An Empirical Investigation of the Role of Legal Origin on the Performance of Property Stocks within the Context of a Tactical Asset Allocation Strategy

by

Christopher K.L. Shun

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by

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ABSTRACT

The role of legal origin was first introduced in the Law and Finance Literature by La Porta et al. (1997) in an original study of legal determinants of external finance. Their study is timely given that investor protection is crucial because in many countries, expropriation of minority shareholders and creditors by controlling shareholders or corporate insiders is extensive. This thesis intends to replicate the original La Porta et al. (1997) study for Property stocks in 23 countries whose legal jurisdictions falls into the four of the legal fraternities established by La Porta namely, English, French, German and Scandinavian. The primary motivations for this thesis, is that the Property stocks broadly captures several critical aspects of the original La Porta study. Specifically, Property stocks are very tangible assets that can easily be collateralised due to the direct property underpinning the net asset backing of Property stocks.

*The end result of this research endeavour is to provide a framework for institutional portfolio investors to determine the appropriate countries whose property markets have the most favourable investor climate to facilitate a more attractive environment for institutional investors given the **Means Variance Optimisation** (MVO) methodology. A tactical asset allocation strategy will be employed to determine the **three** stages that a global investor should undertake to arrive at the optimum proportions of funds to invest in Common stocks or Property stocks in any country firstly based on an Emerging/Developed country analysis then secondly, a geographic Regional analysis and finally on Legal Origin analysis to distil the appropriate proportions of funds that should be invested.*

The Thesis has three original contributions, which are as follows:

1) *An empirical investigation of role of Legal Origin on the performance of property stocks within the context of a tactical asset allocation strategy. This thesis studies the impact that Developed versus Emerging, Regional markets and Legal Origin jurisdictions have on the results of the optimal MVO portfolios (based on the highest Sharpe ratio) and presents the research findings of this study, at the Primary, Secondary and Tertiary levels. This thesis is envisaged to fill the research gap between legal origin and the performance of Property stocks across four legal fraternities in 23 countries and make an original contribution in the Law & Finance and Portfolio Management Literature.*

2) *ACTIVE (Ex-Ante) versus PASSIVE (naïve) portfolio management strategy. The original contribution is the application of this methodology to property stocks specifically within a Legal Origin and Regional market framework. Data is collated from 1984 to 2003 (20 years inclusive) from 23 countries with specific reference to the Common and Property stocks markets therein. A 5 year rolling Ex-Post analysis is computed to determine the optimum allocation weights in a multi-asset portfolio and subsequently an Ex-Ante analysis (next immediate year) of the portfolio weights applied to an Actively managed portfolio. This portfolio will be compared with actual portfolio performance from 1989 to 2002 (fifteen subsequent years) to determine whether the Ex-ANTE methodology which underpinned the Active management strategy is preferred over a Passive (equal investment in each asset class) strategy for property stocks portfolio management. The Ex-Ante analysis will be undertaken at two stages: Firstly, Legal Origin markets and Secondly, Regional markets.*

3) *A replication of the Gordon et al. (1995) study which determined the appropriate percentage based on the Markowitz Portfolio Theory (MPT) that should be invested in the Property stock markets in 14 countries. The original contribution is the application of Gordon's methodology to the Legal Origin markets proposed by La Porta et al. (1997). This research study encompasses 23 countries whose legal jurisdictions are derived from English, French, German and Scandinavian legal families. The legal frameworks are crucial in determining investor protection and consequently the likelihood for greater investor participation in the respective property markets.*

This thesis is dedicated to

Stephan Le On Shun

(Firstborn and only son born in February 1998 at the commencement of my Doctoral Programme as a reminder of my Doctoral journey and adventure)

and

Abbygail Sue Anne Shun

(Delightful and inspiring daughter born in October 2000 as an encouragement to persevere and continue the lonely sojourn as a Doctoral student)

and

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(Patient and long suffering wife who endured many personal hardships and at great personal sacrifice to support me in this journey of self actualisation)

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CHAPTER 1

This chapter identifies the primary research motivations, provides the background and the key factors that motivated this study and describes the major problems with respect to asymmetric information in the property stock market. The chapter also describes the contributions of this research and gives an outline of the structure of this thesis.

