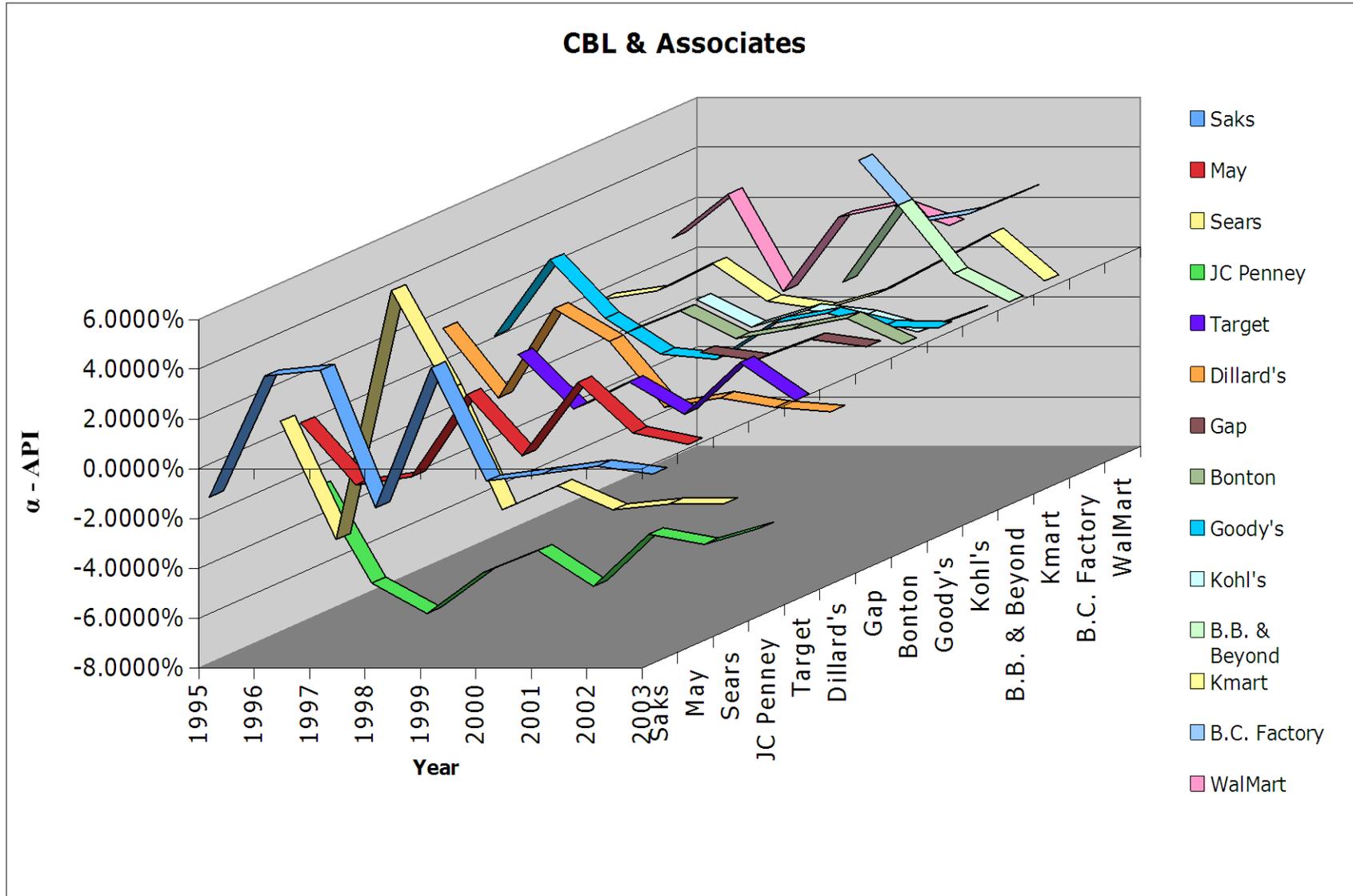


CBL and Macerich Side-by-Side

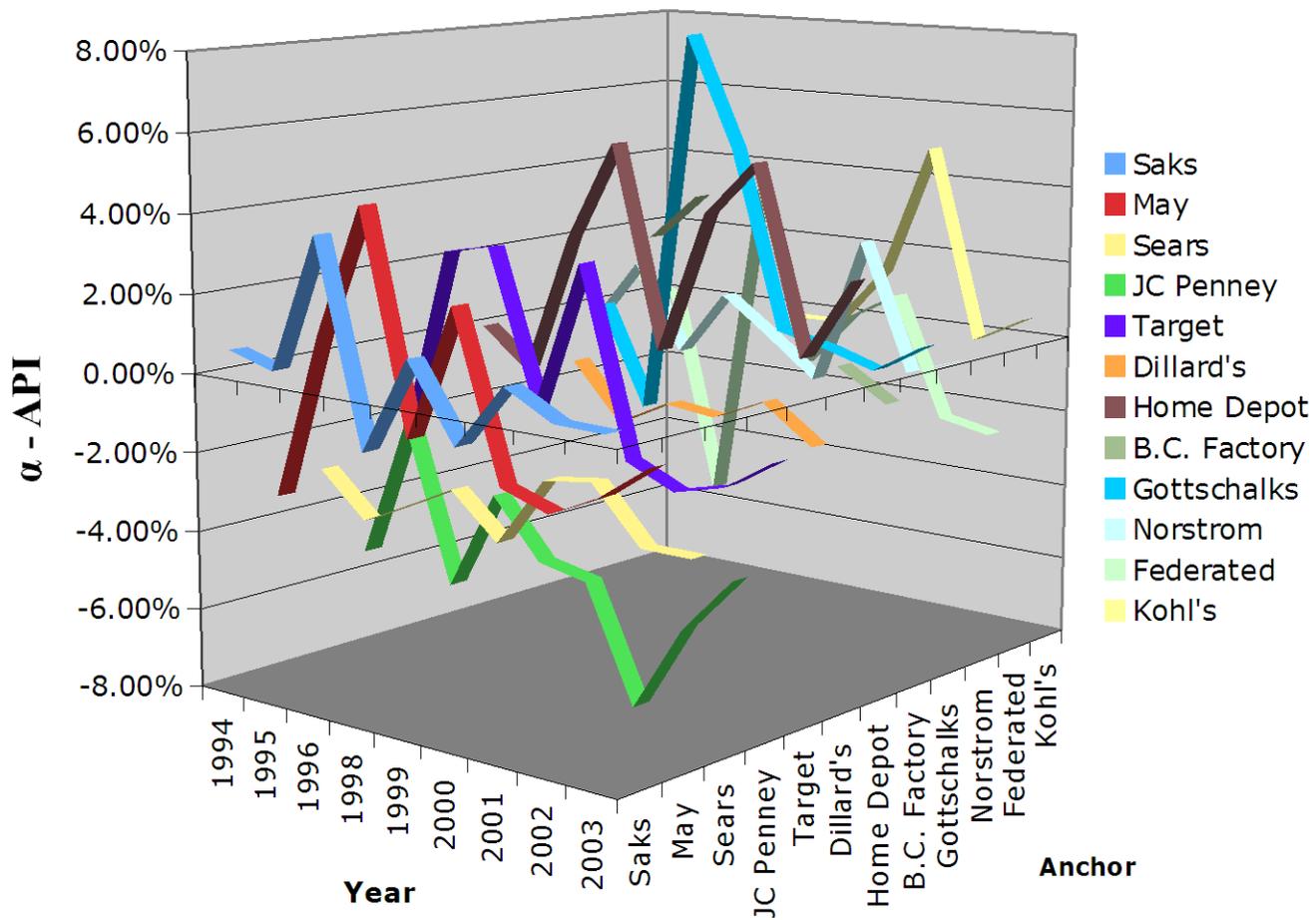


Note: only overlapping companies included

