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Investment in Cyprus Real Estate in the context of the practice of currency risk managemer

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DISSERTATION

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Abstract

Real estate investments as an industry has always been a domestic field, however, following many other asset categories, investments in real estate expands to the international level. The currency differs depending on where investments are made and as a result of this real estate investors also face currency risks in addition to all other real estate related risks they already need to manage. The management of currency risk can have different forms, and the purpose of this thesis is to find out how and if property purchasers in Cyprus hedge this risk. To create an understanding of the issue, a summary of some theories on the currency market and real estate market can be found in the thesis. Only a small amount of research exists on the subject in Cyprus and the theories are mainly from foreign studies and the currency risk management from other business sectors. These theories, combined with the research questions, have formed the questions for the interviews and questionnaire used in this research.

The present research shows that currency fluctuation risk does not affect a buyers' willingness to purchase property in Cyprus. The hedging strategies used on the market seem to primarily be future contract approach and diversification.

The risk is well understood by property purchasers; however, it does not affect the property purchase in Cyprus. Most of the property purchasers have a basic understanding of the currency risk; nevertheless, the majority does not use any hedging vehicles. Most of the respondents held or currently hold investments in foreigner denominators. All the respondents stress the necessity of real estate intermediaries to have expertise in currency fluctuations risk.

Real estate market intermediaries suggest that in the recent years investors and individual buyers are more aware of this risk and keep it in mind when making decision to purchase property here in Cyprus. The significant role in this change of currency risk perception played rouble crash in the beginning of this year. The interviews also imply a shared idea of real estate intermediaries' lack of knowledge in applying risk hedging strategies and difficulty to forecast any market perspectives.

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Jekaterina Ivanova

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1. Introduction

In Cyprus thousands of local residents and foreigners took property mortgages denominated in Swiss Francs during the property boom years of 2007 and 2008. Between 2008 and 2011 the Swiss Franc nearly doubled in value and in September 2011 the Swiss National Bank announced that it would enforce a minimum exchange rate of CHF 1.20 to the EUR. According to the Cyprus Central Bank, Swiss Franc loans summed to nearly €3.2 billion in November 2014 compared to €1.6 billion in 2006. In some cases borrowers have seen their monthly loan repayments double or triple in value due to the strengthening of the Swiss Franc and the high interest rate and margin being charged by the Cypriot banks. Many representatives of the borrowing side claimed that they were mis-sold Swiss Franc loans to buy property in Cyprus and believe that a fair and sensible solution must be found in relation to lending problems of foreign currency loans.

The real estate investors have to deal with currency risks in addition to all other real estate related risks they already have to cope with. Major investment trusts, REITs and other experiences investors are familiar with the currency risk issues, however, individual buyers are often misguided with the short-term advantages of the very attractive investment opportunities and do not realise the risk connected to the currency exchange rates when investing in the property overseas in the foreigner currency.

Hedging currency risk in a cross-border investment is essential part of any investment strategy. According to the Colliers Global Investor Sentiment Report for the year 2013 - "risk aversion, secure income and wealth preservation will remain a key part of the real estate investment strategy for many funds and, particularly, high net worth individuals and private buyers".

The aim of this study is to identify if the investors in Cyprus property face the currency risk, what tools they use to approach this risk and how this risk does affect sales to foreigner buyers.

1.1 Background.

Real estate investments as an industry has always been a domestic field, however, following many other asset categories, investments in real estate expands to the international level. Historically the real estate market has been slow in following the globalization of capital markets and cross-border investments; nevertheless, it reached a

point where the foreigner real estate investments lead to other investment products as well as to supporting organizations which consecutively smooth the progress of other international capital flows (Geltner et al., 2007). The financial market expands and becomes more transparent. Investors' interest in international property markets is on the rises due to the growing need to increase returns through expanded investment opportunities and diversification. Investing in foreign countries can potentially lead to higher returns than investing in the domestic market, moreover, one should consider that investing in an emerging market brings higher returns rather than in a well-developed market with the limited growth. International investments diversify the portfolio and provide the opportunity to transfer the knowledge of development or portfolio management. Although, it is worth mentioning, that the international real estate investors have shortage of local market knowledge and there are also different costs that might be difficult to regain.

This research will focus on direct investment in Real Estate. This can involve buying land and developing a real estate asset, purchasing a portion or all of a completed building, providing some form of real estate, purchasing shares in a real estate company. The individual investors often do not have the time, resources and knowledge to be able to fully replicate public capital markets strategies or to do so as effectively as professional investment vehicle managers. On the other hand, direct investment structures allow the investor the maximum control over the negotiation of terms and conditions of an investment and often over the investments themselves. This can often put direct investors in a position to face and pro-t from the greatest amounts of transaction risk. (Bifani, Darin, 2012)

Investing in real estate is quite different to financing other assets, for instance, stocks and bonds generally due to the trading frequency, liquidity and uniqueness of the asset. The performance of an international real estate investment can be critically affected by currency fluctuations. One of the major market risks when investing in countries with another currency is the currency exchange risk, also referred to as currency risk and foreign exchange rate risk. Investments that are denominated in foreign currencies have two dependent aspects: profits in domestic currency and exchange rate volatility (Nathan, 1999). According to Shapiro, 2001, p.33 the currency exchange rate is "the price of one nation's currency in terms of another". Exposure to currency exchange risk occurs when an investor chooses to invest in an asset funded with another currency than the domestic. The risk comes from floating exchange rates in varied currencies that can

affect the value of an asset (Bos et al., 2000). Showers (1988) specified that incorporating exchange rate fluctuations into the analysis of an international investment can substantially alter the expected risk and return characteristics. With fluctuating exchange rates, the value of a profitable real estate investment could be adversely affected when converted to an investor's domestic currency. The risk should be recognized and incorporated into the international investment decision.