Thesis Introduction

1.0) Introduction

Researchers have long examined a firm's share performance in an attempt to understand the reasons for differing levels of firm performance. The Finance literature provides many different explanations for a firm's performance. Some of these factors relate to a firm's product market share, CEO characteristics, agency conflicts, diversification, institutional ownership of firms as well as **legal** frameworks wherein these firms operate. The corporate governance literature has established that diverse elements of countries' financial systems like the breadth and depth of their capital markets, pace of new security issues, corporate ownership structures, dividend policies and specific securities laws provide varying levels of protection for outside investors. Recent research in Law and Finance undertaken by La Porta et al. (1997b) has empirically established that the legal system wherein a firm operates is central to the understanding of the patterns of corporate finance in different countries.

This thesis will focus and examine the role of legal origin that was first introduced by La Porta et al. (1997b) with specific empirical data and analysis of the traded securities within the Property sectors in 23 countries over an eleven year period from January 1992 to December 2002. This is an extension of the research and model that were first examined and prescribed by La Porta et al. (1997a) in their study of legal determinants of external finance. Investor protection is crucial because in many countries, expropriation of minority shareholders and creditors by controlling shareholders or corporate insiders is extensive.

Expropriation can take many forms such as corporate insiders selling the output, the assets or additional securities in the firm they control to another firm at below market prices. Such transfer pricing, asset stripping and investor dilution is all too common. Expropriation is a result of the agency problems described by Jansen and Meckling (1976), whose seminal research focussed on the consumption of "perquisites" by managers and other types of empire building behaviour designed to utilise the profits and cash flow of the firm for the insider's benefits as opposed to returning the monies to shareholders (dividends) and creditors (debt repayments). Thus, external investors (outsiders) are more vulnerable to expropriation and therefore they are more dependent on the legal frameworks in certain countries to protect their rights. However, employees and suppliers remain useful to the firm and are at a lesser risk of being mistreated. Thus, most of the risk falls onto the external shareholders and bank creditors who provide the financing.

1.1) Research motivations and problems

This research proposal intends to replicate the original La Porta et al. (1997b) study but focuses on Property stocks in approximately 23 countries whose legal jurisdictions falls into four of the legal fraternities established by La Porta namely, English, French, German and Scandinavian. The primary **motivations** for this thesis, is that the Property stocks industry broadly captures several critical aspects of the original La Porta study. Specifically, Property stocks are very tangible assets that can easily be collateralised due to the direct property underpinning the net asset backing of Property stocks. Thus the empirical study and conclusions should be able to shed light on the major factors that make for a more vibrant and broader property market. Optimally, the end result of this research will provide a comprehensive framework for institutional portfolio investors to determine the appropriate countries whose property markets have the most favourable investor climate and protections to facilitate a more attractive environment for institutional investors given the means variance optimisation methodology. A tactical asset allocation will be employed to determine the analytical stages that a global investor would undertake to arrive at the optimum proportions of funds to invest in regular stocks or Property stocks in any country.

The global investor will firstly determine whether to invest in two asset classes namely Stocks (General Equities) and Property Stocks. At Stage one, the investor will determine what proportions to invest in Emerging versus Developed Countries. Then the investor at Stage two would consider Regional Analysis as to whether investing in certain Regional groupings would enhance their returns. The investor would have four regions to consider namely North America, Europe, Asia and Australasia. Finally, at Stage three, the investor would consider Legal origin analysis as to whether investing in certain legal fraternity groupings would enhance their returns. The investor would have four legal frameworks to consider namely English Law, French Law, German Law and Scandinavian Law. The primary analysis for Stages one, two and three would be T-tests and F-tests. The F-tests is employed to test the means for more than two groups and to determine if there is statistical significance within the means of the various Regional and Legal origin groupings. Also, the regional groupings in Stage two and the Legal origin groupings in Stage three would be averaged to prevent any one country distorting the results and providing spurious conclusions.

1.2) Asymmetric Information (Direct property market)

At this juncture, it is important to recognise that the direct Property market is fraught with asymmetric information, which creates imperfect markets. The dependence on local legal infrastructure, market structures, conventions and other formal regulatory barriers defined by Guerts and Jaffe (1996) as "institutional risk", makes the prospect of direct property investments rather daunting. Surveys of foreign institutional investors by Worzala (1994), determined that the most important factor deterring overseas investment is unfamiliarity with foreign market structures and conventions and other formal regulatory barriers herein defined as "institutional risk". Guerts and Jaffe (1996) suggest that this "institutional risk" should be a prime area of concern when contemplating investing into foreign markets, especially into emerging markets where cultural and legal differences will be even more pronounced. If foreign investors can become more informed of the institutional structures and business practices of overseas markets they are more likely to invest in those markets reinforcing the maxim that "*familiarity breeds investment*".