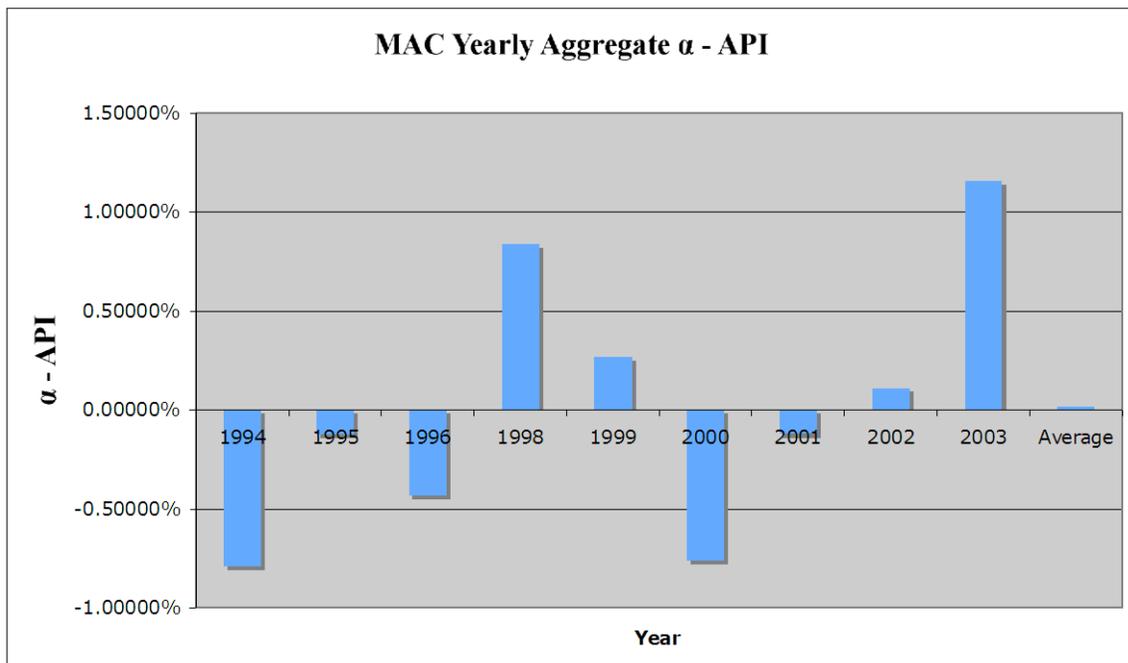
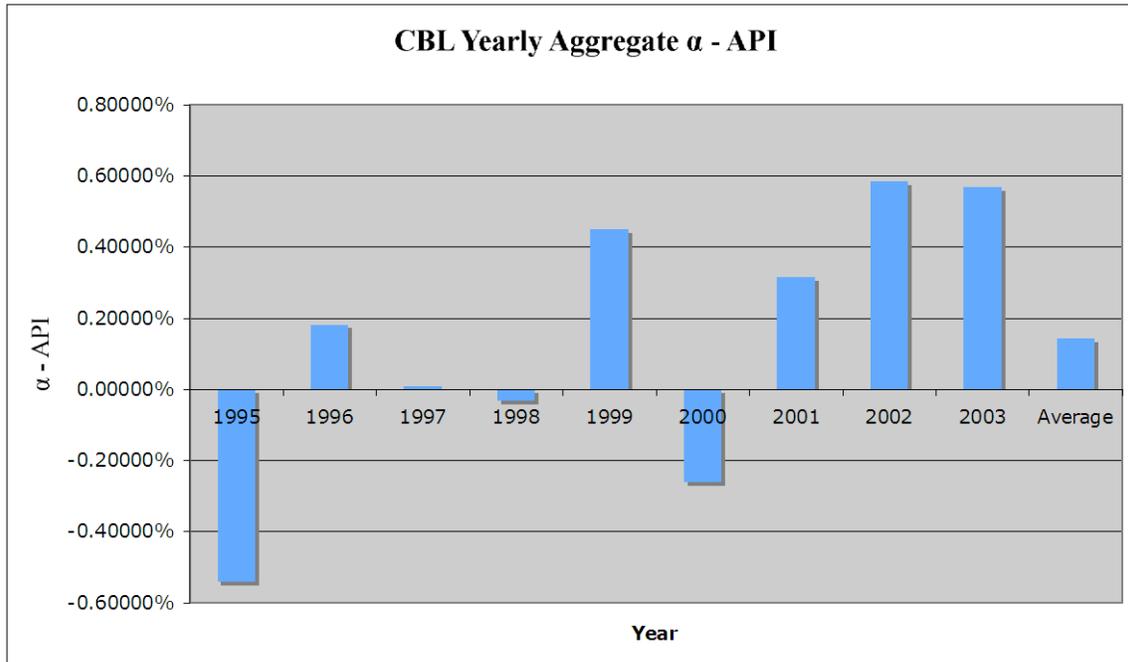
Yearly Anchor α - API Breakdown:



The Macerich Company



In addition to anchor-specific results, annual α - API figures on the REIT level were calculated to determine whether average anchor weights reflect actual leased space figures.



