

International Diversification Strategies In
A Modern Portfolio Context

by

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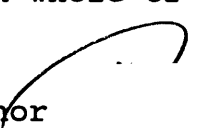
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ABSTRACT

A study of an international diversification strategy in real estate was conducted. The strategy was reviewed in the context of an institutional portfolio being managed using Modern Portfolio Theory. The study analyzes the correlation of the United States economy and the economies of the United Kingdom, France, West Germany, Italy and Spain. The effects of the market-economic integration of the Member Nations of the European Economic Community and the events taking place in Eastern Europe are addressed. The obstacles and risks associated with implementing an international diversification strategy were considered.

The results from the study indicate an international diversification strategy is appropriate in a Modern Portfolio Context. The events now taking place in Europe will have a significant positive impact on the economic growth of the countries of Western Europe. It appears that the countries in Western Europe may share a closer relationship in the future but there is still benefit in diversifying within Europe. The obstacles and risks associated with investing in international real estate markets do not appear to be insurmountable or prohibitive.

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INTRODUCTION

Many investors are now considering the investment opportunities available in the real estate markets of Western Europe. The interest in these real estate markets is being heightened by the dramatic changes that are taking place in the economic, political and social climates of Europe. In addition, real estate markets in most regions of the United States are slumping and the returns on real estate investments are falling. Portfolio managers are now looking at international diversification strategies as a means of reducing the volatility in their real estate portfolios while maintaining their overall returns.

The first section of this thesis considers whether an international diversification strategy in a real estate portfolio is consistent with Modern Portfolio Theory. In recent years, portfolio managers have invested more heavily in foreign equity-financial markets. The benefits of these investments and the performance of overseas markets will be reviewed. The role of real estate investments as a vehicle to achieve "efficient diversification" in a portfolio of investments will be evaluated from a historical prospective. The application

of Modern Portfolio Theory to real estate will be addressed and the benefits of economic-geographic diversification in a real estate portfolio will be considered. The merits of an international diversification strategy in real estate and its appropriateness as an "efficient" means of limiting volatility and risk will be explored.

The second section of this thesis addresses the obstacles and risks relating to investments in foreign real estate. An international diversification strategy as compared to a domestic strategy has many additional obstacles and risks; currency translation, language barriers, cultural differences, the availability of market information and unusual business practices. Strategies for dealing with these obstacles and risks will be discussed.

The final section explores the relationship between the economies of the United Kingdom, France, West Germany, Italy, Spain and the United States. The tremendous changes taking place in Eastern Europe and the integration of the markets and economies of the Members of the European Economic Community will be addressed. The impact of these changes on the relationship of the economies of these countries will be explored. The merits of a diversification strategy that invests in all or some of these markets will be evaluated.

SECTION I

THE CURRENT STATE OF REAL ESTATE MARKETS IN THE U.S.

As we enter the 1990s, the U.S. real estate industry is in turmoil. Real estate markets across the United States are slumping and the excesses of the 1980s are haunting the industry. In addition, concerns regarding our country's trade and budget deficits are casting doubt on the economic future of the United States.

The decade of the 1980s was a unique time for most real estate markets in the U.S. The 1981 Tax Act and the deregulation of the savings and loan industry brought billions of dollars into the real estate industry. These new sources of capital enabled the industry to grow rapidly for most of the decade.

The 1981 Tax Act provided incentives for those who invested in real estate. Syndication firms worked quickly to create investment vehicles for those seeking tax shelters for their income. Most of these investments were made through limited partnerships that took full advantage of the tax incentives. In addition, the syndicators took large front-end fees for creating

the investment vehicle. Most of these investments were driven by the tax advantages gained by the investors and syndication fees, not the underlying real estate economics involved.

The savings and loan industry was deregulated in the early part of the decade. Many of these institutions began loaning money to developers involved in high risk real estate development projects. Few of the institutions were prepared to deal with the complexities of the real estate development business. Loan executives were given incentives bonuses to produce more high yielding loans for the bank. Many failed to realize that a higher yield also meant higher risk. These events took place in a time when our economy was booming. Reaganomics was in full glory and few were looking at downside risk.

The impact of all this was that the real estate industry was flooded with new money. Development companies rushed to satisfy this new demand. It seemed that new development companies were formed and projects were begun overnight. Money never seemed to be a problem.

In 1974, the Employment Retirement Income Security Act (ERISA) was enacted. ERISA instructed pension funds to minimize the overall risk in their investment portfolio. Diversification was mandated. The Federal government

was concerned that a fund with all its assets in one investment vehicle exposed itself to the risk of a huge loss. Traditionally pension funds had limited their involvement in real estate. Most funds had less than 1% of their assets invested in real estate. Real estate was now viewed as an appropriate way to balance risk in an investment portfolio and by the early 1980s pension funds had become a significant player in the industry. As baby boomers aged and monies were contributed to pension funds on their behalf, more and more money was available to invest. These funds had billions of dollars and as the industry prospered and profits soared so did the appetites of these funds for real estate.

The 1980s represented a "bull market" for real estate in most regions of the United States. Competition for properties reached an all time high and the pricing reflected the anticipation of substantial appreciation. In addition, foreign money was rapidly being invested in most major U.S. markets. By the end of the decade, vacancy rates had begun to increase and real estate professionals started to see signs that with the buildings under construction the market was grossly overbuilt in all sectors.

A number of events occurred in the second half of the decade that had a substantial impact on the industry. The first occurred in 1986 when a new Tax Act became

law. The Act removed almost all the incentives related real estate investment. The depreciable lives for real estate were extended and most tax credits were eliminated. The syndication firms described above vanished as quickly as they had come into existence. The second event occurred in October 1987 when the New York Stock Exchange collapsed. The Dow Jones Industrial Average dropped over 500 points in one day. Investors and the public in general were becoming increasingly concerned about the mounting trade and budget deficits. Financial firms that had grown so rapidly in the 1980s started to contract and thousands were laid-off.

The savings and loan industry now began to feel the effects of a slower real estate market. Many of the developers who had borrowed millions of dollars began defaulting on their loans. The institutions immediately found themselves in difficult financial times and the "savings and loan crisis" was underway. These problems were complicated by problems in the junk bond market. Many of these institutions also invested heavily in junk bonds. The cost of savings and loan bail-out is now estimated at \$500 billion.