Without which, investors will avoid such markets, as the uncertainty that the lack of transparency induces will increase the risk of investment to such a level that it becomes unacceptably high. When considering investment into direct property markets, especially emerging markets, many foreign institutional investors need to consider transparency risks. Roulac and Eachempti (2002) state that lack of transparency is "the single greatest obstacle to economic development" facing emerging countries today. Consequently the question becomes how transparent are the emerging property markets relative to the developed countries of the world. This can partly be answered by assessing their level of property market **maturity** defined by market infrastructure and the existence of sophisticated property profession with their associated institution support networks and the amount of readily available level of information exchange (**transparency**) within in each country. Transparency International undertook such a study with the results highlighted in Table 1.1

Table 1.1: The Maturity and Transparency of direct Property markets

Country	*Maturity*	*Transparency*
Australia	Established	Highest
Belgium	Nearly Established	High
Canada	Established	Highest
China	Emerging	**Low**
Denmark	Nearly Established	High
France	Nearly Established	High
Germany	Established	High
Greece	Emerging	Opaque
Hong Kong	Nearly Established	High
India	Emerging	Opaque
Indonesia	Emerging	**Low**
Ireland	Emerging	High
Italy	Emerging	Low/Opaque
Japan	Nearly Established	Semitransparent
Malaysia	Emergent	Semitransparent
Netherlands	Emergent	High
New Zealand	Nearly Established	High
Norway	Emergent	High
Philippines	Emerging	**Low**
Portugal	Emerging	Opaque
Singapore	Nearly Established	High
South Korea	Emerging	**Low**
Spain	Emergent	Low
Taiwan	Emergent	Low
Thailand	Emergent	Low
UK	Established	Highest
USA	Established	Highest
Vietnam	Emerging	**Low/Opaque**

Source: Transparency International (2002)

The property markets of China, Vietnam, Indonesia, South Korea and the Philippines are still at the ***emerging*** stage of maturity and also display the least (**Low**) transparency. While the markets of Malaysia, Thailand and Taiwan have moved to a stage of rapid development towards maturity (emergent) however still displaying low to semi-transparent levels of transparency. Thus, these markets are perceived unsuitable for institutional investors and are only of interest, to individuals willing to take a higher risk or venture capital funds seeking out high returns in a very short time before moving on to new markets.

In contrast the markets of Hong Kong, Singapore, New Zealand, Australia and Japan have much more established markets and all show good to high levels of transparency. All of which suggests that it is these markets that are likely to offer the “best” form of investment opportunities to institutional investors considering overseas investment in the Asian region. It is not surprising that these countries feature prominently in the horizons of institutional property investors seeking to diversity and invest externally.

As global markets develop, the established investors call for increased transparency to reduce the risk of mispricing and to improve the reputation and credibility of the market. In short, international property investment depends on the ability to achieve immediate and full access to market information that can be verified and can be confirmed in a shorter time than ever before. Indeed the free flow of information is a necessary condition for market efficiency.

To mitigate some of the problems highlighted by Roulac and Eachempti (2000), this research will focus on listed Property Stocks in 23 countries which have had at least a 10 year track record and whose prices have been analysed by Global Property Research in Amsterdam, the Netherlands, who have incorporated a rigorous property stocks index for each country in order to analyse as a separate asset class to incorporate into a multi asset Markowitz portfolio analysis to determine the efficient frontier. The rationale for such analysis will be elaborated in Chapter Six: Research Methodology and Design.

1.3) Overview of Research

The seminal contribution of the original La Porta et al. (1997) research opined that the **legal framework** is a crucial determinant as to which countries were most likely to have the most attractive investment climate that would attract foreign investment and engender a vibrant and healthy stock market with greater breadth and depth and consequently, procure dynamic corporate performance. In short countries with poorer investor environment, measured by the character of the legal rules and quality of law enforcement, should have smaller and narrower capital markets both for equity and debt markets.

Their empirical analysis have been further verified by numerous studies applied in different sectors undertaken by Levine (1998) in the Banking industry, Alesina et al. (1999) on Government Aid, Rajan and Zingales (1997) on financial dependence and growth and Demirgüç-kunt and Maksimovic (1998) in their World Bank study which concluded that countries whose legal systems score high on an efficiency index, had a higher propensity to use long term external financing. Their study also concluded that an active and large banking sector was also associated with externally financed growth. A thorough comparative review of the La Porta et al. (1997) paper and the Demirgüç-kunt and Maksimovic (1998) paper is undertaken and analysed to show the similarities and also their differences. Please see (Appendix 1).