Discussion

Individual Anchors

In interpreting the model's results for CBL & Associates, we see that 9 of the 14 significant⁸ anchors (64%) were assigned weights that fall within a +/- 1% range of their API. Thus it seems that for most of the anchors examined, when results are averaged, an anchor's percentage of square feet it leases is a fairly good indicator of its influence on its respective mall REIT's return. In addition, all but two significant retailers had more influence than expected. There were certain CBL-held retailers whose assigned weights did stray significantly from their API. According to the model, Burlington Coat Factory, Bed Bath & Beyond, and Wal-Mart all influenced CBL returns more than expected (1.60%, 3.08%, 1.18% respectively). Conversely, both J.C. Penney, and Sears influenced CBL returns significantly less than expected (-5.58% and -1.17% respectively).

Examining the results for The Macerich Company, we see that 7 of the 12 significant anchor retailers (58%) were assigned weights that fall within a +/- 1% range of their API. Although this again shows a fairly strong connection between an anchor's API and its amount of influence on MAC stock returns, the standard deviations of differences were generally greater than those of CBL's anchors. In addition, whereas only two anchors predicted less than was expected within CBL's portfolio, no such trend could be identified with regard to Macerich's anchors. One possible explanation could be that, comparatively, CBL leased more of its GLA to anchors than did MAC as is shown in Table 1.

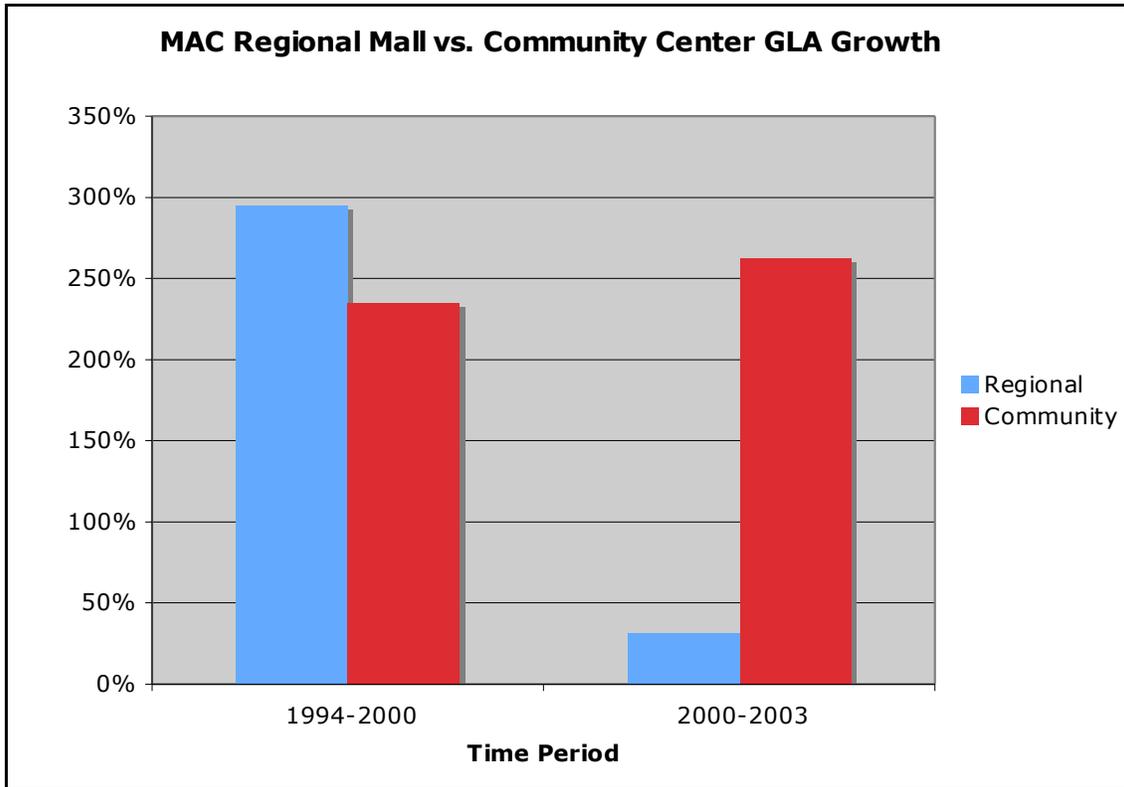
⁸ Any retailer with sixteen or more quarters within a REIT's portfolio.

Table 1

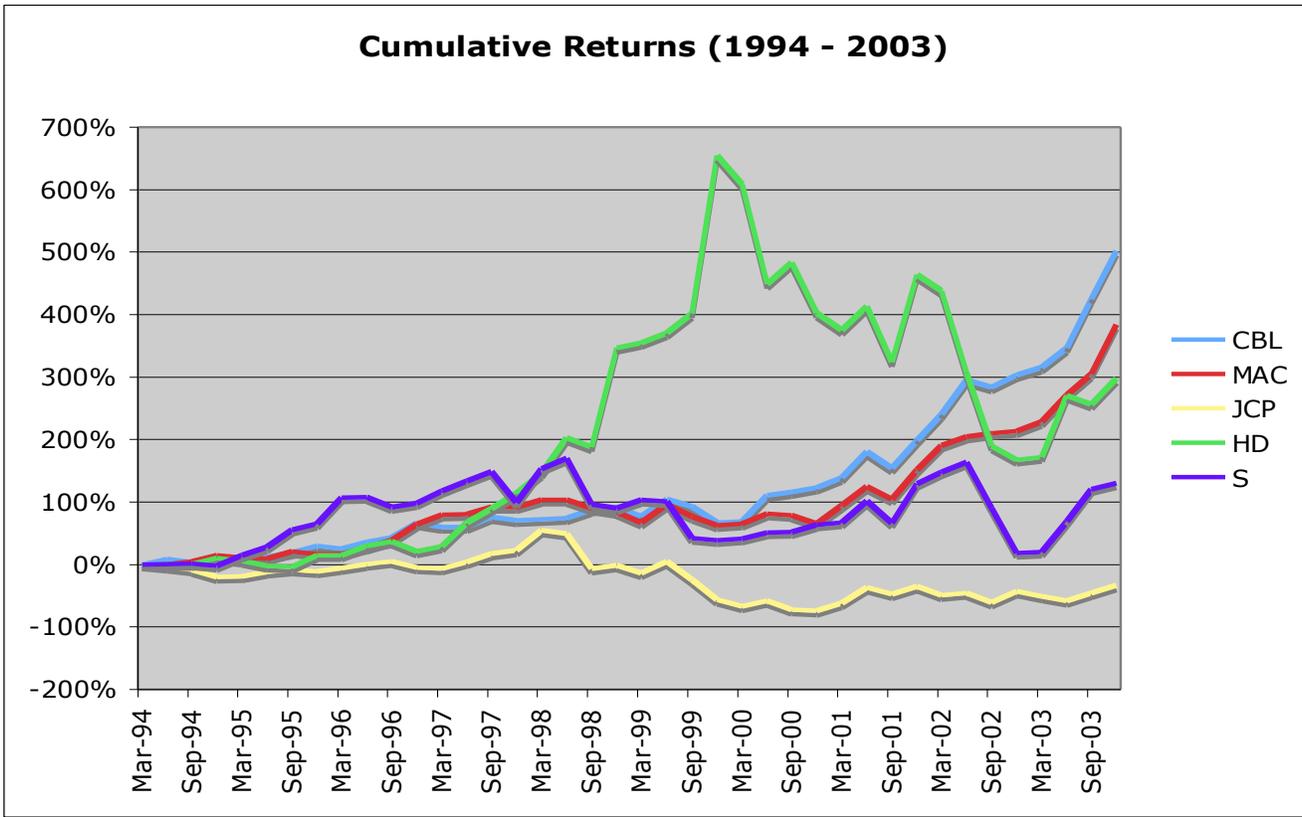
	% Anchor-Occupied GLA	
	CBL	MAC
1994	n/a	58.20%
1995	65.02%	56.58%
1996	65.11%	58.80%
1997	65.74%	55.29%
1998	64.19%	50.49%
1999	64.11%	54.94%
2000	64.10%	54.99%
2001	62.80%	56.41%
2002	63.26%	52.67%
2003	64.61%	54.03%
Average	64.33%	55.24%