According to institutional economics theory, the attractiveness of a country as an investment destination depends on its socio-economic environment and institutional framework. Therefore, one possible explanation for the long-term aberration from expected values are market entry barriers encompassing a broad range of institutional, legal, and real estate specific risks. (Real Estate Finance (Aspen Publishers Inc.), 2015). Political and the currency risk increase when making international investments and there might appear obstacles of various discriminating regulations (Geltner et al., 2007). Baum and Hartzell, 2012 suggested that a level of the currency risk has been reduced in Europe since the introduction of the Euro and it is easier now for a foreign investor to enter the Euro-zone.

1.2 Purpose of the study.

The purpose of this thesis is to analyse the impact of foreign currency exposure on the risk characteristics of property purchase in Cyprus; to find out how, if and why real estate buyers hedge this risk in Cyprus; and to propose optimal risk hedging tactics.

1.3 Importance of the study.

Any international investment is accompanied by currency risk. An extensive literature is available on the subject of dealing with exchange rate management. The majority of studies made in this area focuses on traditional financial assets, such as stocks and bonds, which are the investments held for a rather short period of time. The international real estate investment has long been a feature of property markets.

In recent years, overseas real estate investment has generated both academic and professional interest. According to the Cyprus Land Registry Department statistics, the substantial number of Cyprus property is sold to the overseas buyers (terms "overseas buyer" or "foreigner investor" refer to British and non-EU citizens). Proposed various tax incentives attracted significant amounts of new foreign investment to Cyprus. Furthermore, Cyprus naturalization program that allows obtaining of European

citizenship via purchase of the property in the amount of €5 000 000 euro as individual applicant or € 2 500 000 through collective application, has substantially boosted Cyprus economy and enticed many wealthy foreign nationals.

Cyprus offers unique benefits to foreign investors due to the various incentives. However, it is not researched yet whether Cyprus represents a significant cross border opportunity for investor when it comes to safe and profitable real estate investment in the context of the practice of currency risk management. To fill up the gap, the above study is aimed to identify if the currency fluctuations influence overseas buyer and investor decision when acquiring property in Cyprus.

1.4 Research questions.

The research will cover foreigner investments in Cyprus property with a focus on currency risk management for investors and individual buyers. According to the last few year's global financial crises and the volatility on the market, it is even more interesting to see how and why different real estate investors act in a specific way in this matter. The aim is to find efficient currency risk insurance, probably through combining managing approaches from both investors and theoretical base of the discussed subject. The purpose is to explore to which extent international real estate investors in Cyprus tend to recognize currency exchange risk.

The research above focuses on the following issues:

- Currency risk and specifically risk in real estate market
- Currency risk management within real estate investment in Cyprus
- Foreigner investment in Cyprus property market in local currency
- Foreigner investment in Cyprus property via loans in foreigner currencies

The research questions have been framed to cover the aim and purpose and to give an overview and understanding of the subject:

1. How do the foreigner investors perceive the different risks?
2. Does the currency risk play a decisive role when investing in Cyprus real estate?
3. Are there different ways of approaching these risks? Is there a way to increase the effectiveness in handling these types of risk?

1.5 Scope of the Study.

The study focuses on the real estate purchase by overseas buyer and investor and the currency fluctuation risk when acquiring real estate in Cyprus in the scope of previous 5 years.
Research analysis has been carried out interviewing local real estate agents and agencies, developers and solicitors.
The questionnaire has been distributed among the respondents from the following countries: UK, Russia, Ukraine, China, Egypt, Syria, and Israel.

1.6 Outline.

The outline of the study is standardized. The paper consists of five chapters, which are as follows:

- Chapter 1, Introduction – background and justification of the research purpose.
- Chapter 2, Literature Review – theoretical framework of the research. Discussion on real estate and risk, risk hedging technics.
- Chapter 3, Research Methods – discussion of the research methodology and its limitations.
- Chapter 4, Research Findings – results of the research analysis and discussion on the findings.
- Chapter 5, Conclusions – summary of the research findings, conclusions and recommendations on the subject.

The list of the references and appendices is provided at the end of the research paper.

2. Literature Review

In the last decade the cross-border property investment has experienced a remarkable growth. This trend is not an unusual phenomenon and is in fact mirrored by other assets such as equities and bonds as well as international trade patterns and foreign direct investments. The substantial increase in international capital might have many explanations, for instance: the availability of suitable investment vehicles; technological advances; internationalization of the real estate industry; and increasing advantages for large investors of capital. A possible reason for the general trend towards an internationalization of real estate investments is the parallel expansion of indirect property investment (Fuerst, Milcheva, Baum).

The purpose of this section of study is to explore real estate in terms of investment, to examine risk concept, risk types and risk hedging technics in the context of property market. The following forms a theoretical basis of the present study and allows consequent building of the practical analysis framework.

2.1 Real estate market.

According to the S.V.Grinenko (2004) the real estate market is the mechanism which combines the interests and the rights of property buyer and seller, and establishes property prices. The real estate market and its level of development are characterized by the development of the national economy.

E.I. Taraskevic (2011) also considers that the real estate market is an essential element of any national economy. He claims that the real estate assets as such should belong to merchandise category. Taraskevic emphasises that a close correlation exists between the real estate market, the attraction of financial capital and the use of resources in this field.

The real estate market has a great impact on all aspects of life and activities of people, carrying a series of general and special functions such as:

- One of the main features of the market is to establish the equilibrium price at which the purchasing power corresponds to the supplied volume.
- Commercial purpose is to recognize the value and use-value of the property and make a profit on the invested capital.
- Redevelopment function – helps to eliminate uncompetitive and weak market participants, inefficient bankruptcy.
- Informative function - a unique way to obtain and distribute generalized and objective information that allows buyers and sellers of real estate freely, knowingly make a decision in their favour.
- The intermediary function is expressed in the fact that the market acts as a broker and the meeting point for many independent and economically marginalized as a result of social division of labour buyers and sellers. A connection is established between the buyer and the seller. The market also provides an opportunity to select an alternative partner. There are professional real estate intermediaries: realtors, appraisers, agents, brokers, insurers, mortgage lenders, and other persons providing services to stakeholders.