The real estate industry which had so much capital in the 1980s was now without liquidity. The markets in the U.S. that had seemed so safe to invest in now seemed full of peril. The projections done on projects that

seemed so conservative were now looked at as overly optimistic. Yields on all properties were under pressure and rents were constantly being renegotiated.

The downturn of the real estate market in the U.S. coupled with the changes in the world capital markets increased investors' interest in international opportunities in real estate. Many investors who were willing to invest money in U.S. real estate complained that one of their major obstacles was finding quality investments. In addition, pension fund managers, who were seeing real estate portfolio yields sink, were now considering international diversification as a way to minimize risk in their portfolios. It would seem that a portfolio that spread its investments among different nations-economies would have less risk than a portfolio of properties all in one country.

The interest in certain foreign markets has also increased with the rapid changes that are taking place in Europe. The European Economic Community is now working towards the integration of the markets-economies of its Member Nations in 1992. The objectives of the Member Nations include removing the trade barriers between European countries and promoting economic growth and job creation. The countries now participating in the EEC include all the major economic powers in Western Europe; the United Kingdom, Germany, France, Italy,

Spain, Greece, Belgium, Ireland, Luxemburg, Portugal and the Netherlands. Goals of the EEC include the establishment of a central bank for monetary policy, a standard taxing policy and one currency for use by Member Nations. Some predict that the integration of Europe will increase the economies of its Member Nations by as much as 6%. If the EEC is successful it will create a market of consumers larger than the U.S. and Japan. The total market will approach 320 million people as compared to the U.S. and Japan which are approximately 245 million and 121 million, respectively. The creation of a European economy will be a monumental task. A European commission has been established to deal with the many political, economic, cultural and emotional objections. The administrative implementation issues will also be considerable. In spite of these obstacles it appears that the 12 governments involved are committed to the success of this endeavor.

The Berlin Wall has fallen and the markets of Eastern Europe are now being opened to the west. This represents a tremendous market with a significant pent up demand for goods and services. The landscape in all of Europe is changing. The demand for housing, computers, consumer goods and communication equipment is enormous. The changing economic, social and political climate in Europe presents a tremendous opportunity and challenge to U.S. investors. It appears that the U.S.

economy and the real estate markets are in need of some healing and the European markets are ready to take off as their economies change and grow.

MODERN PORTFOLIO THEORY
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A portfolio investment strategy at its most basic level suggests that through diversification one can limit risk. Placing your funds in a number of different investments is safer than putting all of your money in one company's stock, bond or in one real estate project. The approach assumes that by spreading your funds in this manner the likelihood of a catastrophic loss is reduced. ERISA in 1974 instructed pension funds to adopt this portfolio approach and diversify their investments. Markowitz refers to this strategy as naive diversification and he believed that the conclusion that this approach limits risks is not supportable.

Markowitz believed that there is a significant difference between naive diversification and efficient diversification. Efficient diversification balances the risks and investment returns in a portfolio. Modern portfolio theory requires that a fund manager select their investments using a scientific approach that produces an efficient combination that maximizes overall investment returns for a given level of risk. Markowitz

felt the selection of an investment had to be based on the understanding of how that investment interrelated to the other investments in a portfolio. The relationship of one asset's performance to that of another asset in the portfolio needed to be quantified. As one asset's yield increased the other asset's yield decreased. This relationship was termed a covariance. The objective of Modern Portfolio Theory was to achieve the most efficient balance. The proper mix of investments would allow the portfolio to earn a steady and reliable return over time. The volatility of the portfolio would be minimized and significant fluctuations could be avoided.

In 1964, William Sharpe expanded Markowitz's theory by including the concept of market equilibrium. Sharpe believed that the rate of return on an asset included two prices: the price of time and the price of risk. The price of time represented the non-risk return that is earned by all investors. The price of risk is the premium earned for assuming the unknowns of making the investment. Sharpe believed that by applying Modern Portfolio Theory the business risks (unsystematic) in a portfolio could be eliminated. Business risk can be defined as the uncertainty associated with a particular investment such as management issues, financial leverage, limited raw materials, labor shortages etc. The selection of investments with negative covariances should enable a manager to limit these risks and

maintain a steady yield on their portfolio. Sharpe felt that an investment rate of return included a premium for taking market (systematic) related risks. Market risks can be defined as the uncertainty associated with the market at large and the impact that changes in the market may have on an individual investment.

Sharpe developed a methodology for determining market related risk by measuring the covariance of an individual investment with a diversified market portfolio. The approach examines two investments in which one is an individual investment and the other is an index representing a perfectly diversified market investment. A measure produced from this analysis was termed the investment's beta coefficient. The beta measures the sensitivity of the investment's return to that of a market portfolio. Sharpe demonstrated that the price of a security is a combination of the price for time, referred to as the riskless rate and the risk premium. The risk premium is the market portfolio's risk premium multiplied by the securities beta.

Markowitz and Sharpe demonstrated in their research that with the proper scientific analysis of market data an optimal or most efficient portfolio could be determined. An investment manager could select a mix of assets that eliminates unsystematic risk through diversification and also provides the investor with the highest return for a

given level of risk. The term efficient frontier refers to a set of efficiently diversified portfolios that provide the optimum return for a given level of risk. To determine the best possible portfolio mix for an investor you must superimpose the investor's utility function on the efficient frontier.

In Real Estate Investment Strategy Analysis Decisions the authors describe four basic steps in developing an efficient two asset portfolio (1). Step 1. estimate the rates of returns and the probability of occurrence for each investment. Step 2. compute expected returns and variances for each investment. Step 3. compute the covariance of each investment and step 4. compute the optimal combination of the two investments.

Modern Portfolio Theory was developed for use in the securities markets. The concepts were developed to assist investment managers in making decisions on investing funds and quantifying risk. The application of these concepts have been expanded to include the bond markets and foreign securities. A great deal of research has been done regarding the validity of Modern Portfolio Theory and diversification strategies as they relate to the securities industry. This research clearly supports the premise that through diversification a manager can minimize volatility in their portfolio while maintaining attractive returns.

Modern Portfolio Theory requires that a portfolio be reviewed continually adjusting for changes in the market and business risks. The financial markets provide an investment manager with the ability to react quickly to changes in the market and if necessary to redeploy invested funds.

Diversification Through International Securities
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Over the past decade advances made in the technology of communications have allowed investors to trade with ease in foreign markets. Investment managers now follow closely the trading in most foreign markets. This was never more evident than in October of 1987 when traders on Wall Street watched with great concern the trading in Tokyo, Hong Kong and London.

Investment fund managers have also been attracted to foreign markets because many of these investments have out performed the U.S. market. The following historical data was prepared by Morgan Stanley Capital Information and reported recently in the Wall Street Journal:

Country	Investment Returns	
	12 Months	5 years
Australia	9.2%	173.0%
Austria	114.6%	430.6%
Belgium	19.0%	471.1%
Canada	4.2%	80.6%
Denmark	49.6%	283.9%
Finland	-21.6%	N.A.
France	44.1%	344.8%

Germany	61.7%	256.0%
Hong Kong	18.3%	167.9%
Italy	39.7%	331.6%
Japan	-13.7%	309.8%
Netherlands	29.4%	234.3%
New Zealand	5.7%	N.A.
Norway	40.1%	286.2%
Singapore-Malaysia	21.8%	129.4%
Spain	9.8%	411.1%
Sweden	27.3%	456.5%
Switzerland	49.4%	236.1%
United Kingdom	21.0%	186.6%
U.S.	16.9%	120.9%

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According to Rowe Price-Fleming International Inc., a joint venture of Rowe Price Associates Inc. in Baltimore and Robert Fleming Group in London, investors who placed 30% of their funds in foreign stocks and the balance in U.S. stocks earned higher return and experienced less volatility than investors with all their funds in U.S. stocks. Mutual funds are available for the individual investors who are interested in investing in overseas securities. Fidelity Investment's Overseas Fund earned 304% over a five year period ended March 31, 1990.

The information reported demonstrates clearly the attractiveness of overseas securities. The U.S. securities market's performance ranks 12th in the last 12 months and 18th over the last 5 years. Over the past 5 years 10 countries exceeded a 200% return as compared to the U.S. return of 120.9% The Wall Street Journal recently reported that in 1979 52% of the total value of world equities were in U.S. stocks, today the U.S. share of total world equities is 34%.

Modern Portfolio Theory and Real Estate

Real estate has been used by portfolio managers as an investment vehicle to diversify their portfolios and limit the volatility of their returns. Real estate has been traditionally considered a hedge against inflation, as prices rise so do the prices of real estate. The stock market is typically negatively impacted by inflation fears, as the threat of inflation grows the stock market falls. These relationships were supported by research done by Goldman Sachs (November 1987) (2). The table below summarizes the relationship (covariance) between various investments and inflation.

	Property	REITS	Stocks	Bonds	Inflation
Property	1	-.14	-.28	-.38	.38
REITS	-.14	1	.78	.36	.03
Stocks	-.26	.78	1	.49	-.15
Bonds	-.38	.36	.49	1	-.35
Inflation	.38	.03	-.15	-.35	1

The results of the Goldman Sachs study show that real estate prices tend to move in the same direction as inflation and stock and bond prices tend to move lower as inflation increases. The research demonstrates that returns on real estate and equities are negatively correlated. This indicates that investing in real estate would be an excellent diversification strategy

for a portfolio manager. Considerable research and numerous articles have been written regarding the relationship between real estate and inflation. The research confirms that real estate is an appropriate hedge against inflation. In 1987, an article was published entitled "Real Estate Returns and Inflation" which after studying more than 300 properties concluded that a diversified portfolio of commercial properties provided a complete hedge against inflation over the period 1973-1983 (3).

Since 1974, portfolio managers have increased the portion of their portfolios invested in real estate from about 1% to 4% of their total assets. Real estate clearly is an appropriate diversification strategy for a portfolio being managed using Modern Portfolio Theory. Real estate had become an attractive investment alternative for many institutional investors not so much to earn higher returns but to properly diversify their portfolio and limit the risk in their portfolios. As noted earlier, ERISA reinforced the importance of diversification. Research has shown that a portfolio that included other investments including real estate and foreign securities has out-performed a portfolio strictly invested in equity securities. The following chart demonstrates that a portfolio that was invested in stocks, bonds, cash, real estate and foreign stocks was much less volatile over time while providing an almost

identical return (4). The BB&K Index represents a portfolio that is allocated equally to the S&P 500, T bonds, cash, real estate and foreign securities. This data supports the belief that through efficient diversification risks in an investment portfolio can be limited and large swings in the returns can be avoided. It should also be noted that the BB&K Index outperformed portfolios that excluded real estate and foreign securities as investment strategies.

Year	S&P 500	BB&K INDEX
1970	4.01%	4.7%
1971	14.31	13.7
1972	18.98	15.1
1973	-14.66	-2.2
1974	-26.47	-6.6
1975	37.2	19.6
1976	23.84	11.5
1977	-7.18	6.1
1978	6.56	13.0
1979	18.44	11.5
1980	32.42	17.9
1981	-4.91	6.4
1982	21.41	14.4
1983	22.51	15.4
1984	6.27	10.4
1985	32.16	25.4
1986	18.47	23.3
1987	5.23	8.6
1988	16.81	13.2
1989	31.49	14.3
Compound Annual Return	11.55%	11.53%

Modern Portfolio Theory has generally not been applied to real estate portfolios. Many practitioners feel that because real estate markets differ in so many ways from the securities market that to apply Modern Portfolio Theory would be impractical and of little value. Real

transactions typically are very large, take a considerable amount of time to negotiate and often involve complex financial structures. Securities transactions happen almost instantaneously and are rather straight forward. Information in the real estate markets is often inaccurate or stale. Information in the securities markets flows quickly and is updated daily for new events. Real estate is not always liquid. Securities markets are generally very liquid. Many real estate transactions are private. Securities markets are public and information is available on every transaction. Real estate markets are considered by many to be classic inefficient markets. In addition, many real estate professionals feel that because the markets are inefficient there is more opportunity than in the securities markets to earn an above market return. Real estate skills, negotiating ability, sophisticated financing structures and property management provide a means for creating additional value in an investment. Many practitioners believe that the application of Modern Portfolio Theory to real estate will inhibit the process and drive down returns.

It is true that real estate markets and securities markets differ in many ways but as the real estate industry matures and research is done it is becoming increasingly clear that Modern Portfolio Theory is appropriate in managing a real estate portfolio. As

real estate portfolios grew over the latter part of the 1970s and early 1980s investment managers tended to diversify their portfolios in a rather naive manner. Typically real estate portfolios that were diversified were done so by property type and geographic location. The property types included apartment, hotels, industrial, office and retail. The geographic locations included the East, West, South and Midwest.

Geographic diversification may have been the most naive of the strategies employed by portfolio managers. The four regions the north, south, midwest and west were determined in a rather arbitrary manner. The states within a region may only have had location in common. The relationship of these markets to each other were not considered in creating the regions and without this information there is no way of knowing if your diversification strategy is effective. Research done by Miles and McCue and Hartzell, Hekman and Miles concluded that the benefits of diversifying by geographic location were not readily identifiable and because the basis for diversification was so broad the strategy had little value (5).

In 1987, David Hartzell, David G. Shulman and Charles Wurtzebach co-authored an article entitled "Refining the Analysis of Regional Diversification for Income-Producing Real Estate" (6). The authors

redefine the regions of the United States based on economic activity. Eight economic regions were identified and they included; New England, Mid-Atlantic Corridor, Industrial Midwest, Old South, Farm Belt, Mineral Extraction, Northern California and Southern California. New England includes all of the New England states except Fairfield County in Connecticut. The employment base is primarily high technology, defense, education, business and medicine. The labor force is highly educated. Winters are harsh. The Mid-Atlantic Corridor includes Fairfield County, New York City and stretches to northern Virginia. The employment base is business, financial services and the government. The government is a huge employer in Washington D.C. The Old South stretches from Virginia to Florida and west to Arkansas. The employment base is military, construction and power generating facilities. There is a large number of lower income non-union laborers. The Industrial Midwest includes the Ohio and upper Mississippi valleys. Its employment base is large industrial production facilities. The work force is primarily union. The Farm Belt is the bread basket of our country. The largest city in the region is Kansas City. The Mineral Extraction region runs from the Canadian boarder to Texas. It also includes Alaska. The region is a large producer of oil (energy) and also has a business service and high technology base. The Northern California area also includes Washington,

Oregon and northern Nevada. The employment base includes finance, business, defense and natural resources. The labor force is highly educated. The Southern California region includes Arizona and Southern Nevada. It represent an important financial center. The region has a substantial number of manufacturing and defense firms. The data included in their study covers a period from 1973 to mid 1987 and encompasses the returns of over 200 properties in a market value in 1987 of more than \$3 billion. The report concluded that when diversification is done based on economic location as opposed to geographic location, regional diversification does have benefits. This study is important in the application of Modern Portfolio Theory to real estate. More study is needed in this area but their work clearly demonstrates that when scientific data is applied to diversification, real benefits are derived.

Salomon Brothers presented a report in May 1990 entitled, "Metropolitan Employment Trends: Analysis and Portfolio Considerations" (7). The report examines trends in employment growth in each of the eight nations and attempts to determine if there is a method for determining a correlation between the regions. Employment growth will provide the portfolio manager with information on new demand for real estate. If research can tell the manager which markets are negatively correlated in terms of growth an appropriate

investment strategy can be developed. The report makes some very interesting observations. The report notes that regions tend to grow at the national average but it is critical to isolate each region's local growth rate. The following table summarizes the correlation between total employment changes in the eight nations, 1976-1989 (annual data).

	NEG	MAC	IMW	SOU	FMB	MEX	NCA	SCA
New England (NEG)	1							
Mid Atlantic (MAC)	.88	1						
Industrial MW (IMW)	.73	.70	1					
Old South (SOU)	.86	.97	.88	1				
Farm Belt (FMB)	.77	.82	.96	.89	1			
Mineral Ext (MEX)	.42	.27	.21	.19	.20	1		
Northern CA (NCA)	.76	.73	.84	.81	.86	.41	1	
Southern CA (SCA)	.81	.86	.93	.90	.92	.38	.94	1

The employment changes in a region when related to other regions show for the most part a high positive correlation. The report infers this to mean that the national economy has a strong influence over a region's economy and employment growth. The fact that the correlation is not 1 indicates that the local economies play a role in the growth of the region.

The report then examined the correlations between regional employment growth excluding national and industry mix effects. The table below summarizes these correlations:

	NEG	MAC	IMW	SOU	FMB	MEX	NCA	SCA
New England (NEG)	1							
Mid Atlantic (MAC)	.64	1						
Industrial MW (IMW)	-.45	-.27	1					

Old South (SOU)	.65	.81	.05	1			
Farm Belt (FMB)	-.22	-.18	.63	.13	1		
Mineral Ext (MEX)	.27	.29	-.73	-.14	-.64	1	
Northern CA (NCA)	-.14	-.44	-.29	-.35	-.09	.07	1
Southern CA (SCA)	-.07	-.31	.25	.01	.24	-.18	.52 1

The results indicate that in certain situations and between regions there are significant positive and negative correlations. This would mean that regional economic diversification provides some benefit to a portfolio manager. For example, the industrial midwest has a negative correlation to New England. This would mean that these economic regions move in opposite directions, as employment grows in the northeast it falls in the midwest, as employment grows in the midwest it falls in the northeast. An investor may want to place funds in properties from both regions in their portfolio to obtain a proper balance and efficiency.

The Salomon report clearly indicates that regional diversification strategies can limit a portfolio's risk resulting from changes in region-specific factors. The report also demonstrates the powerful influence of the national economy on regions. Regional economies tend to move in harmony with the national economy. In a portfolio with only U.S. properties this remains a substantial risk.

It is interesting to note that in this period of difficult economic times, that many real estate portfolio managers have taken no steps to diversify away

the risk of the U.S. economy. If the U.S enters into a recessionary period all property returns will fall.

INTERNATIONAL DIVERSIFICATION STRATEGIES IN REAL ESTATE
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From the research described above several very important conclusions can be drawn. They are as follows:

1. Modern portfolio theory should be used in managing an investment portfolio of real estate. In fact, as the competition grows for the funds of institutional investors, the application of Modern Portfolio Theory will be required. Investment managers will need this information to support their investment decisions.

2. Real estate represents an effective hedge against inflation. Real estate tends to move in an opposite direction from the stock market and therefore represents an excellent diversification strategy for an institutional investor. Including real estate in an investment portfolio should reduce the volatility in a portfolio while maintaining its overall return.

3. Foreign equities have been an effective means for an institutional investor to diversify their portfolio of stocks. Many foreign markets have out performed the U.S. market in recent years. Advances in technology have facilitated the transfer of information among all markets and increased tremendously the opportunities in

international trade.

4. A real estate portfolio should be diversified by economic region in the U.S. Diversification by region will minimize a portfolio's exposure to local economic factors. A portfolio invested entirely in U.S. will still bear the risk of our national economy.

In recent months the interest in European real estate has increased dramatically. Investing money in international real estate at first glance appears to be very appropriate. Trading in international equity markets is done daily and research shows that it is an effective diversification strategy. In fact, as noted above foreign stock markets have earned higher returns than the U.S. stock market.

Research indicates that investing in different economic regions will minimize risk in a real estate portfolio. It would seem that investing in different economies throughout the world would further limit the risk of volatility in your real estate portfolio. The U.S. economy is sagging and there is much concern regarding the trade deficit, budget deficit and savings and loan crisis. Other economies throughout the world may be poised for prosperity and growth.

It is interesting since international opportunities seem

so logical that so many in the real estate industry are resisting the idea of investing in foreign markets. In "Emerging Trends In Real Estate 1990" prepared by Equitable Real Estate in conjunction with RERC Real Estate (8); most of the developers they interviewed 56% believed Europe offered limited potential for U.S. development firms, 26% believed interest in overseas markets was a fad with no potential and 18% felt there is excellent potential. Many feel these markets are unknown and are full of peril. Industry professionals cite cultural differences, language barriers, foreign currency issues, unusual business practices, legal constraints, poor market information and politics as some of the obstacles to be overcome in venturing overseas. Many feel there are just too many obstacles to overcome. In addition, there appears to be a built-in bias in the industry against foreign investment. Real estate has been considered to be a local business and in tough times there is a tendency of industry professionals to retreat to the markets they know the best. Many industry professionals shudder at the thought of going into foreign markets.

These arguments seem very weak when you consider the tremendous investments made by U.S. companies in foreign lands. In travelling the world you will often see U.S. companies with facilities overseas. Certainly opening a factory overseas or buying a company involves dealing

with all of the obstacles noted above. In just the past year there have been several significant acquisitions by U.S. firms in Europe. Foreign countries have also invested heavily in the U.S. real estate market. The Dutch are heavily invested in the U.S. and the Japanese have bought properties in most major markets including Rockefeller Center in New York City and ski resorts in Vermont. Many British and Japanese companies have been investing in real estate throughout the world for decades. The hesitancy of U.S. firms to explore opportunities in foreign countries seems unreasonable.

The real estate industry in the U.S. has grown tremendously over the past 15 years. The involvement of institutional investors has brought with it a new focus on research and understanding the dynamics of the market. In addition, the needs of an institutional investor are quite different from an individual. Their decisions are made using a different set of criteria. The business has grown from a local business to a regional business to a national business. We will have to wait and see if it will grow to be an international business for U.S. firms. It already is for most foreign owned real estate firms.

Modern Portfolio Theory certainly would support investigating opportunities in foreign markets. To the extent an investor can find suitable investments in

countries that have different economic fundamentals (zero or negative correlation) foreign investments should be made. The next section of this thesis will address the obstacles that will be encountered in implementing such an investment strategy.

SECTION II

INVESTING IN FOREIGN REAL ESTATE

International real estate presents new challenges for American real estate investors. These challenges will require U.S. investors to develop strategies for overcoming obstacles that limit their access to international markets. In addition, investors will need to minimize the additional risks that may be associated with real estate located in foreign lands. It will be important for American investors to keep in mind that they may bring with them a predisposition to failure. Many of the things that have been discussed above may be used as excuses for rejecting an international investment strategy regardless of how intriguing the opportunities may appear.

One of the first obstacles to be overcome by U.S. investors is bridging the cultural gap. A cultural gap can mean many things, it can describe differences in the way people dress, their customs, their motivations, their attitude toward family, their religious beliefs and their understanding of property ownership. Understanding these cultural differences is critical for

two reasons in making a real estate investment. The first reason is cultural differences affect behavioral patterns which will determine the demand for a real estate product. The expectation of workers can play a role in the design of an office building, the quality and space per worker. The social pattern of a country and the composition of a family unit can impact the size and number of bedrooms in an apartment complex. The second reason cultural differences will impact a real estate transaction is in the actual purchase of a property. Generally real estate transactions require intense negotiations that can take several months. In the process of these negotiations cultural differences can create barriers to communication and closing a successful deal.

The world we live in is quickly changing. International trade and advances in communications have diminished to some extent the implications of cultural differences. This thesis is focusing on opportunities in Western Europe. The people of Western Europe purchase many of the same products Americans do, buy the same clothes, drive the same cars, watch the same television shows and movies and travel to many of the same resorts. Many people in Western Europe have studied or travelled in the U.S. The cultural gap between the U.S. and Western Europe is shrinking rapidly but cultural differences may still play a role in real estate transactions. An

investor by limiting their investment scope to countries with economies based in the west and by using the correct brokers and consultants can overcome this obstacle.

Language barriers are often cited as an obstacle for an investor attempting to enter a foreign market. There is no doubt that if you do not speak the language doing business will be more difficult. The language barrier is also one that is commonly overcome in international business circles. Many U.S. companies do business overseas and many foreign based companies do business in the U.S. A first step for anyone intending to do business overseas would be to learn the language of the country they have targeted. Another option would be to hire real estate professionals who are fluent in the language of that country and English. There are also many translators available to American businessmen. It should be noted that in most of Western Europe English is an acceptable language for doing business and many people speak the language.

Political unrest is also a fear of Americans investing abroad. After all isn't it possible that your holdings could be nationalized leaving the investor with a catastrophic loss. This would be a risk in less developed countries but in Western Europe it is highly unlikely. Since this thesis is focused on investment

opportunities in Western Europe we will not consider political unrest to be a major concern.

Understanding the property laws and rights relating to real estate in a country is essential in developing an investment strategy. Real estate laws like others were developed over a long period of time and are often very complex. It is interesting to note that real estate law can vary by state in the U.S. As Mary Alice Hines noted in her book "International Income Property Investment" (9), " The three basic classifications of legal systems are Romano-Germanic, Common Law and Socialist. The Common Law system is practiced in England, most of the United States, and in many of the countries dominated by the United Kingdom and the United States. Socialist law is practiced in the U.S.S.R. and its satellite countries. Romano-Germanic law is then practiced in most other countries who were particularly influenced by early Roman Law. The Western European countries, for example, each have their distinctive legal variations of Romano-Germanic legal systems." The laws regarding property ownership, leaseholds, landlord-tenant law and contract law can differ between countries. Obviously this an area of great concern to an investor. Having clear title and knowing their rights under the law is essential. With the growth of international trade during the past 15 years, many law firms now have offices in cities outside the U.S or

affiliations with law firms in foreign countries. An investor will need to establish a relationship with a firm in the country they have targeted for investment to learn the nuances of their laws.

Currencies throughout the world are now traded like commodities. Fluctuations in the value of currency can have a dramatic impact on the success of a transaction. For instance, if a property was purchased when the dollar was very weak against the foreign currency it would require that the investor use a large amount dollars to buy enough of the foreign currency to close the transaction. If the investor then sells the property for the same price in the foreign currency but the dollar has strengthened when the foreign currency is converted back to dollars the investor will have fewer dollars and will have incurred a loss. This would be considered a foreign currency translation loss. The impact of fluctuations in foreign currency is of concern to anyone investing overseas. The investor can take one of two approaches in dealing with the risk of currency translation losses. The first is to ignore them. This can only be done if you are reasonably sure that you will not be required to bring the funds back to the U.S. at a time when the exchange rate is unfavorable. If you choose this approach you have elected to place your funds in a foreign market for an indefinite period. The second option is to employ a specialist in foreign

currencies who can devise a hedging strategy for your investment. Hedging strategies are employed frequently and limit the risk of any currency exposure. The cost of the hedging strategy will be born by the investment.

One of the more significant issues relates to taxation. Each country has its own tax structure and the investor must understand how that tax law impacts their investment. For instance in the U.S. pension funds are exempt from taxation. The principle being that the income of the fund are being deferred until the beneficiary/retiree receives the benefit. In essence the pension fund is that individual's retirement savings. In certain foreign countries the income earned by the funds may not be tax exempt. This could have a substantial influence on the decision to invest in that country. The "big six" accounting firms all have offices overseas. These firms could provide an investor with whatever information they need regarding an investment. In addition, these firms can assist the investor in their tax planning. The individuals in these firms may also be a valuable source of business contacts and information.

SECTION III

THE CHANGING LANDSCAPE IN EUROPE
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Many in the U.S. have been watching with great interest the activities of the European Community. The European Commission has been working with its 12 Member Nations at forming a single integrated market-economy. The program adopted in 1985 calls for a fully integrated market by December of 1992. The task of implementing such a plan is enormous and many obstacles will have to be overcome but it appears that member nations are committed to the establishment of a single integrated market. The GDP, once the nations are combined, will be slightly less than that of the U.S.

The concept of a single European market is not new. In fact, The objective of single common market was first described in the Treaty of Rome in 1957 (10); "The Community shall have as its task, by establishing a common market and progressively approximating the economic policies of Member States, to promote throughout the Community a harmonious development of economic activities, a continued and balanced expansion, an increase in stability, accelerated raising of the standard of living and clear relations between the

states belonging to it."

The Treaty of Paris in 1951 and the Treaty of Rome in 1957 established the three initial European Communities; the European Coal and Steel Community, the Atomic Energy Community and the European Economic Community. These organizations were combined in 1967 to form the European Community. Their goals were summarized in "1992 Single European Market" as follows (11):

1. To lay the foundation for a closer union among the peoples of Europe.
2. To establish a common market by the elimination of trade barriers.
3. To work for the constant improvement in living and working conditions throughout Europe.

There were originally six member nations Belgium, France, West Germany, Luxembourg, the Netherlands and Italy. In 1972, Denmark, Ireland and the U.K. joined and in 1981 Greece was added, in 1986 Spain and Portugal.

In 1985, the European Commission released their program for creating a fully integrated market by 1992. The program described specific steps necessary to achieve this goal and proposed timetable for implementation. The program was adopted and the Commission is now in the

process of implementing the measures required to eliminate all the physical, technical and fiscal barriers to a free internal market. The objectives set out in the Treaty of Rome more than 30 years ago are now rapidly approaching fruition. The process in getting to this point may have been painfully slow at times but the Community and the Commission remain dedicated to achieving their objectives. This dedication may be in part motivated by the tremendous benefits that could result from an integrated market and economy. The Member Nations when combined have a population that is larger than the U.S. and double that of Japan. The U.S. markets cover some 3.6 million square miles. The EEC's markets cover 870,000 square miles and most of the major markets are within a few hundred miles of Paris. These markets have operated independently in the past and because of this there have been great inefficiencies. These inefficiencies have hampered the growth of these markets and economies. The European markets-economies have been handicapped in competing with the fully integrated markets of the U.S. and Japan. The European Commission believes that an integrated market should bring an economy of scale to the industries in its Member Nations. Increased competition, particularly in industries that were protected, should lead to a reduction in profit margins and the price of these goods. This pressure on margins should motivate firms to increase their efficiency to protect these profit

margins. Competition should also increase the quality of goods and stimulate innovation in the production process. The Commission in its program statement in 1985 estimated the gains that would result from these improvements in the manner of doing business (12):

1. Add, on average, 5.3% to the Community GDP
2. Deflate consumer prices by an average of 6.1%
- 3 . Improve the balance of public finance by an average equivalent to 2.2% of GDP.
4. Improve the EEC's trade position by the equivalent of around 1% of GDP
5. Boost employment by 1.8 million new jobs, though in the short term unemployment will be unaffected. In the longer term, it should fall by 1.5%

As outlined in the Euromonitor publication "1992 Single European Market" there are a number of costs incurred do the segregation of the European markets (13). These additional expenses are summarized below:

1. Administrative costs incurred in dealing with different national bureaucratic regimes
2. Higher transport costs related to border-customs formalities
3. Increased costs resulting from the need to meet different national standards which require smaller production runs

4. The duplication of costs incurred by separate production runs

5. The higher costs of non-competitive and heavily regulated national activities such as government procurement

The European Commission is expected to issue approximately 400 Directives in the process of implementing their program to fully integrate their Member Nations' markets-economies. At the present time, more than 100 of these have been issued and committees have been established to reach a consensus on the unissued Directives (14). The process is obviously complex and at times difficult but the Commission has been empowered and the investment has been made to integrate these markets. All the objectives of the Commission will not be achieved. It is also likely that with the events in Eastern Europe, the consolidation of Germany and the politics of its Member Nations the Commission will not meet its deadline of December 1992 but it does appear that the considering the history of this endeavor, the momentum it has now and the work that has been done it will be achieved in the near future. It is interesting to note that Germany has reconfirmed its commitment to the EEC. Many are concerned that a reunified Germany will threaten the success and future of the European Commission. Others believe that regardless of the impact of a reunified Germany the

events in eastern Europe are going to accelerate the informal integration of the markets-economies of Europe. The reconstruction of eastern Europe will require a tremendous amount of foreign investment. The Germans alone will need close to \$300 billion to rebuild East Germany. All Eastern European countries will be anxious for foreign investment. In addition, the markets of Eastern Europe as well as the labor force are very attractive to Western Europe. The momentum started by the European Commission toward a more integrated and freer economy will continue and grow stronger as Eastern Europe opens up. The benefits of a common market, the need for capital and the demand for goods and services are simply too great for any member nation to stand in the way.

In terms of real estate strategy the events in Europe have great importance. The objectives of the Commission are to promote economic growth, expand employment and improve the overall quality of life. All of these objectives should also increase interest in real estate and stimulate the real estate markets. It is impossible to predict when the impact of an integrated market will be realized in Europe but it is safe to say that while the U.S. struggles to deal with its trade and budget deficits Europe seems poised for an expansion in its economies.

The activities of the European Commission also pose an interesting question for an investment manager looking at a diversification strategy involving acquiring a European portfolio of properties. The integration of Europe may reduce any benefit of a regional diversification in Europe. All the economies of the Member Nations may react as one or have a very positive correlation.

OVERVIEW OF ECONOMIC PERFORMANCE IN WESTERN EUROPE
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As was noted above, an "efficient" diversification strategy must consider in a scientific manner the relationship-correlation of the performance of an investment with other investments in a portfolio. In assessing opportunities in the real estate markets of Western Europe it is essential to first understand how these markets will perform in relationship to real estate markets in the U.S. The greatest benefits in terms of a diversification strategy will be achieved if the foreign markets are negatively correlated to the U.S. In addition, it is essential in any international diversification strategy to understand the relationships between all the countries-investments in a portfolio with each other.

The economic performance of a country has a significant impact on its real estate markets. During a time of economic expansion and employment growth a country's

real estate markets will also be stimulated. The correlation matrices below summarize the relationships between the U.S., U.K., France, West Germany, Italy and Spain when comparing the annual growth in GDP and employment.

CORRELATION MATRIX- GDP GROWTH, 1970-1989

	U.S.	U.K.	FRANCE	W.GERM	ITALY	SPAIN
U.S.	1	.40	.36	.56	.14	.31
U.K.	.40	1	.39	.56	.40	.42
FRANCE	.36	.39	1	.77	.69	.64
W. GERM.	.56	.56	.77	1	.79	.47
ITALY	.14	.40	.69	.64	1	.43
SPAIN	.31	.42	.64	.47	.43	1

CORRELATION MATRIX- EMPLOYMENT GROWTH 1970-1989

	U.S.	U.K.	FRANCE	W.GERM	ITALY	SPAIN
U.S.	1	.35	.12	.44	.19	.04
U.K.	.35	1	.35	.39	.21	.34
FRANCE	.12	.35	1	.37	.12	.47
W. GERM.	.44	.39	.37	1	.04	.24
ITALY	.19	.21	.12	.04	1	.05
SPAIN	.04	.34	.47	.24	.05	1

The results indicate that the U.S. economy has a strong influence on many of the economies of Western Europe. This is not surprising when you consider the size of the U.S. economy and the depth of its markets. Many of the countries in Western Europe export a great deal to the U.S. and their industries depend on these markets. The economies of Western Europe will tend to move in the same direction as the U.S. but not to same degree or as quickly. The results also indicate that West Germany has the strongest relationship to the U.S. while Spain and Italy appear to be the least dependent. The coefficients though positive clearly indicate that events specific to a particular country have a strong influence on its economy. For this reason the current status of each market must be carefully reviewed in making an investment decision.

The events in Europe must also be considered in assessing an international diversification strategy. The actions of the European Commission and the changes in Eastern Europe should enhance the potential for growth in Western Europe. It is precisely these changes that make the real estate markets of Western Europe so appealing to U.S investors. It should be kept in mind that the historical data used in the study did not include events such as this. The benefits of this growth will have an impact on the real estate markets in the U.S. but obviously to lesser degree than in Western Europe.

The results also indicate that the economies of Western Europe tend to move in the same direction. West Germany and France seem to have the strongest influence on the direction of the economies in Western Europe. The fact that these correlations are not 1 indicates that country specific factors play a significant role in the prospects of a particular market.

Additional study is needed but it appears there would be a benefit to an institutional investor in investing in the real estate markets of Western Europe.

REAL ESTATE MARKETS IN WESTERN EUROPE
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Many international real estate firms provide their clients with information on real estate markets throughout Europe. In particular, Landauer Real Estate Counselors (13), Healy & Barker (14) and Baker, Harris Saunders (15) were useful resources in looking at the markets of western Europe. These firms and others publish quarterly and annual reports regarding markets throughout the world. There is no doubt that information on foreign as well as domestic real estate markets can be improved but there is reasonably good information available. In addition, there have been many books written on international trade and several on investing in foreign real estate.

In selecting a foreign market for real estate investment it is critical that you have an understanding of the fundamental strength of the country's economy. Each year the Economic Commission of Europe publishes an Economic Survey of Europe that provides a tremendous amount of information on the current status and prospects for each country's economy.

The United Kingdom's real estate markets in many ways are similar to the current state of real estate markets in the U.S. London is a major international financial center and is also the U.K.'s principal real estate market. The London market, like the U.S., is burdened by concerns about the health of the nation's economy and

an excess supply of inventory created by a development boom in the late 1980s. Current predictions are that the U.K. will experience an inflation rate of better than 7% in 1990. In addition, short term interest rose sharply in 1989. Most believe this will dampen economic growth in the short term and also the demand for real estate. The office sector has seen a reduction in demand resulting from concerns regarding the economy. The demand for retail space has also slackened as a result of a drop in consumer spending. The industrial market had a good year in 1989 but as companies tighten their belt in light of the gloomy economic news demand should drop. The office and retail sectors are considered to be overbuilt and have significant amounts of new space due to come on line. It is interesting to note that overseas investors have been significant investors in U.K. property. Olympia and York are developing the Canary Wharf project and JMB bought a Randsworth Trust a real estate firm with significant holdings in the U.K. In 1989, foreign investors purchased about 3.1 billion pounds of real estate. Japanese and Scandanavian investors were particularly active.

The economy of France appears to be quite strong. The nation's GDP grew by 3.2% in 1989 and inflation was kept relatively in check at 3.6%. Paris is France's primary real estate market though other city's and regions are

seeing growth as a result of the expanding economy and anticipation of the integration of Europe in 1992. It was noted earlier that a majority of the EEC's combined market lies in a 400 mile radius of Paris. In addition, Paris is one of the great city's of the world. The office market in Paris was a strong performer in 1989. In the last three years there has been significant new development in Paris but in the center city and the inner suburbs the demand has been strong and supply tight. A substantial amount of the new development has been in the outer suburbs, especially those served by transportation systems. The interest in real estate markets outside Paris has been spurred by the arrival of a new high speed train and the Channel Tunnel Project. The returns on office properties have been under pressure due intense competition for the properties. It seems that almost everyone is seeking to buy a French office building. The Japanese, Swedish and Dutch have been active in the France's real estate markets. In addition, other Member Nations of the European Community have been acquiring property. The retail market in Paris was strong for prime locations. The retail market in general has been driven by the healthy economy and a robust level of private consumption. It is interesting to note that out of town shopping centers, hypermarkets, are becoming an important convenience for the French shopper. Industrial development has occurred primarily outside of Paris and in smaller cities. Demand has been

strong for industrial space and rents have been moving upward.

Germany may be the most interesting of all the real estate markets in Europe. The impact of reuniting East and West Germany is staggering. The investment that will be required to rebuild East Germany is estimated to be as much as \$300 billion. It is almost impossible to predict the impact this will have on the economy of Germany or on its real estate markets. Germany may need to open its borders to foreign investors seeking to invest in their future. The West German economy put in a strong performance in 1989. The country's GDP rose by 3.9% and inflation though it increased substantially was only 3.2%. All of Germany's real estate sectors office, retail and industrial did well in 1989. This is to large extent attributable to the strength of its economy. Foreigners are starting to invest in German real estate markets. In 1989, about one third of the funds invested in commercial real estate were foreign. The lack of investment grade properties has prompted many of these investors to place their money in development projects. The approval process in Germany is difficult which limits supply. In addition, competition for properties is intense. The West German economy is one of the strongest in the world but it will be under tremendous pressure in attempting to rebuild East Berlin. This could be a unique opportunity for

foreign investors to buy German real estate.

The Italian economy slowed in 1989. The country's GDP increased by 2.8%, but the growth was slower than in prior years. The inflation rate increased in 1989 and is now running at 6.5%. The office markets in the major cities of Italy are very tight. Stringent standards for new development limit the supply in most downtown locations. The retail market in most major cities is strong. In addition to restrictions on new development, retail associations also have considerable influence on the amount of new space built. The industrial sector was strong performer in 1989. Prices are high and opportunities are limited for foreign investors.

The GDP of Spain grew by 4.9%. The economy has benefited greatly from its affiliation with the EEC. The inflow of foreign capital has been significant. The large well educated work force and relatively low wages have proven to be very attractive to foreign investors. Unemployment and inflation remain a concern but all indications are the economy will continue to grow. The major real estate market in Spain is Madrid. The performance in all sectors of the real market in Madrid have been strong. As the economy has grown interest in other cities has grown, particularly in Barcelona and Valencia.

CONCLUSION

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This thesis addresses the appropriateness of an international diversification strategy in real estate. The study was done from the perspective of a large institutional investor seeking to minimize the volatility in their portfolio while maintaining their overall return. In addition, the current state of real estate markets in Western Europe was explored. From this research three important conclusions can be drawn. They are as follows:

1. Investing in foreign real estate markets is an appropriate strategy for an institutional investor who is managing their portfolio using Modern Portfolio Theory. Efficient diversification is the basis of Modern Portfolio Theory. Historical investment results have shown that diversification by product type and economic region in the U.S. has reduced volatility in a real estate portfolio while maintaining overall returns. Economic diversification in the U.S. reduces the impact of region specific economic changes. Research has also demonstrated the economic health of the U.S. has a significant effect on all economic regions of the country. A strategy that involves investing in foreign markets would reduce the impact a recession would have

on a portfolio of real estate investments which are entirely located in the United States.

2. Many changes are now taking place in Europe which will have a significant effect on the countries of Western Europe. The future direction of Europe will be greatly impacted by the integration of the markets of the European Community and the changes that are taking place in Eastern Europe. The benefit of investing in different real estate markets in Western Europe was considered. These changes will have such a strong impact on the economies of Western Europe that the benefits of diversifying within Europe could be insignificant. Only time will tell how these events will reshape Europe but the opportunity for economic growth should be enhanced. Each country will be affected but to differing degrees. The study reviewed the current state of the real estate markets and economies in the U.S., the United Kingdom, France, West Germany, Italy and Spain. Each of these markets appears to be in very different states of health with very different prospects in the near term. A strategy which invests in all of these markets would seem most appropriate.

3. Many U.S. firms are reluctant to explore opportunities in foreign markets, many obstacles are cited and risks are discussed but these are by no means

insurmountable. There are many resources available to U.S. real estate investors seeking foreign investments. An institutional investor should not be deterred by the biases of the real estate community.

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