Macerich did have anchors in its portfolio that strayed quite a bit from their expected amount of influence. According to the model, Home Depot, Burlington Coat Factory, and Gottschalks all influenced MAC returns more than expected (2.22%, 1.58%, and 1.08% respectively). Conversely, both J.C. Penney, and Sears influenced MAC returns significantly less than expected (-4.11% and -2.28% respectively). Overall, it seems those anchors that influence mall REIT returns significantly greater than expected (Home Depot, Burlington Coat Factory, Bed Bath & Beyond, and Wal-Mart) tend to either specialize in a certain area of retail or concentrate on discounting. The popularity of these types of stores has grown in recent years, and may stem from the increased complexities and nuances of consumer demand within most areas of retail, or increased consumer price sensitivity overall. Thus, as mentioned, community shopping centers, which are typically anchored by these types of retailers, are becoming increasingly prevalent. This trend is further explained by the high relative development and acquisition costs of traditional enclosed malls and the larger spatial requirement such properties have.

Continued Growth In Community Center Holdings:



The strong and growing popularity that these specialty and discount anchors have enjoyed however, does not necessarily explain why they tend to influence their mall REIT returns more than other retailers. We must then explore the possibility of market coincidences to determine if they play an active role in these retailers' high influence. Given the nature of the model, it is possible that the correlation of REIT returns and anchor returns could lend itself to higher-than or lower-than-expected weighting. Intuition dictates that those anchors whose stock returns are more highly correlated with its REIT's returns will be assigned higher influence than those with lower correlations. The charts below track the cumulative returns of both REITs studied, along with Home Depot (HD), J.C. Penney (JCP), and Sears (S), and list associated correlations of quarterly cumulative returns.



CORRELATIONS

	JCP	HD	S
MAC	-0.3657	0.3444	0.3893
CBL	-0.4898	0.3613	0.2877

As one can see, J.C. Penney has negative cumulative returns and negative correlations to both REITs. It seems likely then, that J.C. Penney's significant underweighting in the model output stems from this type of market coincidence. The above explanation does not quite hold in the cases of Home Depot and Sears however, as both are similarly correlated to the REITs, but Sears has been assigned a lower-than-expected weighting. Correlation similarities remain between Sears and Home Depot regardless if computations are run on a daily or quarterly basis. Therefore, we do not accept the idea

of market coincidence as it pertains to the weightings of Sears and Home Depot, and the legitimacy of this study's model cannot be ruled out in this instance.

In the Aggregate

The annual weight outputs of this study's model seem to be significantly and positively correlated to the actual annual percentage of mall REIT space leased to anchors. By averaging the difference between each anchor's α and its API yearly, we see figures well within $+ / - 1\%$, and the average of yearly differences to be insignificant. Therefore, it seems there is a true link between the stock market returns of public anchors overall and those of their respective REITs in direct proportion to the amount of space that is leased.

Conclusions

Hypotheses

- On an anchor-specific level, the amount of influence a retailer's returns will have on the returns of its respective REIT will correspond with its API.

Within the two funds studied, stock returns of 62% of anchors⁹ influenced their corresponding mall REITs in a manner corresponding to their API.¹⁰ However, certain retailers did stray from API significantly, standard deviations were high overall, and market coincidence may have factored into the model's results.

Therefore, on an anchor-specific level, API is not an accurate measure of REIT return influence.

⁹ Refers only to those anchors in a mall REIT portfolio for sixteen (16) quarters of more.

¹⁰ $|\alpha - \text{API}| \leq 1\%$

- Certain retailers will tend to have more API-adjusted influence on their respective mall REIT returns than others.

Most anchor retailers had levels of influence that were in line with expectations. Home Depot, Burlington Coat Factory, Bed Bath & Beyond, and Wal-Mart had more influence on their respective REIT returns than expected. J.C. Penney and Sears influenced both CBL and MAC returns significantly less than expected.

- On an aggregate level, anchor retailer returns will be positively correlated with mall REIT returns in accordance with API.

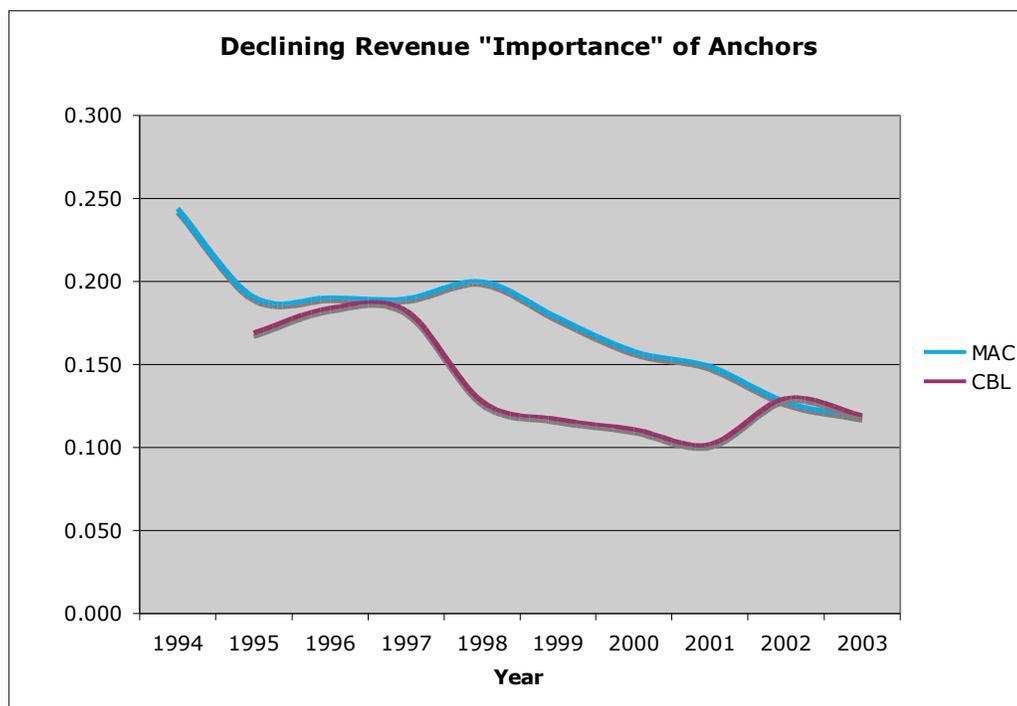
The average yearly differences in anchor α – API figures were all well within + / - 1% showing that for any given year, the stock returns of public anchor tenants and those of their respective mall REITs correlate accurately to the percentage of space leased by the public anchors. Thus, on a fund level, public anchor returns are directly linked to REIT returns.

Study Limitations

Significant limitations as to the scope of my study, its importance, and its applicability going forward certainly exist. First, as previously mentioned, this study was performed using data of only two of nine major mall REITs in the U.S. This severely limits the assumptions we can draw from its results. If the use of additional REIT data were possible, phenomenon such as market coincidences may have been better explained. In addition, anchors that strayed from their API consistently across additional funds would have made for a better basis with which to resolve the second posed hypothesis.

Second, although anchors do play a key role in attracting shopping traffic to mall and shopping centers, over the time of this study, REITs have decreasingly relied on them

as a sources of revenue (see chart below). As the revenue link between anchors and REITs continues to weaken, it seems that overall, they should have a decreasing role in the makeup of mall REIT returns. Mall stores, constitute the bulk of the money mall REITs bring in, and their rent payments depend on their monthly revenues. Thus while performing this study on smaller retailers within mall REITs might reveal higher correlations, severe data limitations make such an exercise nearly impossible.¹¹



With regard to my study's practicality going forward, I see limits to its application due, most notably, to the increased prevalence of mergers and acquisitions among larger anchor retailers. With K-Mart and Sears having merged, as well as Federated Department Stores seeking to acquire May Department Stores in the near future, the performances of individual retailers will be hard to discern from those within a

¹¹ Due to a) the fact that mall REIT annual statements do not systematically break down mall store occupancies, and b) many smaller stores within a mall REIT's portfolio are privately held.

conglomerate. These holding companies will have portfolios that may very well be designed to smooth out the business cycle and absorb abnormal retailer performances in a fashion that may make my study obsolete.

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