This thesis represents an extension of two separate bodies of research; one examining the role of legal origin on the performance of the equities markets and external finance (La Porta et. al. 1997) and the other, the benefits that diversification accrues from international investing in Property Stocks across both emerging and developed markets as elucidated by Eichholtz & Hartzell (1996). To date, there has not been any comprehensive research undertaken to assess the impact of the legal origin infrastructure on the performance of the securitised property sector. Therefore this thesis is envisaged to fill the research gap between legal origin and the performance of Property Stocks across four legal fraternities and make an ***original contribution*** to the Law & Finance and Portfolio management Literature.

The enforcement of "property rights" is important as there is an active secondary market for property, which makes it relatively liquid as opposed to manufacturing companies in the various 49 countries originally studied by La Porta et al. (1997). The study on one industry (property) across many countries removes industry differences, which could **distort** and or influence the differences observed and discovered in the original La Porta (1997) study. This is because certain countries have concentrations in certain industries like mining extraction (Norway), or manufacturing (Germany), or financial and general services (Hong Kong) that could have undue influences on the independent variables examined by the La Porta study.

This current study is approximately seven years after the original 1997 study and includes the period covered by the major economic crisis that afflicted the Asia Pacific region from 1997 to 1999. Thus, this research will be beneficial to property scholars and practitioners as the results will incorporate a systematic shock (Asian financial crisis), which has brought about a realignment of the factors that drive the property industry. Also the Asian countries feature prominently in the Emerging countries, which is in Stage One of the research evaluation process. Therefore the impact of the Asian crisis would have a material impact on their risk adjusted returns measured by the Means Variance Optimisation methodology. The benefits and contributions of this research is further elaborated later under 1.3.2) Thesis contributions

1.3.1) Property diversification

The literature reveals that there is a need for property diversification beyond one's domestic shores as suggested by Eichholtz (1996b), in order to achieve greater diversification benefits and to extend outwards the Markowitz efficient frontier for Institutional Property investors. Giliberto (1990) and Giliberto and Testa (1990) used the returns of international property shares over the time period 1985 to 1989 to demonstrate the risk-reduction possibilities of international property stocks within a property-only securities portfolio. Gordon et al. (1998) undertook a study of the property markets in 14 countries from 1984 to 1997 and concluded that risk reduction was clearly demonstrated by including international Property Stocks into a mixed asset portfolio.

This thesis intends to review the research methods utilised by Gordon et al. (1998) and to integrate them with the La Porta et al. (1997) study, to produce a thesis, which will provide a comprehensive property investment framework for institutional portfolio managers investing in the Property Stocks in 23 countries covered in this study. The research process would include incorporating regional market analysis into legal frameworks to determine the optimum proportions that should be invested by a global investor based on ex-post analysis from data from 1992 to 1996 (5 years inclusive).

The EX-POST results based on the weights determined by the Means Variance Optimisation (MVO) methodology would attempt to establish any systematic shifts or trends that a global investor could observe to extrapolate the future investment trends. An Ex-Ante analysis would be undertaken within the ambit of this thesis to determine if by employing a 5 year rolling basis, whether a global investor could have employed the optimum MVO weights to attempt to outperform the benchmark in the following year. So for example, to determine the optimum weights to invest in 1997, the global investor would undertake a 5 year analysis (1992 to 1996). Whilst, the global investor might not be interested in the specific optimal outputs that the MVO methodology suggests in that specific 5 year time period Ex- POST, in contrast the global investor is very much concerned with the Ex-ANTE analysis used to develop active management strategies wherein the optimal MVO weights derived in the previous 5 years (1992-1996) are utilised to allocate investment resources in the following year 1997. Thus this is in contrast to a Passive management strategy of investing equal proportions in each asset class in 1997. This thesis undertakes the EX-ANTE analysis for 1997 through 2002 (seven years) employing the 5 year rolling basis to outline the trends of Active management versus Passive management strategies. This is dealt with thoroughly in Chapter eight. The current priory assumption as evidenced in the Literature as elaborated by Pagliari et al. (1995) is that the Active management strategy does not outperform the Passive management in the medium to long run. This thesis will explore the Active management strategy utilising the MVO methodology to see if the assumption by Pagliari et al. (1995) is valid when considering the impact of legal origin on the returns of the Property Stocks in 23 countries.

1.3.2) Thesis Contributions

The Thesis endeavours to make three distinct original contributions, which are as follows: