

Economic Analysis Suggests that REIT Investment Characteristics are Not as Advertised

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Executive Summary. Commercial real estate is a cyclical asset with partial inflation-hedging characteristics. The inflation-hedging characteristics can account for the observed long-term appreciation in institutional-grade real estate value over the last two decades. Investment characteristics of regulated investment companies are shaped by two sets of economic attributes: investment portfolio characteristics and legal constraints on the companies. Both sets of real estate investment trust (REIT) attributes differ from corresponding attributes of regulated funds that invest in corporate securities. Analysis of the REIT attributes suggests that REIT investment performance since industry inception has been more or less as could have been anticipated. Despite imminent regulatory changes, it also suggests that future REIT investment performance should be similar to performance in the recent past.

by Richard A. Graff*

Introduction

Real estate investment trusts (REITs) are the result of a mid-twentieth century attempt by the United States Congress to extend the investment company concept beyond securities such as stocks and bonds to more exotic asset classes.

REITs were authorized by the Real Estate Investment Trust Act of 1960. The statute was enacted in response to pressure from Wall Street investment banks, which were searching for highly profitable new investment products to satisfy growing consumer demand for financial assets during one of the greatest bull markets in U.S. history.¹

The benefit bestowed on REITs by the authorizing legislation was an exemption of shareholder dividends from the double taxation that applies to dividends of conventional operating companies. The legislation included constraints on REIT business activities to ensure that the tax exemption applied only to real estate investment companies that exhibited the same type of passive investor behavior as regulated stock and bond investment companies already exempt from double taxation.² Foremost among the constraints was a prohibition against REITs managing their own real estate.³ The prohibition applied to both direct management activities and indirect self-management through economically related entities.

The 1960 REIT legislation was not passed as a stand-alone bill, but rather as a rider attached to an unrelated piece of tax legislation.⁴ This suggests that the REIT industry owes its existence

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more to adept legislative maneuvering by lobbyists and legislative sponsors than to recognition by Congress of the desirability of providing real estate investors and developers with preferential access to the public equity markets. As will be discussed, the REIT industry recognized the implications of this lesson and has applied it over several decades to achieve a step-by-step reduction in constraints imposed on REIT activities by the original legislation.⁵

Although publicly traded REITs enjoyed an initial period of popularity at the end of the 1960s, they did not develop into a major source of real estate capital during the ensuing market cycle. Imprudent use of debt by REIT managers to boost earnings led to a number of forced REIT dissolutions and asset liquidations during the real estate and corporate equity bear markets of the early 1970s.⁶ Accordingly, it is not surprising that investor appetites for real estate securities withered by the mid-1970s, both for REIT initial public offerings (IPOs) and for secondary stock offerings by existing REITs.

Most of the surviving REITs continued to operate quietly over the next two decades without significant infusions of equity capital from the public markets. During that period, REIT stocks exhibited investment characteristics associated more closely with small-capitalization stocks than with real estate.⁷ The number of REITs slowly increased over the years. However, at the end of 1986 less than fifty equity REITs were listed on the New York and American Stock Exchanges, nearly all with equity capitalizations well below \$200 million and most with capitalizations below \$100 million.⁸

REIT Modernization Prologue

One of the reasons for the slow growth of the REIT industry before 1986 was the restriction of REITs to passive investment activities, and in particular the prohibition against real estate self-management. As King (1998:37-8) remarks: this "independent contractor requirement was a source of irritation for REITs" from the beginning; "More than any other requirement of the (Internal Revenue) Code for REIT qualification, the limitations that prevented a qualified REIT from actively

managing its own properties also prevented it from becoming an integrated operating company;" and "Repeal of the independent contractor requirement was the major legislative priority of the National Association of Real Estate Investment Trusts (NAREIT) for years."

In 1986, NAREIT got its chance. Congress was preparing legislation containing major changes in commercial real estate taxation. As Decker (1998: 5) remarks, "The REIT industry knew that the impending 'death' of real estate tax shelters meant that REITs would (have an opportunity to) play a much more significant role. The industry, led by NAREIT and a dedicated group of mentor REIT companies and associated law and accounting firms, successfully convinced Congress to attach a package of REIT-related amendments" to the Tax Reform Act of 1986. The package, titled the Real Estate Investment Trust Modernization Act, included a provision that permits REITs to manage their own properties.⁹ That provision is regarded by REIT observers as the "most important change in the REIT tax regime that has permitted the explosive growth of the REIT industry in the 1990s and to REITs becoming real operating companies," King (1998:39).¹⁰

Despite the elimination of the passive investor constraint, the REIT industry did not grow significantly for the next few years. Although some real estate partnerships and companies converted to REIT status, by the end of 1990 there were still only fifty-eight publicly traded equity REITs with a combined capitalization of \$5.6 billion. Similarly, the total market capitalization of all publicly traded REITs was less than \$8.8 billion.¹¹ An additional boost would be required to trigger substantial growth in the REIT industry.

Private Real Estate Crisis

Throughout this period, real estate investment remained in essence a private market. However, two sea changes were occurring in the private real estate market that threatened to increase the risk-adjusted cost of real estate capital and reduce the amount available. These changes would provide the additional boost that the REIT industry needed for explosive growth.¹²

During the preceding decade, the private real estate equity market consisted primarily of two investor classes: taxable real estate entrepreneurs and wealthy investors in search of income-generating tax shelters, and tax-exempt pension funds. Since taxable investors usually leveraged real estate equity capital with mortgage debt, most entrepreneurial real estate investment capital actually came from the commercial mortgage market.

The largest source of long-term debt finance in the commercial mortgage market traditionally has been the life insurance industry. However, an epidemic of mortgage defaults triggered by the collapse in real estate prices in the early 1990s threatened the solvency of some prominent insurance companies. Investigation into the source of the problems lead insurance regulators to revelations about structural deficiencies in pricing and risk control in insurance company lending policies. Among other deficiencies, insurance companies were classifying many commercial mortgages as investment-grade bonds for capital reserve requirement purposes. This enabled lending officers to be overly aggressive in negotiating real estate loan sizes and interest rates.¹³

The National Association of Insurance Commissioners (NAIC), the regulatory agency for the insurance industry, reacted in 1993 by replacing simple investment reserve requirements then in effect with a set of risk-based classifications for insurance company investments and an accompanying set of risk-based capital reserve requirements to protect against investment losses. The risk-based criteria became effective at the end of 1993 for life insurance companies and at the end of 1994 for property-casualty insurance companies.

The risk-based criteria require insurance companies to set aside larger loss reserves for riskier investments than for less risky investments, providing the companies with an economic incentive to factor risk into asset pricing. For example, the criteria encourage insurance companies to make a smaller portion of high-risk loans and penalize overall portfolio returns if companies fail to charge higher interest on riskier loans than on lower-risk loans.

Most significantly for real estate, the risk-based criteria classify most commercial mortgages as higher-risk fixed-income investments for reserve requirement purposes and set limits on the sizes of most loans.¹⁴ Although risk-based debt pricing had the potential to reduce the severity of booms and busts in the real estate cycle, it was not viewed as a positive development by the real estate industry.¹⁵

The end of the era of cheap and generously allocated insurance industry loans suggested that leveraged real estate investors would have to respond by reducing debt-to-equity ratios as existing debt matured. This created a problem for a number of large private real estate partnerships and investment companies, some of which owned more than \$1 billion of highly leveraged commercial real estate. Since commercial real estate valuations were depressed and mortgage loan standards had tightened, the debt could not be refinanced at economically viable interest rates. More ominously, some portions of the debt could not be refinanced at all.¹⁶

If maturing debt could not be refinanced, then the partnerships would be confronted with the prospect of bankruptcy or forced asset liquidation in a depressed real estate equity market. Either alternative would result in significant realized investment losses for equity partners, and likely partnership dissolutions.

In this case, a third alternative appeared: refinancing of maturing debt with an infusion of inexpensive equity capital.¹⁷ Ordinarily this would be an unlikely mass solution to private real estate re-funding problems. However, REIT valuations had surged in 1991 as commercial real estate prices were collapsing, suggesting that REIT investors were more concerned with current income and stock market capitalization levels than with private market valuation of the underlying real estate portfolios.

In a related development, a privately owned shopping center investment company named Kimco Realty had converted to publicly traded REIT status with a successful \$128 million IPO in November 1991. "The public offering, which raised more equity capital than the REIT industry had raised

during any of the preceding 26 months, was followed in 1992 by four conversions of private real estate companies to publicly traded REITs accompanied by IPOs that raised a total of \$638 million," see Baird (1998:10).¹⁸ Although not milestones for the REIT industry (in 1988 a \$160 million IPO had accompanied a private real estate investment company conversion to a publicly traded REIT), the 1991–1992 IPOs suggested the possibility of a recapitalization alternative for private real estate partnerships that would defer indefinitely any need to cope with the consequences of a tightened real estate debt market.

Private partnerships and investment companies had reason to expect that REIT equity capital would be an inexpensive replacement for debt capital, due in part to the fact that nonfungible assets held for investment purposes are not required to be appraised (or reappraised) prior to public stock offerings. Although U.S. securities law requires prospectuses to disclose asset valuations, the disclosed valuations can be based on acquisition cost or the most recent appraisal valuation. Thus, prospective converts to REIT status had an opportunity to retire debt and raise additional investment capital by offering shares to the public based on current portfolio income and disclosure of asset valuations that predated the real estate market decline.¹⁹

The conversion of private real estate partnerships and investment companies to REIT status soared in 1993. Baird (1998) reports the formation of forty-three new REITs in 1993 accompanied by IPOs totaling \$8.3 billion. Han (1994) reports that \$3.2 billion of secondary REIT offerings also took place in 1993, as well as the first IPO in the history of the REIT industry to raise close to \$1 billion.

The only remaining question was whether the pool of public capital that REITs were tapping would be large enough to accommodate future funding demands of the newly converted REITs. However, the other sea change in the private real estate market suggested a strategy that would enable the REIT industry to ensure that public equity markets would be able to absorb a vastly expanded number of REIT public offerings of unprecedented size.

Institutional Real Estate Investment

The real estate landscape changed with enactment of the Employee Retirement Income Security Act of 1974 (ERISA). ERISA focused enormous pressure on pension plan sponsors to diversify plan portfolios by establishing criteria based on Modern Portfolio Theory (MPT) for prudent investment diversification and exposing directors of pension funds that failed to comply to personal liability in the event of investment underperformance.²⁰ ERISA also anointed real estate as the third great domestic investment class. This turned commercial real estate investment into a high-priority item on the planning agendas of large corporate pension funds.²¹

Pension plans made a big move into real estate during the early 1980s. The move did not include significant investment in REITs, in part because of legal restrictions on the value of REIT shares that could be owned by institutional investors. The 1960 REIT legislation had included shareholder diversification requirements that amounted to de facto restrictions on the percentage of REIT stock that could be owned by individual investors, and the legislation regarded most institutional investors (including pension funds) as individuals for shareholder diversification purposes. Furthermore, doubt existed at the time about whether REIT investment characteristics more closely reflected the investment characteristics of underlying REIT real estate portfolios or the overall stock market.²² In order to ensure that real estate portfolio components reflected real estate investment characteristics, large pension plans restricted real estate investment to open-end and closed-end funds and passive direct real estate ownership.²³

A potential problem with substantial investment positions in illiquid assets such as privately owned real estate became apparent during the real estate collapse of the late-1980s. In the case of open-end and closed-end funds, pension plans found themselves locked into investments whose actual downside performance had exceeded any reasonable expectations based on MPT-based analyses of historical investment uncertainty.

Unlike stock and bond market positions, failing investments in open-end and closed-end funds could

not be liquidated quickly. Some institutional investors were held hostage by fund managers to provisions of investment subscription agreements that allowed the managers to turn real estate sales into a leisurely process. This implied that several years could elapse before poorly performing fund assets would be liquidated and the remaining capital returned to the investors for redeployment in more promising investment opportunities. During this period, fund managers could continue to collect management fees.

This was an embarrassment to prominent investment consultants who earlier had promoted open-end and closed-end real estate funds to institutional investors. They needed an explanation for the improbably poor real estate results of the 1980s.

Explanations that emphasized agency costs were not promulgated, possibly since agency issues are prominent among the economic risks that investment consultants are supposed to help their clients avoid. Instead, consultants blamed the illiquidity of directly owned real estate.

Although the impact of illiquidity is another risk that investment consultants are supposed to anticipate, it had the advantage of being a concise concept easily described to clients. In addition, it had the advantage that a ready-made conceptual solution in the form of publicly traded REITs already existed in the investment marketplace, even if institutional investors could not acquire significant investment positions in REIT shares.²⁴

Institutional Capital and REIT Growth

The REIT industry recognized opportunity in the illiquidity explanation and responded with proposed legislation that congressional supporters of NAREIT attached to the Omnibus Budget Reconciliation Act of 1993 (OBRA).²⁵ The legislation weakened legal constraints on commitments of institutional investor capital to REIT shares by creating a distinction between individual investors and some institutional investors—including pension funds—for purposes of shareholder diversification requirements in the original REIT legislation. The legislation directs REIT diversification

regulations to look through most institutional investors to the institutional beneficiaries, essentially recasting institutional investors as large collections of individual investors for diversification requirement purposes.

Although the amendment eliminated applicability of the 5-50 test that originally constrained pension fund ownership of REIT equity, pension fund ownership is still constrained by a less restrictive provision that was included in the amendment to prevent pension funds from using REITs to convert unrelated business taxable income (UBTI) into passive income. The provision defines a REIT to be pension-held if a single pension fund owns at least 25% of the REIT voting interest, or if at least one pension fund owns more than 10% of the voting interest and pension funds together own more than 50%. The provision discourages the existence of pension-held REITs by recharacterizing portions of pension-held REIT dividends as UBTI in the case of pension funds that own more than 10% of the REIT voting interest.²⁶

The NAREIT effort was an economic success for the REIT industry in the case of some categories of institutional investors, enough to fuel demand for shares issued during the unprecedented 1993–1997 wave of REIT IPOs.²⁷ Writing in 1997, Parsons (1998:421–23) notes that, “Mutual fund complexes are by far the largest category of REIT investors,” and “Domestic insurance companies have grown to become major participants in the real estate investment trust industry, second only to mutual funds.” However, the response of pension funds has been more restrained. Parsons (1998: 424) also notes that, “Currently, the U.S. pension plan sponsors are estimated to own approximately \$130 billion to \$140 billion of direct real estate equities. In contrast, we estimate that the pension plan sponsor community currently owns approximately \$5 billion of U.S. REITs, exclusive of any venture interests.”

REIT industry boosters acknowledged institutional investor concerns about whether REIT investment characteristics more closely resemble real estate or stocks, and about an inconsistent industry history of investment performance. However, they asserted that any past problems with

REIT investment characteristics were due to small size, and that any failure to reflect investment characteristics of underlying real estate portfolios would disappear if the REIT portfolios grew large enough.

The boosters further theorized that large capitalizations would enable REITs to achieve economies of scale in asset management, which would enhance shareholder returns by reducing the drag on investment performance exerted by portfolio management costs. They added that economies of scale together with investor liquidity would be the selling points that would provide REITs with permanent direct access to stock market capital and finally enable the REIT industry to engulf the private real estate market.²⁸

They finished their theory by predicting a wave of consolidation similar to previous events in the automobile, steel and petroleum industries.²⁹ The consolidation would concentrate REITs into a small number of entities controlled by those managers with the greatest ability to add shareholder value.³⁰

Although this was speculative theory without any supporting empirical evidence, several years would have to elapse before any REIT could grow large enough and accumulate enough of a track record to disprove the assertions. Until then, the business of raising institutional and small investor capital through issuance of REIT shares and investment of the proceeds in expanding real estate portfolios would be reasonably secure.

The REIT industry expanded enormously from 1993 through 1997. By the end of 1997, there were 176 publicly traded equity REITs with a combined equity capitalization of \$128 billion.³¹ The expansion enabled the industry to absorb more than 6% of the U.S. commercial real estate supply, including a disproportionate percentage of product at the highest end of the market.³²

However, even this unprecedented capitalization may not be enough to change the long-term performance of REIT stocks. The REIT boom came to a sudden halt at the beginning of 1998. Prices of REIT stocks languished, fresh infusions of capital

into the REIT sector virtually ceased and control of the real estate market returned to private investors. Some REITs cut back on personnel, and REITs were so concerned about marketplace developments that NAREIT hired a public relations firm to improve the image of REITs perceived by investors.

The key question today for potential REIT investors is whether this situation is temporary or whether fundamental economic forces are driving the new REITs toward the same long-term market equilibrium the previous generation of REITs reached in the mid-1970s. This study examines interactions between real estate investment characteristics, legal constraints on REIT managers and informational constraints on REIT investors to derive an answer to the question.

Real Estate Investment Characteristics

Whether or not investment companies directly reflect investment characteristics of their underlying investment portfolios, portfolio investment characteristics must help shape the long-term investment characteristics of investment company stocks. This suggests that any analysis of REIT investment characteristics should begin with an examination of the investment characteristics of commercial real estate.

A tenet of economics at the basis of investment analysis is that the investment value of an asset equals the present value of future net cash flows expected from the asset. This characterization applies regardless of asset investment risk and return characteristics.

In the case of commercial real estate, expected net cash flows can be separated into two components: the present value of expected net cash flows from current leases and the present value of expected net cash flows from future leases. The two components have different investment characteristics.

Expected net cash flows from current leases are payments specified by lease covenants that tenants are required legally to remit to the asset owner at

times specified in the covenants. Uncertainty in the sequence of net cash flows is solely a consequence of tenant credit risk together with any uncertainty created by provisions in the lease covenants.³³ Absent lease cancellation provisions, these cash flows are independent of the dynamics of the real estate rental market subsequent to the signing of the leases.³⁴ In short, the present value of expected net cash flows from current leases has the investment characteristics of a fixed-income asset (e.g., a portfolio of bonds).

By contrast, amounts and timing of net cash flows from future leases depend on supply and demand in the spot rental market at such time as the leases are negotiated. Thus, the present value of expected net cash flows from future leases reflects expectations about future prospects for the spot rental market. Accordingly, this component has the investment characteristics of an equity asset.

It follows that commercial real estate is the sum of two components with distinct investment characteristics.³⁵ Furthermore, the current lease component is solely responsible for the income characteristics of real estate, and the future lease component is solely responsible for the equity investment characteristics of real estate. Accordingly, the future lease component is also referred to as the equity component of commercial real estate.

Equity Component Investment Characteristics

It is possible to deduce investment characteristics of the equity real estate component from basic observations about commercial real estate. For example, unlike corporations, commercial buildings typically do not grow. In other words, without a major capital investment to reconfigure a building, the amount of usable space in the building will never increase.³⁶ It follows that expected cash flows from future leases can only grow as a function of time if expected rents per square foot from future leases increase as a function of time.³⁷

In the short term, expected net rent per square foot of usable commercial space from future leases is determined by the supply-and-demand equilibrium

in the spot rental market, and fluctuates with expected near-term changes in supply and demand. However, over longer intervals replacement cost acts as an attractor to constrain future fluctuations in supply and demand.

More specifically, in the U.S. it is usually the case that land represents a relatively small component of development cost.³⁸ It follows that development cost per square foot is relatively predictable at the project planning stage for each type of commercial property. Useful economic life is also relatively predictable for commercial property, so annual amortization of development cost per square foot over the useful economic life of property improvements can be predicted at the planning stage with reasonable accuracy. It follows that the required annual return from new property development can be forecast with reasonable accuracy, and that it equals annual amortization of projected cost per square foot of incremental property development plus an investment return competitive with alternative available capital market investment opportunities.

If supply and demand fluctuations produce a near-term spot rental equilibrium for a particular type of property that significantly exceeds the required annual return from new property development, then developers have strong economic incentive to increase the local supply of that type of property. Since land availability is not a major constraint on real estate development in the U.S., experience has shown that developers will respond to the incentive if the capital markets provide financing. Accordingly, incremental supply will exert eventual downward pressure on the rental equilibrium.

Conversely, if supply and demand fluctuations produce a near-term equilibrium rent for a particular type of property that is significantly below the required annual return from new property development, then investors who own that type of property locally have incentive to reduce the local supply by reconfiguring their property for more productive alternative uses or writing off the investment. Accordingly, reduction in supply will exert eventual upward pressure on the rental equilibrium.³⁹

Such changes in supply do not take place overnight. Incremental development typically requires

between two and five years in the case of institutional-grade property, and property reconfiguration or investment write-off can only take place once existing leases have expired. This suggests that the required annual return from new property development is a long-term attractor that constrains expected rents from leases expected to commence in the more distant future, although possibly not expected rents from future leases expected to commence in the near term. As will be discussed, this has the implication that commercial real estate is not a growth asset.

Future demand for commercial space is harder to forecast accurately than future supply. Accordingly, the supply-and-demand equilibrium for commercial property can only be forecast a few years into the future with any degree of accuracy. This suggests that the most rational expected rent per square foot on commercial property from future leases to be written beyond the next several years (*e.g.*, certainly beyond eight years) is equal to the value of the long-term attractor that constrains expected rents from leases expected to commence in the more distant future. It follows that expected long-term rent per square foot from future leases is equal to the required annual return from new property development. In other words, expected long-term rent per square foot from future leases is equal to annual amortization of projected cost per square foot of new property development over the economic life of the property plus an investment return competitive with alternative investment opportunities of comparable risk concurrently available.

Finally, the expected long-term rent per square foot from future lease of any particular property is equal to the expected long-term rent per square foot from future leases, provided the probability that the asset will cease to be operated during the useful economic life of the property is negligible. This assumption is satisfied by institutional-grade property in major real estate markets.⁴⁰

Expected rents from future leases to be written in the near term (*e.g.*, within two years) fluctuate with changes in expectations about the future supply-and-demand spot rental market equilibrium. Changes in expected supply can be forecast with

great accuracy in the near term and are largely independent of changes in near-term economic activity.⁴¹ Changes in expected demand are determined by changes in expectations about future near-term economic activity. Accordingly, expected rent from future leases to be written in the near term is independent of the constraint imposed on long-term expected rent by the required annual return from new property development.

Expected rent from future leases to be written in the intermediate term (*i.e.*, following the near term but prior to the long term) is a blended function of (weak) expectations about the future supply-and-demand equilibrium during the intermediate term and the long-term economic constraint imposed by the required annual return from new property development.

It follows that the equity component of commercial real estate can be regarded as the sum of three cyclical subcomponents: expected rent from future leases to be written in the near term, expected rent from future leases to be written in the intermediate term and expected rent from future leases to be written in the long term. The long-term subcomponent usually represents the largest portion of equity component value, since the value of the long-term subcomponent is equal to the present value of net rent from all leases to be written nine or more years in the future.

In many important cases, the equity component has fewer than three subcomponents. For example, in the case of fully-leased property in which current leases have at least nine years remaining in all primary lease terms, there are no future leases to be written in the near term or intermediate term. It follows that the equity component consists solely of the long-term subcomponent.

Real Estate Cyclicity

Expected rent from future leases to be written in the near term is determined by simple extrapolation from the current supply-and-demand equilibrium in the spot rental market. This implies that expected rent from these leases is determined by the progression of the real estate cycle. It follows

that the near-term subcomponent is a cyclical asset.

As discussed, expected rent from future leases to be written in the long term equals the required annual return from new property development. In other words, expected long-term rent per square foot equals annual amortization of projected cost per square foot of new property development plus an investment return equal to the expected investment return from alternative investment opportunities in the investment universe of comparable risk. The projected cost per square foot of new property development and the expected investment return from opportunities in the investment universe of comparable risk to commercial real estate are both functions of the economic cycle. It follows that the long-term subcomponent is a cyclical asset whose current value is determined primarily by the current state of the economy.

Expected rent from future leases to be written in the intermediate term is a function of the variables that determine the expected rents from future leases to be written in both the near and long terms. In other words, expected rent in this case is a function of a combination of cyclical real estate and general economic variables. It follows that expected rent from future leases to be written in the intermediate term must be a cyclical asset.

Since the three subcomponents of the equity component are cyclical assets, it follows that the equity component of commercial real estate is a cyclical asset.⁴² Thus, each commercial real estate asset is the sum of a fixed-income component and a cyclical equity component. It follows that commercial real estate is a cyclical asset.

The subcomponent decomposition makes it possible to disentangle the inflation-hedging properties of the equity component. First, expected rent from future leases to be written in the long term is fully inflation-hedged, since both the expected cost of new product development and the expected return from investments of comparable risk are fully inflation-hedged. By contrast, expected rent from future leases to be written in the near term is essentially a function of expected near-term demand. Since expected near-term demand for real space is

not a function of inflation, it follows that expected rent from future leases to be written in the near term is unresponsive to inflation. Lastly, expected rent from future leases to be written in the intermediate term responds to economic variables that affect either of the other subcomponents. This suggests that the intermediate-term subcomponent responds to inflation, but that it is not fully inflation-hedged. Together the three conclusions suggest that the equity component responds to inflation but that the component is not fully inflation-hedged.

Finally, real estate is the sum of its current lease component and its equity component. The current lease component is a fixed-income asset that is not inflation-hedged unless rents in current leases are inflation-hedged, which is certainly not the case in the present real estate environment. Thus, conceptual analysis suggests that real estate is an asset with inflation-hedging characteristics, but that commercial real estate should not be expected to maintain its value in response to increased inflation.

Based on observed returns generated by assets in the National Council of Real Estate Investment Fiduciaries (NCREIF) database since 1981, institutional investors expect a small annual appreciation in real estate value that averages about 2.5%. The expected capital gain is close to the 2.48% annualized capital gain in the NCREIF Property Index over the interval 1982–1999 and less than the 3.29% annualized increase in the Consumer Price Index (CPI) over the same interval.⁴³ This suggests that the expected capital gain is a rational response to average long-term appreciation in institutional-grade property observed in a low-inflation environment, and also that real estate partial inflation-hedging characteristics are responsible for the average long-term appreciation observed in NCREIF-managed property.

Empirical evidence consistent with this hypothesis is presented in Miles and Mahoney (1997), which examines inflation-hedging characteristics of quarterly index returns from the NCREIF Property Index from 1971:4 to 1995:3.⁴⁴ The study regresses quarterly NCREIF index returns against quarterly

proxies for the expected and unexpected components of inflation, with the regressors lagged three quarters behind the dependent variable. The study concludes with high confidence that NCREIF index returns were a complete hedge against expected inflation and a statistically significant partial hedge against unexpected inflation during the test period.⁴⁵

The Miles and Mahoney regression has an adjusted R^2 of .17, which suggests that inflation explains only about one-sixth of the variation in total NCREIF index return. Empirical evidence has shown that most variation in investment return is nonsystematic in the case of institutional-grade property, see Graff and Young (1996). It follows that inflation induces price appreciation that is consistent with the average growth in value observed in institutional-grade real estate, but that inflation-induced appreciation explains only a minuscule fraction of investment return variation in the case of individual real estate assets.

Real Estate Valuation

Graff and Cashdan (1990) shows that the sample variance of the equity component of the NCREIF Property Index was greater than the sample variance of the Lehman Brothers Intermediate-Term Government/Corporate Bond Index but less than the sample variance of the S&P 500 during the test interval 1978–1989. This suggests that the equity component of institutional-grade commercial real estate has moderate investment risk: greater than bonds but less than large-capitalization stocks.⁴⁶ In other words, institutional-grade real estate is the sum of a low-risk fixed-income component and a cyclical equity component that has less risk than typical large-capitalization stocks.

It follows that institutional-grade real estate is a low-risk cyclical asset that is more bond-like than stock-like. This suggests that institutional-grade real estate is an income vehicle that the real estate market should value primarily for its income-generating capacity.

The suggestion is a testable hypothesis. More precisely, if the hypothesis that institutional-grade

real estate is valued primarily for its income-generating capacity is correct, then capitalization rate should be a major determinant of asset price in the case of institutional-grade real estate. This was verified empirically by Wheaton and Torto (1989), in which it is shown that the capitalization rate was the most efficient of numerous statistical estimators of asset price during the test period 1978–1988.

Since institutional-grade real estate assets have relatively low investment risk compared to S&P 500 stocks, institutional-grade real estate has much lower potential for unexpected upside performance than S&P 500 stocks. In other words, the probability of an observed investment return from institutional-grade real estate significantly greater than the expected return when the asset is acquired is significantly smaller than the probability of corresponding unexpected upside performance in the case of stocks in the S&P 500. This result has practical implications for real estate investment strategy when considered in conjunction with real estate market inefficiency.

Assume for the moment that an investor misvalues an institutional-grade property when acquiring the asset, and that the investor overpays for the acquisition. Then it is likely that actual investment return will be lower than expected investment return, because low investment risk implies that future unexpected upside performance to compensate for the performance penalty imposed initially by asset misvaluation is unlikely. This is a general investment principle that applies to all asset classes: overvaluation becomes a greater handicap to investment performance as investment risk declines. As next discussed, the general principle suggests that accurate valuation of individual portfolio acquisitions and sales is more important than efficient portfolio diversification in the case of institutional-grade real estate.

MPT was designed to reduce investment risk in the stock market, where investment risk is significantly higher than in real estate and where current market price is an efficient and readily available estimator of asset value. Since investment

risk is lower in real estate than in the stock market, the value added to real estate portfolio strategy by incremental portfolio risk reduction is less than in the case of stock portfolio strategy.⁴⁷

On the other hand, real estate market inefficiency together with low real estate investment risk implies that misvaluation is a greater threat to investment performance in real estate than in the stock market.⁴⁸ This implies that the value added to real estate portfolio strategy by incremental investment in accurate asset valuation is greater than in the case of stock portfolio strategy.⁴⁹

Asset overvaluation may be the primary explanation for an underperformance problem that is pandemic in institutional real estate investment. Fisher and Young (2000) presents compounded annual investment returns (*i.e.*, internal rates of return) for individual properties in the NCREIF database that were both acquired and subsequently sold during the interval 1980–1998. The study examines 2,187 assets, each of which had a required annualized return of 12% when acquired. However, the mean annualized return actually observed is only 7.7%, with fully 50% of the actual returns failing to exceed 8.0%. This suggests that institutional managers routinely overpay for acquisitions, which implies either inadequate attention to accurate valuation or greater concern with asset acquisition than with expected investment return.⁵⁰

In either case, the evidence suggests the existence of a major agency cost that has imposed significant penalties on institutional investors for passive real estate investments.⁵¹ As will be discussed, the agency cost imposed on passive real estate investors by the REIT structure appears to be even greater.

Legal Constraints on REITs and Implications

As discussed, institutional-grade real estate is a low-risk cyclical asset valued primarily for its income-generating capabilities. It follows that double taxation of real estate income would constitute a prohibitive performance handicap on passive real

estate investments relative to income-oriented mutual funds. Congress intended REITs to be an investment vehicle that would circumvent this problem by providing small investors with passive investment opportunities in stabilized income-producing real estate that could compete with low-risk bond funds on an after-tax basis. Accordingly, REITs are taxed only on the undistributed portion of REIT earnings.⁵²

In granting an exemption from double taxation to investors in any corporation-like entity, Congress takes the risk that ingenious corporate managers will find ways to turn the business activities of such entities in directions that Congress does not intend. In order to ensure that REIT managers remain focused on real estate-related investments throughout the real estate cycle, Congress included a requirement in the original REIT act that 75% of annual REIT income must be derived from real estate-related investments (*e.g.*, rent, mortgage debt service and realized capital gains on real estate equity and debt). The Real Estate Investment Trust Modernization Act relaxed the constraint in 1986 by adding earnings from certain short-term investments outside real estate to the list of acceptable real estate-related investments.⁵³

In order to prevent REITs from using their tax exemption to subsidize direct competition for capital and product with actively managed real estate businesses, the authorizing REIT act of 1960 also required REITs to distribute at least 90% of taxable ordinary income to REIT investors during or shortly after the year in which the income accrues. The minimum distribution threshold became 95% at the beginning of 1980.⁵⁴ The higher minimum threshold for REIT dividends provided an additional layer of protection against any incentive of REIT managers to abuse the relaxation of passive management constraints when the Real Estate Investment Trust Modernization Act was enacted in 1986. Less latitude in retaining income to finance portfolio expansion suggested greater difficulty in extending newly authorized active management activities beyond the intended legislative objective of property management services for otherwise passive investments.⁵⁵

In order to foreclose the possibility that individuals or small groups of real estate investors would use REITs as limited liability investment vehicles to implement personalized investment programs exempt from double taxation and with access to public equity markets, Congress added the 5-50 test: each group of five or fewer investors in a REIT cannot own more than 50% of the voting interest in the REIT during the second half of its fiscal year.⁵⁶

Real Estate Acquisition Incentive

The legal REIT constraints have implications for REIT investment characteristics. For example, the 75% income test provides REIT managers with an incentive to commit any significant incremental investment capital to real estate equity and mortgage acquisitions as soon as feasible.⁵⁷

Both REIT managers and managers of closed-end and open-end real estate funds have a carrot-and-stick incentive to assign a higher priority to prompt acquisition of real estate investments than to avoidance of overpriced real estate. However, REIT managers have greater incentive to commit capital promptly to overpriced acquisitions due to the 75% earnings test (*i.e.*, the stick incentive) than managers of private real estate partnerships. The managers of private real estate funds typically have two years to commit new capital to real estate investments before they must return any uncommitted capital to the partnership investors, and the partnerships are not at risk of being taxed if too much capital remains uninvested in real estate.

The carrot part of the incentive to commit capital promptly to overpriced acquisitions is also greater for REIT managers than for managers of private real estate funds. Closed-end funds typically are scheduled to liquidate real estate portfolios and return investor capital after an investment term specified when the funds are created (typically fifteen years), and open-end funds are supposed to liquidate assets and return investor capital within a few years of any request from investors. In both cases, fund managers are aware that they will not collect investment management fees indefinitely. By contrast, REIT managers are never required to

liquidate real estate or return investor capital once the equity has been raised. Thus, the present value of future investment management fees is greater for REITs than for closed-end or open-end real estate funds.

REIT managers are aware that investment management fees constitute an annuity they can collect as long as they continue in REIT management. Thus, the present value of future investment management fees provides greater incentive for REIT managers to invest in real estate without concern for acquisition cost than the present value of fees for managers of private real estate funds.

Empirical evidence consistent with this behavior has begun to appear. Hardin and Wolverton (1999) examines apartment transactions in three cities during subintervals of the 1990s. The study finds that REIT buyers paid a premium of 26.1% in the Atlanta market and a premium of 27.5% in the Phoenix market during the test intervals and that the premia are statistically significant, although the study does not detect evidence of a premium in the Seattle market. Examining apartment transactions in the Phoenix market with a larger data set and a different methodology, Graff, Slade and Webb (2000) finds that REIT buyers paid a premium of 32.2% during the interval 1990–1997 and that the premium is highly significant, which confirms the result of the Hardin and Wolverton study for Phoenix.⁵⁸

Per Share Earnings Growth

Investment companies can generate long-term per share earnings growth in only two ways: by investing in assets with growing earnings, and by financing expansion of the investment portfolio through reinvestment of retained earnings. Neither approach is available to REITs, since REITs are restricted to investments in low-risk income-generating cyclical assets. The 95% income payout requirement implies that REITs cannot finance expansion of the investment portfolio with retained income. By contrast, taxable corporations with growth prospects typically retain at least 50% of after-tax earnings for reinvestment in the corporation.

Growth through redeployment of undistributed capital gains is also unpromising, because capitalization rate is one of the most prominent factors in real estate price determination. It follows that there is much less variation in capitalization rates across the investment universe of stabilized real estate than there is across the stock market. Since the corporate tax rate is 34%, it is likely that the after-tax proceeds of any asset sale will be redeployed in property with less income-generating potential than the divested asset if capital gain was a significant component of the sale price. Accordingly, REITs have an incentive to retain ownership of appreciated property, and long-term REIT investment performance should not significantly exceed the performance of a portfolio of stabilized commercial real estate.⁵⁹

Since the average duration of the real estate cycle is about a decade, one scenario can occur in which REITs can appear to generate per share earnings growth. If REITs raise large amounts of incremental capital at the bottom of the real estate cycle, then rising cyclical real estate valuations and rent increases can be misconstrued for about half a decade as portfolio and earnings growth. However, when the cycle peaks and the apparent growth rate is not maintained, investors will lower their expectations concerning REIT growth capabilities and adjust their valuations of REIT shares to reflect the diminished expectations.

This is the scenario that was observed during the period 1993–1998. It is a relatively improbable scenario because it requires an ability to raise real estate investment capital at the bottom of the real estate cycle, when most investors usually perceive real estate investment risk to be at its highest. Thus, the scenario is unlikely to recur in the foreseeable future.

Antitakeover Protection

An additional legal constraint on REITs with economic implications is the 5-50 test. As discussed, the test is designed to prevent small groups of investors from taking control of REITs and using the REITs as private real estate investment vehicles.

However, the test provides a safe harbor for underperforming REIT managers not available in the case of unregulated publicly traded corporations.

In the case of most publicly traded corporations, the possibility of hostile takeovers constitutes a form of insurance against the imposition of out-of-control agency costs by corporate management and provides assurance to shareholders that management has incentive to maximize the economic wealth created by the assets of the corporation.⁶⁰ If corporate management falls significantly short of achieving this objective, the stock market is likely to place a significantly lower capitalization on the total outstanding stock in the corporation than would result from involuntary replacement of management by a new management team or that would result from sale of the corporate assets if the assets were liquidated in an orderly and efficient manner. This provides strong economic incentive to an outside investor group to attempt a hostile takeover of the underperforming target. The attempt is likely to succeed if a voting shareholder majority perceives that the outside group provides shareholders with a more attractive economic alternative than current management.

In order to prevent groups of investors from subverting the 5-50 test by coordinating investment activities to acquire control of REIT management, coordinating investors can be interpreted as a single shareholder for purposes of the 5-50 test.⁶¹ Accordingly, any dissident shareholder group that captures majority control of REIT voting stock through overly aggressive means could cost the REIT its tax-exempt investor status. It follows that the dissident group could be sued by other REIT shareholders for harming shareholder value.

To ensure that aggressive investor initiatives will not result in forfeiture of the REIT tax advantage, many REITs have adopted antitakeover provisions, including poison pills, golden parachutes and restrictions on the maximum amount of REIT stock each investor can hold. Thus, the law governing REITs has the incidental consequence of ensuring that hostile REIT takeovers are nearly impossible.⁶²

Similarly, it is virtually impossible for disgruntled REIT shareholder groups to force a change in management policy without the cooperation of current management, regardless of management performance. It follows that REIT management need only be concerned with investor perceptions of management performance if management intends to float additional stock offerings to finance expansion of the REIT portfolio and the investment earnings that constitute the economic base supporting management income.

Unlike the managers of nearly every other entity with publicly traded stock, REIT managers need not be concerned with investor perceptions once fee income from the REIT investment portfolio has grown large enough to satisfy management needs. At that point, the managers can operate their REITs as private fiefdoms with minimal deference to shareholder interests.

Although long-term REIT per share earnings growth is not possible, REIT managers have resurrected a strategy used formerly by managers of corporate conglomerates to generate the temporary appearance of per share earnings growth. In essence, REITs with higher-than-average price-earnings ratios absorb REITs with lower price-earnings ratios.

Since REITs are virtually immune to hostile takeover, REIT acquisitions are likely to occur only with the approval of the managers of targeted REITs. It follows that the managers of targeted REITs must have economic incentive to surrender their fiefdoms. The incentive can be in the form of either a carrot or a stick.

Because of the protection from hostile takeovers, any stick must be imposed internally by the economics of REIT management. Once the equity market spigots close, REITs with portfolios that did not grow large enough to generate adequate long-term fee income before the flow of fresh capital ended are vulnerable to the economic blandishments of buyout proposals that include reasonable settlement provisions for managers of takeover targets.

Once all surviving REITs have investment portfolios that are large enough to support the magnitude of fee income desired by management, buyout package proposals for managers of targeted REITs are unlikely to constitute enough incentive to induce the managers to exchange their business careers for luxurious retirement. At this point, REIT mergers are likely to become infrequent events, occurring only when controlling managers of a REIT (the target) approach retirement age and are willing to step aside if so doing will generate one last financial windfall. At that point they can collect a big carrot in the form of a bountiful management buyout package in return for selling the company to another REIT, in lieu of a less lavish financial package if they simply retire.

In either case—stick or carrot—REIT mergers will occur only when or if they meet the needs of REIT managers, with minimal regard for shareholder interest beyond avoidance of any blatant breach of fiduciary responsibility that could trigger a shareholder lawsuit.

Agency Costs and Valuation

As discussed, directly owned real estate is valued by the real estate market for its income-generating capabilities. Since REITs are income-generating companies without significant internal growth-generating capabilities, and since REITs have a tax incentive to retain appreciated assets, the stock market would be rational to value REITs for the income-generating capabilities of their real estate portfolios, without the addition of any growth premium although possibly with the addition of a liquidity premium.

Investors usually are capable of perceiving that REIT real estate portfolios are managed in the interest of REIT management rather than for maximization of per share real estate value through highest and best asset use and well-timed (and well-priced) acquisitions and sales. For example, during the period 1998–1999 this insight could be acquired by reading the real estate page in the Wednesday edition of *The Wall Street Journal* on a regular basis. Accordingly, it is reasonable to expect REIT shares to trade most of the time at a

discount to underlying per share asset value. The average discount percentage of REIT shares is likely to be larger than in the case of most exchange-listed closed-end equity funds due to REIT protection against hostile takeover.⁶³

This is what occurred during most of the two decades prior to the REIT explosion of the 1990s, and what also has occurred since the collapse of the REIT boom in 1998. This suggests that any value added to real estate by REIT liquidity is more than outweighed by the penalty of incremental agency costs engendered by legal constraints on REITs and their economic impact on the market value of REIT shares.

Institutional investors may already have come to some of these conclusions. Worzala, Sirmans and Zietz (2000) presents empirical evidence suggesting that institutional investors perceive REIT investment risk to be incommensurately large in comparison with expected return.⁶⁴

Leverage and REITs

Corporate management in every industry is aware that leverage enhances current investment returns to equity shareholders, provided the cost of debt is below the marginal expected return from incremental investment. In the case of REITs, debt may take the form of either mortgages on specific properties in the investment portfolio or general obligation debt backed by the credit of the REIT. However, regardless of how the debt is secured, legal constraints on REITs imply that debt constitutes an Achilles heel for both REIT management and REIT investors.

With typical borrowings of taxable corporations, debt covenants usually provide for reduction of future refinancing risk by staggering debt repayment over the debt term. For example, the repayment schedule may provide for annual amortization payments, or for sporadic sinking fund payments to reduce the balloon payment due when the debt matures. In general, cash needed to fund the scheduled payments is acquired in one of four ways: by refinancing the current portion of debt principal

with new debt, by floating a new issue of stock, by selling corporate assets or by retaining enough cash from corporate after-tax earnings to cover the payments.

The difficulty with debt in the case of REITs is that the 95% income payout test implies that REITs cannot retain enough cash from current earnings to cover any sizable principal payments. Although REITs may retain small amounts of cash for several years and park the cash in money market instruments in anticipation of a sinking fund payment, money market returns on cash are usually lower than real estate investment returns and penalize overall REIT investment returns. Issuance of new stock is also a problematic solution, since the stock market is frequently unreceptive to secondary stock issues that are floated to refinance corporate debt. The voluntary sale of real estate from the REIT portfolio to retire debt is usually an unattractive option for REIT management, since this is equivalent to a return of investment capital and results in a reduced REIT earnings base. The most attractive solution to debt refinance from the perspective of REIT management is usually to avoid annual amortization payments, minimize the number of sinking fund payments (*e.g.*, eliminate sinking fund payments if lenders are willing), refinance each balloon payment of debt principal with new debt, and remain on the lookout for a window of opportunity during which the stock market is receptive to the refinance of REIT debt with new equity.

The risk inherent in this strategy is that lenders may not be able to refinance the entire debt if the value of underlying REIT real estate has declined significantly when the debt matures. In this event, REIT management will be forced to liquidate part of the REIT asset portfolio at precisely the wrong time for REIT shareholders (*i.e.*, when the value of the real estate has declined) to cover the required debt payment. The result will be a substantial decline in shareholder capitalization. In case of substantial declines in real estate valuations and highly leveraged REITs, the process can lead to REIT dissolutions or bankruptcies.

This is more than a theoretical possibility. In the early 1970s, many REITs were highly leveraged

with intermediate-term interest-only debt. The debt came due in the mid-1970s as the real estate cycle bottomed, triggering a wave of REIT dissolutions that soured investors on the REIT concept for nearly two decades. More recently, Oppenheimer (2000:225) reports that, "In 1998, the Federal Reserve Board issued a supervisory letter to its examination staff and banking organizations that included a cautionary reference on unsecured lending to equity REITs."

Informational Constraints on REIT Investors

REIT managers do not allow public access to detailed information about buildings, leases and tenants needed by investors and investment analysts to derive accurate earnings forecasts and portfolio valuations. At initial glance this seems consistent with standard institutional real estate management policy regarding the protection of client investment information from prying outsiders. However, in the case of private institutional closed-end and open-end funds, the information is accessible for examination by client investors and their investment advisors.

In the case of publicly traded REITs, stock market investors constitute the actual and potential equity investors. Thus, in the case of REITs, the client investors are the general public and the investment advisors include Wall Street REIT investment analysts. Thus, the secrecy policies of REIT managers keep REIT investors in greater ignorance about portfolio holdings than corresponding investors in institutional private partnerships.

Grossman and Stiglitz (1976) predicts that analyst and investor expectations should converge in the absence of concrete investment information and investor behavior should tend to become more uniform. These predictions were confirmed in the case of REITs during the recent REIT boom.

As Wall Street raised tens of billions of dollars for the new generation of REITs during the 1990s, the number of Wall Street analysts following the REIT industry expanded from one or two to more than a

dozen. However, institutional real estate managers observed that predicted REIT earnings from the new analysts were more uniform than in the case of analysts following other industries. In fact, earnings estimates varied by no more than a few cents across the universe of REIT analysts every quarter, a strong indicator that the analysts lacked adequate information to stimulate the formation of individual insights needed for the generation of diverse predictions.

Such uniformity extends to REIT investor behavior. For example, Graff and Young (1997) shows the existence of patterns in monthly returns of exchange-listed equity REITs during the interval 1987–1996. The patterns suggest that investors tend to acquire and divest REIT shares in unison. The study suggests that such behavior temporarily destabilizes the market price equilibrium of REIT shares, resulting in the imposition of larger-than-expected trading costs on investment returns at the beginning and end of investment holding periods.

The Graff and Young study shows that the patterns are most pronounced in returns of the new larger-capitalization REITs, which are favored by institutional investors for their greater liquidity. Thus empirical evidence suggests that larger REITs are not priced more efficiently by the stock market than smaller REITs. More generally, it suggests that liquidity alone is insufficient to guarantee pricing efficiency of corporate equity in the absence of adequate investment information disclosure by corporate management.⁶⁵

As discussed, the layer of shareholder protection provided by hostile takeover risk against the imposition of excessive agency costs by corporate management is absent in the case of REITs. An additional layer of protection is provided by the fiduciary responsibility for shareholder economic interests imposed on corporate management by securities law together with the right of shareholders to legal redress for any egregious abuse of the interests by fiduciaries. However, the shareholder right to legal redress is virtually impossible to exercise successfully in the case of REITs that are in compliance with regulatory requirements.

The difficulty with successfully exercising shareholder rights in legal proceedings is that inadequate information about property, leases, tenants and valuations translates into an inability on the part of REIT shareholders to obtain objective evidence of manager mismanagement prior to filing suit and engaging in protracted and costly discovery proceedings to search for evidence of fiduciary breaches.

Whether unintentionally or not, REIT disclosure policies have the practical consequence of making successful discovery proceedings unlikely. For example, SEC disclosure regulations require REIT management to report asset values to shareholders based on the most recent valuations, but do not mandate periodic appraisal updates. Accordingly, REIT assets are almost never appraised except during acquisition and disposition.

REITs can also take advantage of inadequate publicly available investment information to structure investments that mislead investment analysts who follow the REIT industry. For example, some REITs finance corporate real estate through sale-leaseback transactions and build-to-suit purchases. In such transactions, REITs usually prefer leases that schedule periodic rent increases throughout the primary lease term to leases with constant rent. In exchange for the periodic increases, REITs agree to accept lower-than-market rent near the beginning of the lease term.

The increasing rent schedule usually has the same net present value as the forgone alternative schedule with the same term and constant rent marked initially to market. It follows that no value is added to the investment by rearranging the rent schedule. However, because investment analysts do not have access to leases, they cannot discern that the initial rent is below market. Similarly, analysts cannot discern that increasing income during the lease term is being generated by rent increases that were scheduled at the time the sale-leaseback contract was signed. The only conclusion apparent from analyzing publicly available investment information is that REIT income appears to be growing.⁶⁶ This encourages analysts

and investors inexperienced with real estate finance to capitalize REIT income at a growth company multiple rather than a cyclical company multiple.

The example illustrates why knowledge of lease contents (including renewal options) is essential to real estate portfolio valuation and risk analysis. Without access to the leases, analyst and investor efforts to forecast earnings and value REIT real estate portfolios are essentially useless.

Agency Costs and REIT Modernization

The larger-capitalization REITs that appeared in the 1990s were advertised by the REIT managers and investment bankers as efficient modern conduits for real estate investment capital that quickly would supplant traditional real estate investment vehicles. However, when the capital market spigots closed to REITs in early 1998, REIT managers began reaping the consequences of overpaying for low-risk cyclical assets during the REIT boom and misrepresenting the investment characteristics of their products.⁶⁷

Soon afterwards a new promotional strategy emerged. Lawmakers were informed that existing legal constraints on REITs are handicaps that prevent REITs from competing fairly in the real estate marketplace. Left unexplained was the reason REIT managers and investment bankers didn't disclose these competitive handicaps in investor prospectuses when the REIT industry was absorbing \$140 billion of commercial real estate assets during the 1993–1998 boom.

Nonetheless, NAREIT lobbyists subjected Congress to prolonged intense pressure to again loosen the operating constraints imposed on REITs in return for the REIT tax exemption. After a year of such pressure, Congress passed the Real Estate Investment Trust Modernization Act of 1999 (RMA) in the Fall of 1999 and the President signed it into law in December.⁶⁸ As a result, a relaxed set of constraints on publicly traded REITs takes effect in 2001.

The RMA allows REITs a little more wiggle room to distance the performance of real estate investment companies from the income-oriented cyclical characteristics of their real estate portfolios. The objective is to manufacture some consistent growth characteristics that will encourage investors to reopen the spigots that disburse liquid capital.

Under the new rules, REITs will be able to retain some additional income for reinvestment to promote growth: 10% instead of 5%. This repeals the 95% distribution requirement that became effective in 1980 and that functioned as a disincentive to REIT abuse of the active management activities authorized by the 1986 edition of the REIT Modernization Act.

REIT active management activities no longer will be restricted to property management support for otherwise passive investments. Instead, REITs will be able to engage directly in ordinary business operations through wholly-owned taxable subsidiaries. Although the new rules impose limits on the amount of income that REITs may earn from such subsidiaries, for the first time the rules permit REITs to compete with taxable real estate corporations through establishment of an economic fiction that constitutes an invitation to abuse.

The precise nature of these changes is not really that important for real estate investors. What is important is that the new activities should cause REIT investment characteristics to diverge even further from the characteristics of underlying REIT portfolios, which seems to conflict with the original REIT objective of providing small investors with opportunities to invest in commercial real estate.

More importantly, the RMA doesn't contain anything to rein in the agency costs that led to recent investor disillusionment with REITs as currently structured. In particular, there will be no change in de facto REIT immunity from hostile takeovers and shareholder lawsuits, or in the ability of REIT management to withhold information from the public needed by shareholders and investment analysts for valuation of underlying real estate portfolios. In short, the 5-50 test and information withholding are not addressed by the RMA.

Any corporate structure that provides corporate management with access to public equity markets and takeover immunity, and that allows information needed for investment analysis to be withheld from investment analysts, is an invitation to agency cost abuse by corporate management.⁶⁹ REIT managers were unable to resist the temptation during the recent boom years and apparently killed their golden goose. So in 1998 NAREIT took the \$130 billion of equity capital the REIT industry had acquired during the previous eight years and went back to Congress for more help in raising funds from the public.⁷⁰

The reality is that REIT managers do not have any apparent competitive advantage in accessing real estate product or in implementing sophisticated portfolio strategies to enhance investment returns. The advantages possessed by REIT managers are periodic access to liquid capital from small investors and the fact that the managers never have to give equity capital back once they get their hands on it.⁷¹

NAREIT proclaimed for more than a year that REITs have been a superior conduit for real estate investment and that REITs have been competitively disadvantaged in the real estate market.⁷² Somehow, lawmakers failed to notice the contradiction and gave them most of what they requested. In 2001 it will become clear whether the investing public is as accommodating.

Conclusion

Commercial real estate is a cyclical income-producing asset with inflation-hedging attributes that appear to account for observed long-term asset appreciation. The investment characteristics of commercial real estate are a blend of fixed-income and cyclical equity characteristics. Real estate is valued by investors for its income-generating capabilities.

Investment corporations can generate long-term per share earnings growth in only two ways: by investing in assets with growing earnings, and by financing investment portfolio expansion through reinvestment of retained earnings. Since buildings

and real estate debt are not growth assets, REITs can grow per share earnings only by reinvesting retained earnings to expand underlying real estate portfolios. However, REITs are required to pay out 95% (90% starting in 2001) of taxable ordinary income to shareholders. It follows that REITs are not growth stocks, but rather cyclical income-producing assets with comparable investment characteristics to underlying REIT investment portfolios.

Institutional investor real estate partnerships treat information about partnership assets needed for accurate asset valuation as confidential, denying access to everyone other than the investors. REITs carry this policy one step further, denying access to investment information about portfolio assets to everyone outside REIT management.

Previous studies suggest that prospective management fees constitute adequate incentive for managers of institutional investor real estate partnerships to assign higher priority to asset acquisition than to concern with avoidance of overpriced investments. The studies present empirical evidence that this behavior does occur, and that resulting agency costs incurred by institutional investors are statistically significant.

This study shows that the present value of expected management fees is greater if real estate is owned by REITs rather than by private closed-end or open-end funds. It follows that REIT management has greater incentive to impose excessive agency costs on investors than management of institutional investor real estate partnerships.

The 5-50 test regarding REIT ownership provides REITs with nearly ironclad protection against hostile takeovers. The absence of public information about REIT investment portfolios provides REIT management with virtual immunity from lawsuits by disgruntled shareholders. Since equity REIT capital is permanent investment capital, it follows that REIT management need not have any concern about investors save as potential sources of incremental equity capital. Once assets under management have grown to the point where REITs need not return to the equity markets for more investment capital, it follows that managers can operate

the REITs according to the dictates of self-interest, subject to compliance with REIT regulatory constraints and token deference to shareholder interests. This point is reached when management is satisfied with the magnitude of fee income generated by the portfolio earnings base. This suggests larger-capitalization REITs can impose agency costs on shareholders reminiscent of equity investor agency costs in general prior to establishment of the SEC.

Investment track records usually enable investors to perceive that REIT managers formulate investment policy on the basis of self-interest, and frequently to the detriment of shareholders. Investors also perceive eventually when REIT managers do not act to maximize the per share value of portfolio assets. It follows that REIT shares normally should trade at a discount to the per share value of underlying portfolio assets at least comparable to discounts that normally accompany market pricing of shares in other publicly traded closed-end funds. This pricing behavior was observed during the nearly two decades between the REIT collapse of the mid-1970s and the REIT boom of the early 1990s. The same pricing behavior has been observed since the collapse of the REIT boom in early 1998.

De facto REIT immunity from hostile takeovers and shareholder lawsuits and the ability to deny shareholders and outside analysts access to information about underlying REIT portfolios necessary for asset valuation have been the keys to REIT investment characteristics and historical REIT performance over the past four decades. The key economic implication for shareholders of larger-capitalization REITs is lessened management concern for capital market approval of management activities. These keys will not be changed by the Real Estate Investment Trust Modernization Act of 1999. Accordingly, it is reasonable to expect that REITs in general, and larger-capitalization REITs in particular, will continue to be a great deal for management, but a risky proposition for outside investors.

Notes

1. Muldavin (1993b) observes that: "While fee structures vary, Wall Street fees for REITs are approximately five percent

- for a secondary offering and seven percent for a new REIT, with total IPO costs of eight to 10 percent of total dollars raised.”
2. See Decker (1998:4), which quotes language in the congressional Committee Report that accompanied the original 1960 REIT legislation suggesting that Congress intended REITs to be passive investment vehicles that would become the real estate investment analogue of regulated equity investment companies; and Downs and Hartzell (1995:609), which remarks that, “The legislators intended for REITs to be a passive vehicle for real estate investment and not an operating company.”
 3. The economic rationale for the prohibition against real estate self-management should be clear from its similarity to an analogous constraint that prevents regulated investment companies from participating in the business activities of corporations in which the investment companies hold economic interests.
 4. Despite its name, the Real Estate Investment Trust Act of 1960 was actually a rider attached to An Act to Amend the Internal Revenue Code With Respect to the Excise Tax on Cigars (e.g., see Brandon, 1998).
 5. King (1998:31) remarks that, “Notwithstanding the original concept that a qualified REIT needs to be a passive investor, typically one thinks of today’s publicly owned REIT as an operating business rather than a portfolio of individual properties.”
 6. Decker (1998) observes that “the REIT concept, with some notable exceptions, was misused just as it began its maiden voyage into U.S. capital markets.”
 7. This observation has been made by several researchers. For example, Gyourko and Keim (1992) examines quarterly returns during the period 1978–1990 and concludes that “equity REITs display a high correlation with stock returns, especially the small stocks ($\rho = 0.82$), a finding that may reflect the fact that equity REITs themselves are small stocks.” The results imply that small stock returns explain more than 60% of the variation in REIT index returns during the test period of the study. Similarly, Han and Liang (1995) examines monthly REIT returns during the period 1970–1993. The Han and Liang study shows that small stock returns explain a substantial portion of the variation in returns from publicly traded REITs: more than 60% in the case of equity REITs and more than 50% in the case of mortgage REITs. The study also shows that the ability of large-capitalization stock returns to explain REIT returns is of marginal significance statistically in the presence of small stock returns. In short, both studies conclude that more than 60% of the variation in REIT returns is explained by returns from small stocks. It follows that less than 40% of the variation in REIT returns can be explained by variables that are uncorrelated with small stock returns. Since Gyourko and Keim also shows that the correlation between stock returns and private real estate returns is equivalent statistically to zero (the sample correlation between S&P 500 returns and private real estate returns during the test period equals -0.04 , and the sample correlation between small stock returns and private real estate returns equals 0.07), it follows that a substantially larger portion of variation in REIT returns is explained by small stock returns than by private real estate returns during the test periods of the two studies.
 8. NAREIT (1998a) reports that in 1986 there were ninety-six publicly traded REITs, of which forty-five were equity REITs, and that the combined year-end capitalizations of the publicly traded REITs and equity REITs were \$10.1 billion and \$4.4 billion, respectively. It follows that the mean year-end 1985 capitalization for all publicly traded REITs was \$105 million, and \$98 million in the case of equity REITs.
 9. See Corgel, McIntosh and Ott (1995:14).
 10. Many real estate academics and professionals regard the regulatory transformation of REITs from passive investment companies to conventional operating companies as essentially complete. For example, Downs and Hartzell (1995: 609) remarks that, “...REITs today are more like actively managed, strategically operated real estate companies.” More definitively, Taylor (1998) begins by asserting that, “Real estate investment trusts have evolved into fully integrated, dynamic, real estate operating companies that are organized as investment trusts simply to avoid taxation at the corporate level.”
 11. Cf. Endnote 8.
 12. The significance for the REIT industry of changes occurring in the private real estate market were recognized at the time. For example, The Real Estate Consulting Group of Deloitte & Touche (1992) notes that: “Real Estate Investment Trusts (REITs) have attracted significant attention during the last year due to ... the decline in alternative capital sources...”
 13. The problem (which applied to regulated institutional lenders in general) was due to interaction of an inadequate market pricing mechanism with an agency cost: it is difficult to estimate the market value of commercial property with precision and at least as difficult to estimate investment risk, and yet insurance company mortgage departments must generate a steady stream of loans to justify their existence. In a study that discusses conceptual methodologies for pricing loan risk and the practical problems with risk control, Shilling (1995:67) quotes A. Downs on how this conundrum was resolved in practice during the 1980s: “if lending officers swamped with money can’t make good deals, they will make bad ones; if they can’t make bad ones, they will make terrible ones; if they can’t make terrible ones, they will make horrible ones *but they will make deals.*”
 14. Commenting at the time, Muldavin (1993b:8) reports that the proposed regulations would limit “loan-to-value ratios on balloon mortgages to no more than 60%. Additionally, loan-to-value ratios on fully amortizing mortgages would be limited to less than 70% of value.”
 15. Some observers thought that the main impact of the new loan criteria would be to reduce the life insurance industry share of the commercial real estate debt market. For example, Muldavin (1993b:8) remarks that: “Proposed new regulations by the National Association of Insurance Commissioners could limit the competitiveness of life insurance company mortgage lenders in the future. ... as banks, savings banks and other lenders increase their interest in commercial mortgages and allow loan-to-value ratios greater than 70 percent...”
 16. Baird (1998:9–10) reports that, “By the early 1990s, most sources of liquidity had abandoned private real estate companies. Insurance companies and banks were not lending

- or were requiring low loan-to-value ratios. Private equity was not available to bridge the lending gap. Commingled funds were dramatically reducing their property purchases. Private real estate companies desperately needed access to equity capital to roll over their debt and to take advantage of market opportunities.”
17. Baird (1998:10) presents three reasons private real estate partnerships and companies converted to publicly traded REITs, among which “was debt reduction, which represents the flip side of the access-to-capital coin. Many loans made to real estate companies in the building boom of the mid-to-late 1980s were five- to seven-year ‘bullets.’ Most private real estate owners who had borrowed 90 to 110 percent of the cost of an asset did not have the equity to refinance at 60 to 70 percent loan-to-value based on lower valuations than original cost. ... This need for debt reduction led to the ‘go broke or go public’ status of many private real estate companies by the early 1990s.”
 18. See Baird (1998) for a summary of REIT IPOs during the decade 1987–1996 and for discussion of legal, economic and marketing issues concerning REIT IPOs.
 19. Observers noted this concern for potential REIT investors at the time. In commenting on sketchy risk analysis in a typical prospectus for a partnership-to-REIT conversion, Dowd (1993:29) remarks: “This does not mean that TriNet will not make all its forecast distributions and then some. ... It does mean that, based on the disclosure in the (offering) memorandum, the reasonably experienced real estate observer couldn’t make the judgment call. Any remaining doubters are referred to the paragraph in the “Risk Factor” section of the TriNet prospectus at the bottom of page 16 beginning with the words in bold type: “Lack of Appraisals.”
 20. Directors of pension funds that fail to satisfy ERISA standards for prudent diversification face personal liability for failure of the funds to meet performance criteria that could be established ex post by courts or governmental agencies, an imprudent personal financial risk for any professional to assume.
 21. Pension funds did not have to acquire real estate investments if the capital required to acquire a prudently diversified real estate portfolio would be greater than ERISA reasonably would expect the funds to commit to real estate.
 22. For example, see Endnote 7 and Giliberto (1990).
 23. Passive real estate investment is necessary to preserve the tax-exempt status of pension fund investment activities.
 24. The delicate question of why consultants had not recognized illiquidity as the key problem with real estate investment and REITs as the answer before the real estate market collapse was left unaddressed by all parties.
 25. Muldavin (1993a) remarks that: “The Senate’s version (of a proposed bill passed by the Senate Committee on Banking, Housing and Urban Affairs) includes the National Association of Real Estate Investment Trusts’ amendment to the ‘five-or-fewer’ rule to encourage greater pension investment in REITs.” Han (1994) observes that “the industry had lobbied very hard and succeeded in modifying the ‘five or fewer’ tax code provision that allows pension funds to invest more easily in REITs.”
 26. For example, see REFNote (1992) and Brandon (1998).
 27. Chan, Leung and Wang (1998) examines institutional investor ownership of individual publicly traded REITs during the period 1984–1995 and averages the results across the REIT universe to show that both average institutional ownership of REITs and average number of institutional shareholders in REITs lagged holdings of comparably capitalized unregulated publicly traded corporations prior to enactment of OBRA, and that in the case of total institutional ownership the annual lag was by a statistically significant margin. The study shows that the annual lags disappeared during 1993–1994 and were converted into statistically significant leading margins by 1995.
 28. Poorvu (2000) remarks that, “An article in the December 29, 1997 issue of *Forbes* opened with the following teasers: ‘Forget industrial stocks. For the next few years real estate is where the action will be. The unstoppable REIT juggernauts.’ Highly respected academics made similar claims in professional journals. Not a great call, as it turned out.”
 29. Linneman (1997) presents these recent prognostications as an economic theory. Vogel (1997) remarks on the wide acceptance of this theory as the “new conventional wisdom” by real estate experts in a dissenting study that refutes the economics underlying the arguments. Campbell, Ghosh and Sirmans (1998) notes that, even “given that scale economies exist, the REIT market for corporate control must operate efficiently enough to ensure that potentially wealth-enhancing mergers actually occur.”
 30. Linneman (1997:25) suggests that ultimately a handful of surviving REIT managers will emerge, and that they will be Warren Buffett-like visionaries in their ability to add value. However, the suggestion is not credible without supporting evidence. Spurgeon (2000) remarks that shareholders in Buffett-managed Berkshire Hathaway experienced a 180-fold increase in the market value of their holdings between 1980 and 2000. Although many new REITs have long track records if their histories as private entities are included, this author is unaware of any REIT manager with a long-term performance record even remotely approaching this standard.
 31. Including mortgage and hybrid REITs, the total was 210 publicly traded REITs with a combined equity capitalization of more than \$140 billion (*e.g.*, see NAREIT, 1998a).
 32. Decker (1998) estimates the total capitalization of the U.S. commercial real estate market at \$3 to \$4 trillion. Oppenheimer (2000) reports that the average capitalization of New York Stock Exchange-listed REITs consisted of 56% debt and 44% equity at the end of 1997. Assuming that the average premium of REIT share price over the value of underlying real estate equity at the end of 1997 was between zero and 40%, this suggests that the value of real estate owned by publicly traded REITs at that time was between \$254 and \$291 billion (*i.e.*, between 6.4% and 9.7% of the total capitalization of the U.S. commercial real estate market).
 33. For example, leases that specify gross rent create uncertainty about net cash flows due to uncertainty about the amount and timing of maintenance expenses and capital outlays. Uncertainty also is created by lease cancellation provisions and some renewal options.
 34. Conditions in the spot market subsequent to lease signing may affect rent during lease option periods, depending on provisions in lease renewal clauses for determining rent during the option terms. However, net cash flows during primary lease terms are unaffected.
 35. Graff (1999) shows that frequently it is practical to separate the components for investment purposes. Graff (2001)

- shows that it can be advantageous for corporations to finance corporate real estate acquisitions by separating the components and selling the fixed-income component to a financier. Among other things, these functions include the transformation of net leases into investment-grade bonds for fixed-income rating purposes.
36. The requirement that REITs derive 75% of their income from real-estate-related activities implies that REITs have a legal disincentive against parking a significant portion of investment capital in money market instruments to finance future physical alterations and additions to properties in REIT investment portfolios. An economic disincentive is that money market investments would lower REIT portfolio income.
 37. It is important to note that the growth criterion excludes scheduled rent increases in current leases. Rent increases in current leases are often the result of negotiated rental schedules that require tenants to pay more than current market rent toward the end of lease terms in exchange for landlord acceptance of below-market rent at the beginning.
 38. Land usually represents between 10% and 20% of development cost, depending on commercial property type and to some extent on locale.
 39. This portion of the analysis is correct provided the probability that local demand could vanish permanently during the useful economic life of existing property is negligible. This assumption is satisfied if the local economy is well diversified. For example, the probability is negligible in any major metropolitan real estate market. However, the probability may not be negligible for some types of property if the local economy is supported by nonrenewable resources (e.g., mining or petroleum) or a single commercial enterprise.
 40. In general, the expected long-term rent per square foot in year n from future lease of any particular property is equal to the product of the required annual return from new property development multiplied by the probability that the asset will continue to be operated through year n .
 41. It is usually cost-effective to complete development projects that are in progress, regardless of subsequent market changes. Since projects to implement near-term changes in expected supply must be already under way, near-term changes in supply can be forecast with high confidence.
 42. An examination of the NCREIF capital gains index also suggests that commercial real estate is a cyclical asset.
 43. The NCREIF database contains investment return data starting in 1978 for institutionally owned properties managed by NCREIF members. The individual property returns are aggregated into a value-weighted index known as the NCREIF (Property) Index. The U.S. Department of Labor publishes the seasonally unadjusted Consumer Price Index (CPI). The annualized capital gain component of the NCREIF Index investment return over the interval 1978–1999 is 3.96%, which is slightly less than the 4.63% annualized change in the CPI over the same interval. The interval 1978–1999 covered by the NCREIF Index can be divided into the high-inflation subinterval of 1978–1981 and the low-inflation subinterval of 1982–1999.
 44. Since the NCREIF Property Index begins in 1978, the Miles and Mahoney study uses a value-weighted index of returns from the Prudential Real Estate Income Separate Account (PRISA) for 1971–1978. This does not result in a change in index risk and return characteristics at the interface, since the PRISA portfolio constituted over 25% of the value of the NCREIF portfolio during the early years of the NCREIF Index.
 45. The Miles and Mahoney study uses quarterly change in the CPI as a proxy for actual quarterly inflation, and the difference between three-month T-bill return and quarterly change in inflation proxies for quarterly real rate of return. A stationary time series model is constructed for the quarterly real rate of return series. The time series is used to generate a series of one-period forecasts that serve as proxies for expected quarterly real rates of return. Quarterly expected inflation is proxied by the difference between three-month T-bill yield and the expected quarterly real rate of return. Unexpected quarterly inflation is proxied by the difference between the proxies for actual quarterly inflation and expected quarterly inflation. The regression coefficient of expected inflation equals 0.99 (t -Statistic = 4.2) and the coefficient of unexpected inflation equals 0.68 (t -Statistic = 3.4), see Miles and Mahoney (1997).
 46. This suggestion would be an implication if Graff and Cashdan (1990) had been able to compare stock and bond returns with real estate returns in the case of individual assets instead of market indices. However, investment returns from individual properties in the NCREIF database have been available only sporadically for a select small set of research studies, and were not available for the Graff and Cashdan study.
 47. Graff and Young (1996) shows that sample correlations between investment returns from institutional-grade properties are typically much lower than sample correlations between returns from individual stocks. Under the standard assumption required by MPT that investment returns are serially independent, stationary and normally distributed, lower real estate correlations imply that MPT-based risk reduction strategies have less potential to add value to real estate portfolios than to stock portfolios. This is an additional reason for real estate investors to be less concerned with quantitative diversification strategies.
 48. Because commercial real estate is the sum of fixed-income and cyclical equity components, it is easier to avoid this problem in the case of real estate than in the case of stocks by applying low-tech valuation techniques that have long been the staple of experienced real estate professionals, cf. Wheaton and Torto (1989). As Poorvu (2000:7–8) remarks, “A sophisticated user of back-of-the-envelope (BOE) analysis often sees what is too easily obscured in elaborate spreadsheets. BOE analysis focuses first on simple ratios, such as return on assets, cash-on-cash, and cost or value to replacement cost, and on the implications of financial and operating leverage,” and “*the initial stabilized cash flow should be the foundation for value.*”
 49. A prerequisite to efficient application of MPT in any asset class is the availability of efficient asset valuations. Accordingly, even portfolio strategists devoted to MPT-based portfolio diversification strategies recognize the critical importance of accurate asset valuation.
 50. Part of the problem is that real estate valuation models used by institutional investors discount all expected cash flows by a single cost of capital. However, expected cash flows from current and future leases should be discounted at different rates because the fixed-income and equity real

- estate components have different investment characteristics. More precisely, expected cash flows from each current lease should be discounted at a cost of capital based on the credit risk of the corresponding tenant, and expected cash flows from the equity component should be discounted at one or more additional discount rates, depending on whether the risk characteristics of equity subcomponents can be translated into distinct subcomponent discount rates.
51. Graff and Webb (1997) presents additional empirical evidence for this agency cost.
 52. REITs are taxable entities but receive a tax deduction equal to the portion of taxable earnings distributed to shareholders.
 53. Because real estate is illiquid, lengthy intervals may be required to commit the proceeds of stock offerings and intermediate-term and long-term debt offerings to the real estate market. Accordingly, REITs are permitted to acquire qualified stocks and debt instruments with the proceeds from each offering and to apply earnings from these investments toward satisfaction of the 75 percent test for up to one year following completion of the offering (e.g., see Brandon, 1998).
 54. For example, see Jarchow (1988) or NAREIT (1999a).
 55. REITs are not required to distribute realized capital gains to shareholders. However, undistributed REIT earnings are subject to corporate income taxation.
 56. The original REIT act of 1960 was modeled on the corresponding mutual fund authorization. Accordingly, there are other requirements patterned after corresponding mutual fund requirements. For example, each REIT must have at least 100 shareholders. See Brandon (1998) or Jarchow (1988) for discussion of additional requirements.
 57. REIT managers are subject to conflicting inducements. On one hand, the exemption cited in Endnote 53 permits REITs to park proceeds from equity and debt offerings in investments unrelated to real estate for up to twelve months, allowing REITs time to shop for appropriate investments. On the other hand, real estate market illiquidity and the lengthy intervals required to perform due diligence and close transactions suggest that there is a risk of violating short-term parking constraints if contract negotiations for long-term investments are not completed within a few months of each offering.
 58. Referring to the eventual industry consolidation predicted by REIT boosters, Linneman (1997:25) suggests that the surviving Warren Buffet-like managers "will ultimately outbid mere asset collectors for managerial talent, tenants and additional properties," and accordingly increase market valuations of real estate assets. However, price premia at this stage of industry development are inconsistent with the Linneman hypothesis and suggest that REIT shareholders incur substantial agency costs.
 59. The investment industry has long been aware that REITs are an income vehicle with minor potential for long-term growth. For example, New York Institute of Finance (1988: 40) observes that, "Because REITs distribute most of their earnings, they cannot accumulate reserves to meet special needs. This also means that *they need to raise additional money if they want to grow* (emphasis added)."
 60. This insurance is absent in the case of corporations in which corporate management owns a majority of the voting stock in the corporation.
 61. Absence of the REIT ownership constraint during the first half of the fiscal year is of no consequence if REIT annual meetings and elections take place during the second half of each fiscal year.
 62. Real estate professionals have long been aware of this feature. For example, Dowd (1993:23) remarks that, "due in large part to corporate bylaws based on the tax code's strict limitation on how much of a single REIT a shareholder can own, takeovers and mergers are almost unheard of in the industry." Similarly, Reiss and Plzak (1998) notes that, "Hostile takeovers are very difficult, if not impossible, to complete because many REITs have adopted antitakeover provisions." Finally, in an empirical study of REIT mergers during the interval January 1989 through January 1998 that identifies twenty-seven friendly mergers, Campbell, Ghosh and Sirmans (1998:51) observes that, "There is a complete absence of successful hostile merger activity during the period of study. This result is surprising because hostile mergers are commonplace in the non-REIT world. The absence of hostile mergers could pose a serious threat to the accomplishment of REIT consolidation even if the fundamentals dictate that consolidation should occur."
 63. Event studies have shown that protection against hostile takeover lowers the market value of exchange-listed corporations. For example, Karpoff and Malatesta (1989) examines proposed antitakeover legislation in forty states from 1982 through 1987 to determine the impact of the earliest newspaper announcement of the proposed legislation on the stock price of selected exchange-listed companies incorporated in the state. The study shows the existence of a statistically significant average percentage decline in stock price over the two-day period ending on the announcement date after adjustment for systematic market risk. The study also shows that the statistical significance of the average decline was due entirely to the response of stocks in firms that have not amended their corporate charters to include hostile takeover protection. The average response of stock in those firms that already had hostile takeover protection in their corporate charters was a statistically insignificant decline. This suggests that stock market investors do not perceive any difference between the average economic effect of antitakeover legislation and hostile takeover charter protection on stock investment value. Karpoff and Malatesta (1990) presents evidence suggesting that the actual economic impact of antitakeover legislation on stock investment value is much greater than the observed impact of the first printed announcement of proposed legislation. The 1990 study remarks that, "The push for most antitakeover laws comes from managers whose firms are (hostile) takeover targets," and that, "The net effect is that antitakeover laws transfer wealth away from ... shareholders. Some of the wealth is transferred to managers and, possibly, other constituents. The rest is dissipated through less efficient enterprise."
 64. The study presents results of a survey of general investment managers of the 398 largest pension funds and portfolio managers of the largest 400 insurance companies to determine institutional return and risk perceptions for twenty investment universe asset classes. For each asset class, respondents were asked to rank their expected return from very low to very high, on a scale of 1 to 5. Respondents were asked to rank perceived investment risk separately on the same scale. For each asset class, responses are averaged across several categories of respondents to determine mean expected return and mean perceived risk for

each respondent category, and averages are ranked in increasing order (*i.e.*, from 1 to 20). Similarly, sample standard deviations are determined, the difference between mean expected return and mean perceived risk is determined, and the *t*-Statistic of the difference is determined to test whether the difference is statistically significant. For all respondents (*i.e.*, the category with largest samples), the ranks of mean expected return and mean perceived risk are equal in each of the twenty cases. By contrast, only eight differences between mean expected return and mean perceived risk are statistically insignificant, while seven differences are significantly positive and five differences are significantly negative. The *t*-Statistic of directly owned real estate is negative but statistically insignificant, whereas equity REITs have the lowest *t*-Statistic of the twenty asset classes. The authors note that only sixteen insurance companies responded to the REIT classification question, so the REIT result primarily reflects the attitude of pension fund investors.

65. It is probably more accurate to refer to this conclusion as a reminder than a demonstration. Based on observations of exchange-listed stocks in the 1920s, financial economists came to the conclusion seventy years ago that liquidity alone is inadequate to ensure efficient pricing of equities. This led to the establishment of the Securities and Exchange Commission (SEC) in 1934, and to subsequent rules for publicly traded companies establishing minimum standards for public disclosure of relevant investment information. However, failure by financial economists to understand the structure of the commercial real estate market and the dynamics of commercial real estate pricing has thwarted adequate enforcement of the rules in the case of REITs.
66. The preferred rent schedule requires real estate finance representatives of the lessee to accept rent increases during the primary lease term. An economic inducement in the form of lease renewal options at below-market rents sometimes is adequate to secure the needed approval. Although below-market renewal options could be responsible for eventual declines in REIT income, the declines wouldn't become visible to investment analysts until at least the end of the primary lease term. In the meantime, the REIT would exhibit apparent growth.
67. Poorvu (2000) notes that, "In 1998, most REIT stocks plummeted in value—many dramatically—and REIT returns in 1999 were mediocre, at best. So what went wrong? Savvy stock market players figured out what *Forbes* did not: that the 1997 multiples were based on unrealistic growth assumptions," and "what *doesn't* work? Gearing your operations to satisfy Wall Street's exaggerated growth expectations, for one thing. The symptoms of this malady are numerous and easy to spot." Part of the problem is that REIT managers either want or believe they need growth stock multiples. For example, Muldavin (1993b) remarks that, "the long-term success of REITs will hinge on whether REITs can convince investors that growth in asset values is possible."
68. The title of the act includes the qualifier "of 1999" to distinguish this REIT Modernization Act from the previous REIT Modernization Act enacted in 1986 and from any future REIT Modernization Acts.
69. Takeover immunity alone presents a serious obstacle to protection of shareholder value. For example, Campbell,

Ghosh and Sirmans (1998) notes that Jensen (1993) and Shleifer and Vishny (1997) regard hostile takeover as an essential market mechanism to limit managerial inefficiency and pursuit of self-interest, respectively.

70. NAREIT lobbied for Congressional relief despite pronouncements such as the following in NAREIT (1998b): "There is greater investor understanding, acceptance and enthusiasm for REIT stocks than ever before," and "As we move forward into 1998, the REIT industry is stronger than ever and poised for meaningful growth well into the 21st century," and "The industry raised more money in 1997 than in any previous two years combined and more than the cumulative total for 1994 through 1996," and "Increasingly, privately held commercial real estate is being transferred into the portfolios of publicly traded REITs," and "The transfer of privately held property into the portfolios of REITs is a trend that likely will accelerate in 1998," and "Another important factor fueling heightened investor interest in REITs is the industry's strong investment performance, particularly in light of increasing market volatility." Also noteworthy is the acknowledgement in NAREIT (1998c) that: "The REIT industry has grown significantly during the 1990s, from an equity market capitalization under \$10 billion to a level approaching \$150 billion."
71. The REIT industry has an important additional economic advantage: political clout that has enabled it to assert significant control over its own political evolution. For example, NAREIT (1999a) states the following: "Yesterday, Representatives ... introduced in the House of Representatives the Real Estate Investment Trust Modernization Act of 1999," and "original co-sponsors include two-thirds of the members of the Committee on Ways and Means," and "We urge all NAREIT members to ... call Representatives who are not original co-sponsors of the RMA and request that they ... become an RMA co-sponsor," and "NAREIT applauds these co-sponsors for their leadership in endorsing legislation that would permit REITs to provide more competitive services to their customers and to operate more efficiently," and "*it is likely that the RMA will have to be made part of a larger tax bill such as budget reconciliation (emphasis added).*"
72. For example, NAREIT (1999b), the text of a position paper presented by NAREIT to the U.S. House of Representatives Ways and Means Committee, states: "current law prevents REITs from providing needed and emerging services to their tenants, putting them at a competitive disadvantage in the real estate marketplace." It also states: "Since 1992, the REIT industry has attained impressive growth as new publicly traded REITs infused much needed equity capital into the over-leveraged real estate industry. Today there are over 200 publicly traded REITs with an equity market capitalization exceeding \$150 billion." It continues: "Yet, future growth may be significantly limited by the inability of REITs under current law to be able to provide more services to their tenants than they are currently allowed to perform."

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