- Enabling function, eventually takes the form of promoting economic profit, productive use of scientific and technological progress in the construction and use of immovable property.
- The investment purpose - the real estate market provides an attractive way to maintain and increase the cost of capital.
- Social function is manifested in the growth of labour activity of the entire population, increasing the intensity of labour of citizens seeking to become owners of apartments, land and other capital and prestigious property units. The social stratification is typically emerging through the possession of the real estate.

(S.V. Grinenko, 2004)

2.1.1 Real estate as an asset

According to the S.V. Grinenko, 2004, real estate as a product is the object of transactions satisfying various real or potential needs and having a certain qualitative and quantitative characteristics. Each real estate property is unique through its geographical location, its emplacement, usage value, dimension and financing form. Any property represents a summation of physical, economic, social and legal characteristics, each of which may, in appropriate cases, act as the main (determining) depending on situations. The essential characteristic of property is its proposed or permitted use. The main features include:

- Geographic characteristics reflect the concept of physical (technical) features of real estate: construction structures and materials, size, location, soil fertility improvement, environment and other parameters.
- The economic concept involves considering real estate from the investment perspective - effective and reliable tool for generating income. Basic economic elements of real estate - the cost and the price - primarily arise from its utility, the ability to meet the different needs and interests of the people.
- On the legal level property includes a set of public and private rights, established by the state, taking into account the peculiarities of the domestic and international standards.
- The social role of the real estate is to meet the physiological, psychological, intellectual and other human needs.

The real estate should be viewed as an economic category that expresses its essence, acting as a national wealth and capital. These features are interconnected, act in unity and, at the same time are inconsistent, which should be taken into account, especially during the transition of the economy.

2.1.2 Real estate as an investment

The real estate market became lately an interesting alternative for potential investors. Investing in buildings and land ensures the capital a good a long time protection against monetary erosion.

Conventional investable properties include retail, office, apartments, hospitality and industrial properties. (Chinloy Peter, Baker H. Kent, 2014).

The term "real estate investor" can carry following meanings: individual and institutional investors: insurance and investment companies; pension and mutual funds; commercial banks engaged in mortgage lending etc.

Income from investments in real estate may take the following forms:

- Future cash flows with periodic character;
- Increasing the value of real estate assets at the expense of acquiring new facilities, the development of the old, or changes in market prices for real estate;
- Proceeds from the sale of the real estate.

An increasing number of investors are requiring a strategic balance between expected returns and perceived risks associated with investment options.

One of the valuable features of real estate is that it produces fairly consistent total returns that are a hybrid of income and capital growth. In a manner, real estate has a coupon-paying bond-like component in that it pays a regular, steady rental income, and it has a stock-like component in that its value has a tendency to change. Real estate may also offer the benefit of inflation hedging, as some real estate leases contain provisions for rental reviews. In addition, some types of real estate have a low correlation to other asset classes, offering portfolio diversification benefits.

The real estate properties have a reduced liquidity degree because they involve complex procedures of transfer of the right of property and transactions with large amounts of money. However, the high value of the real estate properties takes time to analyse the investment pros and cons, and this leads sometimes to the missing of opportunities.

2.1.3 Direct real estate

Direct real estate investment suggests that the investor acquires, manages and maintains a property him/herself. It means that the investor caries all the risks involved in the purchase of the real estate.

The advantages of the direct real estate investment are predominantly predictable secure long-term cash-flows from the rental of the asset, and exposure to the real estate market cycle. The direct real estate investment is appealing to investors because it provides a high income yield in comparison to other asset classes, and is often less volatile in pricing.

The cons of investing in direct real estate are associated with the liquidity and management costs. Direct real estate investments are generally made on residential real estate market, as it is beyond the reach of most individual investors to buy an office building or a commercial centre, mainly due to the higher amounts of funds required. It is also complex to calculate the performance of the real estate since the specific property kind transactions are irregular. Moreover, the real estate is rather expensive investment which makes it difficult to diversify both within the real estate market and with other assets.

The pension fund Tredje AP-fonden in Sweden suggest that there are significant reasons to invest in direct real estate including:

- the rent income is correlated with inflation which gives an inflation security,
- the diversifying characteristics and the limited drawdown, which is the difference in value from highest to lowest value on fluctuations (Hellström, 2013).

However, very few investors can afford to buy a well-diversified portfolio of direct property due to the high costs involved, particularly if they are investing on an international scale therefore, they have to rely on indirect routes.

2.1.4 Indirect real estate

There has been a recent boom in the number and value of property funds, and investing in unlisted real estate instruments has become a progressively regular route to achieving cross-border real estate exposure.

Indirect property investment assumes investment to be made in a product that invests in property - meaning investor is not financing the property directly, therefore, avoiding the downsides associated with the investment in direct real estate and reducing administrative expenses for setting up own organization. This may include illiquidity

and high transaction costs. Indirect investment in real estate gives an investor an opportunity to buy a real estate through buying shares in a publicly quoted property company or purchase of units in a property fund, contributing to a pension plan owning a property portfolio (Chong,Krystalogianni, Stevenson, 2012)

Indirect real estate investments are divided in to two subcategories: (1) listed and (2) unlisted investment vehicles.

The investment in listed investment instruments means purchase of the listed property securities. This can be property companies, real estate operating companies and real estate investment trusts, exchange-traded funds and mutual funds (Baum & Hartzell, 2012). Listed real estate is openly traded and when the market environment is normal, is liquid.

The other major route for investors seeking a real estate exposure is the unlisted indirect real estate investment. It refers to pooled funds which invest in properties on behalf of a number of investors and which are not listed on a stock exchange. Unlisted indirect real estate investments are illiquid and can be separated into two classes: (1) closed-ended and (2) open-ended.

Funds that are closed-ended collect capital from investors before the investment. Cherkes et al. (2009) and Deli and Varma (2002) suggest that closed-end funds may hold less liquid assets and maintain lower cash positions than open-end funds. Closed-end bond funds offer investors the opportunity to leverage their fixed income investment at very low borrowing rates and are attractive to investors for this reason. (Elton, Gruber, Blake, and Shachar, 2013)

Even though a closed-end fund is less complicated to manage, investors often prefer an open-end structure because it provides the greatest flexibility for entering and exiting the fund. Those types of funds allow the investors to make investments and redemption at whatever time, but there is often an incipient lock-up phase. (Baum & Hartzell, 2012)

2.2 Risk

Risk can be defined as the uncertainty of the future total cash value of an investment on the investor's horizon date (Choudhry, 2011).

There are different forms of financial risk that are relevant to the property investments, such as: credit risk, concentration risk, market risk, interest rate risk, currency risk, liquidity risk, refinancing risk, operational risk, legal and political risks, profit risk etc.

The main concern when considering risks of the investment is the downside impact that it might have on the investment. The value of the asset or investment portfolio may significantly change if any of the market factors changes. There are four main market risk factors: equity pricing risk, interest rates risk, foreign exchange rates risk and liquidity risk.

Various methods are used to asses a risk of the investment project. The most common of these include:

- method of adjusting the discount rate of risk;
- sensitivity analysis of performance criteria;
- method of "what if" scenarios;
- analysis of the probability distribution of cash-flow payment;
- a decision tree;
- Monte Carlo simulation;
- critical value approach.

A widely used quantitative way to measure risk exposure is value-at-risk (VaR). VaR approach is used measuring the quantity of capital a company could generate or lose if the certain asset varies in its value. Although it is used to measure the probable profits, it is usually used when assessing the risk exposure.

It measures the instability in underlying values and the portfolio's sensitivity to fluctuations in those values. When using the VaR method it includes three essential factors: (1) a confidence interval, (2) a holding period and (3) a time horizon. A VaR number can be used for either a portfolio or a single asset (Kevenides, 2002).

2.2.1 Currency risk

Currency risks are part of commercial risks, which are subject to the participants of international economic relations. It is the risk of losses when buying or selling foreign currencies at different rates.

Currency risk, or the risk of foreign exchange losses associated with the internationalization of the banking operations, the creation of transnational (joint) of enterprises and banking institutions, and the diversification of their activities and represents the possibility of losing money as a result of currency fluctuations. (Kotelkin, 2004)

A key factor characterizing any currency is the degree of confidence in the currency of residents and nonresidents. The change in exchange rates in relation to each other is due

to many factors, for example, it might be a result of changes in the intrinsic value of currency, constant overflow of cash flows from country to country, speculation, etc.

The modern economy requires that market participants' high level of professionalism, flexible strategy of behavior, long-term forecasting of financial results, and a quick and adequate response to the changes.

There is the following classification of currency risks:

1. Operational currency risk.

Operational risk is mainly related to trading activities, as well as cash transactions on financial investments and dividend (interest) payments. Operational risk is subject to both cash flows and profit margins.

This risk can be defined as the ability to receive less profit or suffer losses as a result of the direct effects of exchange rate changes on expected cash flows.

Operational risk can be reduced if the currency (or currencies) revenues correspond to the currency (currencies) costs. (Krasavina, 2005)

2. Translational currency risk.

This risk is also known as off- balance sheet risk. It is believed that the off-balance sheet risk arises when there is an imbalance between assets and liabilities denominated in foreign currencies.

Attempts to determine the degree of translational risk cause a lot of controversy, mainly due to the different accounting methods used. (Krasavina, 2005)

3. Economic exchange risk.

Economic risk is defined as the probability of adverse effects of exchange rate changes on the economic situation of the company, for example, the possibility of reducing the volume of trade or change the price of the factors of production and finished goods compared to other prices in the domestic market. The risk may arise due to the changes in the severity of competition on the part of manufacturers of similar products, and from the manufacturers of other products, as well as the commitment to change consumer specific brand. The economic exchange risk may have other foundations, for example, the government's response to changes in the exchange rate or the wage restraint as a result of inflation caused by the depreciation of the currency. (Pivovarov, 2008)

The currency risk is higher than the property risk since the volatility on the real estate market is lower than the changes in exchange rates.

This risk decreases because countries merge into blocks, such as the Euro-zone where there is no currency risk. Even though the currency risk decreases within blocks, it will still exist between blocks (Geltner et al., 2007).

2.3 Risk assessment

In economic literature, different terms are used to quantify the risk. These include: the degree of risk level, the cost, size, and the measure of risk. Risk is proposed to measure in absolute terms, such as in EUR or as a percentage.

The modern approach to the assessment of the currency risk involves two different but complementary methods: the method of evaluating "the value at risk" (Value-at-Risk, VAR), based on an analysis of the statistical nature of the foreign exchange market, and the method of analysis of the sensitivity of the portfolio to changes in market parameters - stress testing (Stress or Sensitive Testing).

There is a summary of other commonly used risk measurement approaches that are used by the risk analysts and investors:

2.3.1 PPP (Purchasing Power Parity)

PPP is a relationship between inflation rates and spot currency exchange rates. It is based on total supply and demand for the exchange rate and is a theoretical relation between different currencies. This requires a perfect capital market, which means the market is transparent, and transactions costs, taxes, margin requirements and restrictions on short sales do not exist. PPP can be relative or absolute. The condition for the latter one is that prices of goods must be the same in real term in all countries. The relative PPP theory assumes only inflation drives exchange rates to change and ignore the price levels. The relative PPP is seen as less effective, even though research for longer time periods and in countries with high inflation imply the opposite (van Bremen, 1998).

At time t, the log of exchange rate between the native currency and country i ($ln\ S\frac{id}{t}$ = $S\frac{id}{t}$) is equivalent with the difference between the log of the domestic ($ln\ P\frac{d}{t}$ = $S\frac{id}{t}$) and the foreign price level ($ln\ P\frac{i}{t}$ = $P\frac{i}{t}$). This gives an equation which shows that higher price level gives lower exchange rate for the domestic country which in turn makes the foreign currency more costly, $S\frac{id}{t} = P\frac{d}{t} - P\frac{i}{t}$ (Van Bremen, 1998). An easier calculation of this is that the appreciation or depreciation in

$$Currency\ A = \frac{\text{New exchange rate of Currency B} - \text{Old exchange rate of Currency B}}{\text{Old exchange rate of Currency B}}$$

(Shapiro, 2001).

2.3.2 IPR (Interest Rate Parity)

This theory suggests there is a relationship between the exchange rate and interest rate. Appreciation in interest rates = Expected currency depreciation (Baum and Hartzell, 2012).

2.3.3 Fisher equation

The fisher equations imply that anticipated inflation rate and interest rate are positively correlated.

Appreciation in interest rates = Appreciation expected in inflation

(Baum and Hartzell, 2012).

2.3.4 Monetary model

According to the monetary model, the factors that affect the demand and supply of a currency, i.e. the exchange rate, are GDP, interest rates and prices (Baum and Hartzell, 2012).

2.4 Management of currency risks

Assessing and handling exchange rate risk exposure is important for reducing investors' vulnerabilities from major exchange rate movements, which could adversely affect profit margins and the value of assets. This section will discuss the various things that can be done to reduce the economic exposure.

2.4.1 Exposure and hedging strategies

More currency exposure gives a higher risk. Once currency risk has been calculated, a decision should be made on the area of the required exposure and ways to reach the desired exposure by using different hedging strategies.

There are four different hedging strategies: (1) fully unhedged, (2) fully hedged, (3) partially hedged, and (4) option hedged. The first three are called fixed benchmarks and the last one is referred as to option-hedged benchmark. The strategic exposure is determined taking into consideration risks, expected returns and correlations of currencies and the chosen hedge ratio, which should give the approve net currency

exposure. Usually, companies with an initial currency risk exposure of only 10% - 15% remain unhedged. Based on historical rates a longer time horizon in the investment gives a lower exchange rate risk. Hedging the currency risk costs money and it has to be first understood whether this is profitable or not (Dalio, 1999).

2.4.2 Active and passive management

Active management in hedging can be seen as a value adding method, i.e. increase the value of the strategic exposure, which is the indexed return (Dalio, 1999). Value can be added both as lower risk and higher return (Nathan, 1999).

The outcome should be measured with respect to the investor's chosen benchmark. There are different ways to add value: (1) technically, (2) fundamentally or (3) a combination of the two aforementioned. The use of historical price to forecast future price relationships is called technical analysis, while the fundamental analysis is a way to discover mispricing through using cause-and-effect relationships (Dalio, 1999). In an active management the hedging is periodically updated because of new forecasts of the currency rates (Nathan, 1999), called dynamic hedge adjustment. Choosing currency manager can be made after deciding on investment beliefs and if the purpose is to add value to the portfolio (Dalio, 1999).

Passive management is inexpensive and requires a low amount of effort. The return will be the same as the indexed return (Dalio, 1999). There are two different passive methods of managing the currency risk: (1) no hedging and (2) full hedging. The possible outcomes when using no hedge are the risk of full currency loss, the chance of full currency gain and everything in between those two. If the currency risk is fully hedged it means the exchange rates do not have any impact on the investment's return (Nathan, 1999).

2.4.3 Currency fluctuations on rent

It is cheaper and easier to hedge a well-traded currency than a less frequently traded currency. The last one can be seen as unprofitable to hedge. Real estate investors in developing economies often denominate their assets in a so-called safe haven currency (Baum and Hartzell, 2012). A safe haven currency is a currency that is historically known to be safe when the world economy is unstable. Examples of currencies that historically have been considered to enjoy safe haven status are CHF, JPY and USD (FXstreet, 2013).

It may be expensive to hedge the currency risk that comes from rents denominated in another currency since it is a recurrent flow of capital and is different from one single transaction. It gets harder to find tenants willing to pay a certain rent when there is a decrease in the domestic currency and the rent is set in another, safe haven currency. The increased costs of higher rent can then be paid by the tenant or the landlord (Baum and Hartzell, 2012). As an example, this problem occurred in retail properties in Poland in 2009. The rents were set in EUR and the retail business was making money in the domestic currency, Zloty (PLN). As a result of a decrease in the value of PLN, the tenants had an enlarged rent expense of 40 %. To avoid bankruptcy, retailers even had to close the stores that had the lowest turnover as a consequence of this (Wardroper et al., 2009).

2.4.4 Management/hedging strategies

The risks for international real estate investors are significantly higher than for domestic investors both because of the currency risk, but also other cross-border risks. The currency risk decreases the diversification advantages from having an international spread (Newell and Macfarlane, 1996).

A lot of the literature includes indirect real estate, thus information about direct real estate investments is difficult to find. An argument to have indirect real estate investments as an alternate for direct real estate investments is a study by Eichholtz from 1996 that has concluded these types of investments have some comparable characteristics. Eichholtz made a comparison between real estate investments and assets in stocks and bonds in this particular study. A research was made on both real estate shares and direct real estate investments. The conclusion of this research is as follows, in order to lower the risks, it is more important to diversify real estate shares internationally, as to the opposed usual stocks and bonds. A real estate share's return is in Eichholtz's study believed to be in-between the return of the stock market and the real estate market. This means that the correlation between stocks and direct real estate investments is lower than for stocks and indirect real estate investments. Therefore the abovementioned conclusion of more international diversifying also holds for direct real estate investments. Miller concluded in 2004 that it is known that the correlation fluctuates when the market mature, and therefore some of Eichholtz assumptions are outdated.

According to Bos et al (2002), there are different approaches of managing the currency risk, mainly through hedging and diversification. Ziobrowski and Ziobrowski have made several researches on the subject of hedging the currency risk with a focus on the U. S. real estate market and portfolios. They concluded that currency options should be perceived as a type of insurance against the volatility on the market. Another type of hedging is the use of forward contracts, which as they determine, reduces most of the currency risk, although it is too unsatisfactory to give advantages to all international investors (Ziobrowski and Ziobrowski, 1993, and Ziobrowski and Ziobrowski, 1995).

Another investigation was made on profits when investing in direct real estate in seven countries (Australia, France, the Netherlands, Sweden, Switzerland, U.S. and U.K.) between 1987 and 2001 (Hoesli et al., 2004). In this research both national and international investments were considered, first the unhedged returns and then the hedged returns were analysed . The result shows that real estate should have 5% to 15% weight in unhedged portfolios with diverse assets and this might actually lead to 5% to 10% lower risk. When there is international real estate included in mixed-asset portfolios, the weight should be 10% to 20% and this reduces the risk to 5% to 10%. In hedged portfolios there should be 15% to 25% weight of real estate, which reduces the risk to 10% to 20%. This differs from country to country depending on factors such as correlation between assets; some portfolios should have had more domestic or more international real estate. Having that said, it also has to be considered what is the most expensive; managing the currency risk or actually taking the risk?

Currency risk managers go ahead with the hedging only when the foreign currency value falls, but predicting currency movements is really complicated, maybe even impossible.

A problem for real estate investors is that they should mostly focus on real estate related risks and therefore avoid operations that seem to be speculation on currency variations. However there are a few reasons for not hedging at all: (1) the costs involved, (2) the international efficient frontier is, in the long run, not affected by currency choice, and (3) a wide-ranging international diversification automatically gives currency diversification. The arguments for hedging are: (1) the currency risk adds risk to the total investment, (2) high fluctuation in exchange rate while some investors are searching for a reserved risk-return profile and (3) over time it is getting faster and less expensive to hedge. A natural hedge is debt in the foreign currency and a good diversification is to have the same LTV-ratio in all countries in the portfolio (Geltner et al. 2007).

2.4.5 Diversification

It is most common that investors prefer the local market rather than other markets. This is called home bias and might be more likely for real estate investors, probably due to the local driven demand and supply. The main reason for an internationally spread portfolio is the diversification benefits (Geltner and Miller, 2012). Diversifying currency risk means having assets in different currencies, so when one currency decreases another possibly increases so they balance each other (Baum and Hartzell, 2012). Information costs exist and therefore a trade-off has to be made between these costs and the advantages of diversification. For intermediary investors, the home market is the most strategic investment since the holders of indirect real estate investments can diversify their own investments (Geltner et al, 2007).

Currency overlay is when the currency diversification effects are included in the assessment of a portfolio. After this analysis, the investor decides how much of the remaining exposure that should be hedged (Geltner and Miller, 2012). The currency management, outsourced or in-house, decides on the preferred exposure (Baum and Hartzell, 2012).

Local debt can be used as a natural hedge where positive exchange rates on incoming cash flows give higher outgoing cash flows or the other way around. Since debt is already frequently used when investing in real estate, partly because of the leverage, this is a good and natural method. Leverage is useful for different reasons, from being able to purchase more assets with the same equity to giving higher return when IRR exceeds the interest rate of the liability (Baum and Hartzell, 2012). Debt in the currency the investment is being made is a perfect hedge since the asset equals the debt and the currency risk therefore equals zero (Baum and Hartzell, 2012)

2.4.6 Linear hedging

An agreement to buy or sell a product or service at a certain time and certain price in the future is called a futures contract. The price is determined by demand and supply at the contract deal time (Baum and Hartzell, 2012). Both counterparties reduce or remove the risk, but if there is a gain they will not take part of that either. Future contracts are traded publically and therefore a second hand market exists (Apte, 2010).

A forward contract gives the holder the right, and obligation, either to sell or buy a specified amount and a specific product at a certain price and at a predetermined time in

the future. The buyer has a so-called long position while the seller has short position. Forward contracts are nearly always free of charge.

The difference from an option is that both counterparties have privileges and an obligation. The main difference between futures contracts and forward contracts is that the latter one does not have a second hand market (Apte, 2010).

A swap is a contract between two market actors to switch cash flows, i.e. a bilateral alternative of the forward contract (Baum and Hartzell, 2012). Cross currency swaps are when those cash flows are denominated in different currencies (Apte, 2010) and can exist between currencies that are of the combinations floating/floating, fixed/floating or fixed/fixed (Benhamou, 2013).

A basis swap, also called floating/floating cross currency basis swap, is when two flows of floating currency rates are switched. This might be either in the same currency or cross-currency. Basis swaps are common in the Yen/Dollar market and can be a swap of USD and Libor for JPY and Libor. A basis swap is always floating for floating, which is the difference from a cross-currency swap (Benhamou, 2013).

2.4.7 Non-linear hedging

An option is as mentioned above an entitlement, not a requirement for the buyer to buy or sell an asset. The seller on the other hand is required to buy or sell an asset if the counterpart requests it. There exist several types of options, from futures contracts options to options on options. The most important options to have knowledge of in the area of currency risk are: (1) option on spot foreign exchange, (2) option on currency futures and (3) future-style option. The former one gives the buyer the right to sell or buy a currency at a specified price. The second one is when the underlying asset is a futures contract, which the holder has the right to buy or sell. The third one is a bet on a price of a spot foreign exchange rate where the buyer does not pay the fee when buying the option, but the margins of variation is paid or received on a daily basis (Apte, 2010).

3. Research Methods

A limited amount of research exists on the subject in Cyprus. Real Estate market theories will be conducted mainly from foreign studies and the currency risk management approaches primarily derive from other financial fields.

3.1 Research design

The outcome of this research will be a thesis that presents an overview as well as an analysis of the Cyprus real estate market risks with a focus on the currency risk. First, a historical summary of the different theories of currency exchange market and real estate market in general will be presented, followed by the overseas buyer and local real estate agents, developers and solicitor interviews based on these theories.

The tools to be used to gather information are:

- Analysis - this research theory foundation is gathered by the literature and statistics review as well as by designing questionnaire to collect measurable and comparable data to point out investors and buyers behaviour patterns when buying a property in Cyprus. For the purpose of the study statistical data also will be gathered, generally from Cyprus Department of Land & Surveys and Cyprus Ministry of Interior, CYSTAT, EUROSTAT.
- Questionnaire – will consist of a series of questions and other prompts for the purpose of gathering information from property buyers and investors. Questionnaires allow making a statistical analysis of the responses from the investors. It consists of 15 questions. The questions are close-ended, 5 of those questions provide ordinal scales as the answer options. A four point unipolar scale will be used to measure along one dimension such as from "strongly disagree" to "strongly agree". The aim was to gather information on currency risk management within real estate investment in Cyprus, whether the currency risk is an obstacle when investing in Cyprus property, do clients bear in mind risk when purchasing property, when possessing or after disposal.
- Interviews – reputable real estate agents, developers and solicitor companies were interviewed face-to face, via telephone or e-mail in order to outline main risks that property buyers and investors are cautious of when investing in Cyprus property market. The "other side" of the real estate market, sellers, agents, brokers can provide an important insight in investors' behaviour regarding the currency risk and possible solutions to resolve the risk that buyers face. The downside of selecting this method is complexity to compare the answers from the respondents, although the advantages of the qualitative data analysis are quite immense, therefore this method was preferred.

3.2 Data

The research above will be supported by the data conducted through both the qualitative and quantitative research methods.

The theoretical framework of the research is based on the secondary data, which is gathered through written sources: scientific journals, books, annual reports and other research papers.

Quantitative data shall be gathered via distribution of the questionnaire. This research method will allow obtaining and analysing a great amount of information collected from a large number of people in a short period of time. The results of the questionnaires are quickly and easily quantified and provide scientifically measurable outcome necessary for the research. However, it is claimed that quantitative data lacks validity and does not take into consideration the truthfulness of the responses.

Qualitative data is collected from interviews. The approach is chosen to get in-depth knowledge of the industry within the currency fluctuation context, as well as to analyse the other perspective on the subject from the point of view of the seller or assistant of the purchase of Cyprus real estate. The interviews are composed to capture opinionated outlook on the overseas buyers' patterns when acquiring property in Cyprus.

3.3 Participants

3.3.1 Interviewees

For the purpose of this study, interviews were made with reputable real estate agents, developers and solicitors in Cyprus in person, through email and telephone call.

Real estate and developer consultants have been interviewed with the purpose to review how their clients perceive and approach the currency risk, identify if the currency fluctuation is an issue when deciding on real estate purchase in Cyprus.

Solicitors, as clients' trustees, were also interviewed to explore whether on-the-ground intelligence helps a foreigner investor to hedge currency risk; to determine if the overseas buyers are concerned with the currency fluctuation issue, and if yes, what are the tactics buyers implement or are advised by the lawyers to follow to hedge currency risk.

The interview questions can be found in the Appendix and represent a standard form interview questions to capture personal opinions with lead questions.

3.3.2 Questionnaire respondents

50 respondents from UK, Russia, Ukraine, China, Egypt, Syria and Israel were asked to fill in the questionnaire which can be found in the Appendix.
The group of respondents included: investors, recent purchasers and potential buyers of Cyprus property in Cyprus. Due to the diverse profiles of the respondents, the results of the research can provide a broader insight in the currency risk context of Cyprus property acquisition.

3.4 Limitations

Research is an overview of the currency risk in Cyprus real estate market, a risky venture considering the changes Cyprus has to undergo after the events of March 2013.
An acceptable number of real estate agents, developers and solicitors were interviewed on the research subject, however, their opinion cannot be asserted as industries facts.
The selected respondents who filled in questionnaire were narrowed to 50 respondents from UK and no-EU countries, mainly Middle East, which can be considered as a limitation to a certain extent.

4. Research Findings

The present research consists of two parts: gathering of qualitative and quantitative data via interview of the industry specialist and distribution of the questionnaire among the purchasers and potential Cyprus property buyers. The analysis of which is made and the outcomes are compared.
For this analysis, four trustworthy specialists in real estate industry were interviewed and their short profile and a summary of the key interview points are presented below. The assumptions outlined relate to the current situation in Cyprus property market and are based on the extensive experience of the interviewees. The interview questions are presented in the Appendix I.
50 respondents of different background and origin filled up the research questionnaire that is presented in Appendix II. The results are summarized in the table x in Appendix III. The detailed analysis of the obtained data follows below.

4.1 Interview summaries.

4.1.1. Summary of the interview with Igor Kochetok, sales manager in A. Athanasiou Group in Limassol, Cyprus.

Mr Kochetok has a vast experience in Cyprus property market working past 4 years for A. Athanasiou Developments, which is a leading real estate development and property management company. He has previously worked for many years in real estate agency dealing with resale properties.

Mr Kochetok explains that the majority of his clients are Russian-speaking individual and corporate clients, who either are looking to relocate their family to Cyprus or to purchase a profitable portfolio of properties. In recent years there are many clients willing to purchase property in Cyprus coming from Ukraine and Middle East. The motivation is quite reasonable, people are seeking safety.

According to Mr Kochetok, the haircut events have dramatically influence Cyprus property market. However, the naturalization program that has been introduced recently by Cyprus government has boosted overseas buyer market, which is predominant at this point.

Until this year events in Russia and Ukraine, the currency fluctuation was not an issue when purchasing property in Cyprus. However, ruble crash in the beginning of this year has majorly influenced purchase power of Russian-speaking clients. Many deals were cancelled due to the rather high losses on a side of a purchaser. Clients are more cautious now when transferring funds in euro.

On the other hand, buyers from Middle East and China are less thoughtful about currency fluctuation risks.

Mr Kochetok noted that many corporate clients usually have risk analyst team that deal with risk assessment of offered investment packages. Individual buyers usually seek for solicitor advice when dealing with any risks involved in the property purchase. Sales managers of the company usually leave the expertise to the professionals and are quite careful when advising a client in term of currency risks. This field is rather new to the market mainly due to the political changes in the world.

4.1.2 Summary of the interview with Dimitirs Symeonides, managing director of Veskip Estate Agents Ltd in Limassol, Cyprus.

Mr Symeonides is the founder and a managing director of Veskip Estate Agents Ltd, established in 2006. The agency deals with resale and new property market.

According to Mr Symeonides the only active market in Cyprus at the moment is overseas buyers' market. The majority of Veskip clients come from Russia, Ukraine and other Post Soviet Union countries. In recent years there was interest from Chinese and Arabic-origin buyers. Company deals with individuals and investment companies.

Mr Symeonides mentioned that the beginning of this year has been rather difficult due to the currency fluctuation of rouble. Many clients cancelled their inspection trips and delayed closure of the property purchase deals waiting for rouble to recover. Few clients transferred money from other sources than domestic, in order to avoid high risk of currency fluctuations. The last was quite inconvenient due to the need to provide additional paperwork to Cyprus banks as to prove the source of incoming funds.

Up until this year currency risk hedging mainly referred to corporate purchasers or investors. Due to the political and economic changes on the global scale many individual purchasers started to consider this risk. Unfortunately, these clients do not possess a sufficient knowledge to deal with currency fluctuation risk on their own. Many of Veskip clients ask to refer them to the qualified solicitors and financial advisors in order to complete the purchase of Cyprus property securely. Mr Symeonides believes that real estate intermediaries do not have a necessary knowledge to assist their clients in risk hedging techniques.

Mr Symeonides believes that the recent events in Russia, Ukraine and Greece will change individual purchaser thinking of the currency fluctuations risk. The purchasers will start pay more attention to the currency risk exposure and the ways to deal with it. At this point Cyprus cannot provide a sufficient base for hedging techniques due to the lack of professionals on the island. The fact that Cyprus is a member of Eurozone also plays a major role in countries perception of the currency fluctuation risk.

4.1.3 Summary of the interview with Victoria Christodoulidou, CEO and general manager of Inrealty Real Estate Ltd in Limassol, Cyprus.

Mrs Christodoulidou is a founder and general manager of real estate agency Inrealty, which is based in Limassol. Agency's clientele include both locals and foreigner buyers: Russian, Ukrainian, British and Chinese. Company mainly deals with individual purchasers.

According to Mrs Christodoulidou the currency fluctuation risk was always an issue for British clients, who very often use currency exchange brokers when transferring funds from or to UK. Agency never had any cancelled deals or delayed property acquisitions

with British purchasers as they have the experience and knowledge in hedging instruments.

Russians and Ukrainians, on the other hand, are new to the currency fluctuation risk. This was an issue in the beginning of this year, when rouble crashed and many property owners here in Cyprus dropped their selling prices according to the currency rate with the intention to sell property to European citizens. Many locals took advantage of the currency fluctuations and purchased properties from Russian owners at a reduced price in euro.

The company had to deal with lease issues too. Many Russian tenants were not able to rent properties at the current price and rouble rate. Clients either terminated tenancy agreements or looked for something budget-friendly.

There were also issues once summer season started and many foreigners rented properties on short term basis. In this case a security deposit is paid in cash upon arrival, which was again a problem for Russians who were worried about losing money if they paid deposit in euro. Few clients wished to leave deposits in roubles or set an additional agreement of fixing currency exchange rate on the date of deposit payment and refund.

Company does not advise clients in terms of currency fluctuation risk hedging, however, suggest qualified specialists who can assist client.

There is no doubt that currency fluctuation risk is considered by purchasers, not everyone has expertise, however, Mrs Christodoulidou believes that purchasers will have to adapt and be more sensible in terms of currency exchange rates, fund transfers and hedging the risk.

4.1.4 Summary of the interview with Chrysovalanto Aga, solicitor, compliance officer and client introducer to the banks from Pafos, Cyprus.

Mrs Aga has a 10-year-experience in the legal profession with the expertise in property purchase, company formation, financial and corporate law.

Mrs Aga provides solicitor services to British, Russian, Israeli and Austrian clients in terms of company management, financial restructuring, property purchase in Cyprus and Greece. She mainly works with corporate clients.

According to Mrs Aga, currency fluctuation risk exposure is always a concern for corporate clients. As a solicitor, she advises her clients how to proceed in certain situations in terms of risk minimization. She stresses that the development of a set of controls to monitor a firm’s exchange rate risk and ensure appropriate position taking is

crucial to the cross-border investment firms. The strategies used have become increasingly complicated as they seek to address at once transaction, translation and economic risks, therefore, each case is investigated independently and the set of hedging instruments is tailored for a specific client.

Mrs Aga also notes that there has been a change in how Russian investors and individual purchasers perceive currency fluctuation risk since rouble crash. They are more cautious and choose to keep their funds in euro and preferably in other banks than national.

The recent events in Europe and Russia prove that currency risks grow, and firms have to become progressively proactive in controlling these risks.

4.1.5 Interview conclusions.

The experts suggest that the recent political and economic events effected currency fluctuation risk perception dramatically. Investors and individual buyers are more aware of this risk and consider it when making decision to purchase property here in Cyprus.

The significant role in this change played rouble crash in the beginning of this year. Russian and Ukrainian buyers are now more considerate when purchasing property. However, all the interviewees agree that British buyers are already experienced in handling currency fluctuation risk and do not ask for any assistance from intermediaries involved in the purchase.

The interviews also imply a shared idea of real estate intermediaries' lack of knowledge in applying risk hedging strategies and difficulty to forecast any market perspectives.

4.2 Questionnaire responds analysis.

As it have already been mentioned 50 respondents of different background and origin filled up the research questionnaire. The analysis of the respondents' answers is divided into two research sections – descriptive statistics which includes origin, property ownership and other descriptive data; and inferential statistics that provide an insight in whether the currency fluctuation risk is affecting the decision to purchase property in Cyprus.

4.2.1 Descriptive statistics.

4.2.1.1 Country of origin.

The majority of the respondents come from Russia. Other major national groups participated in the research are British, Ukrainian and Chinese.

Russian diaspora in Cyprus is relatively large. Warm climate, multi-cultural environment, common religious believes, tax incentives for the businesses draw Russians to Cyprus.

The following chart shows the percentage values of the respondents participated in the research according to their origin.

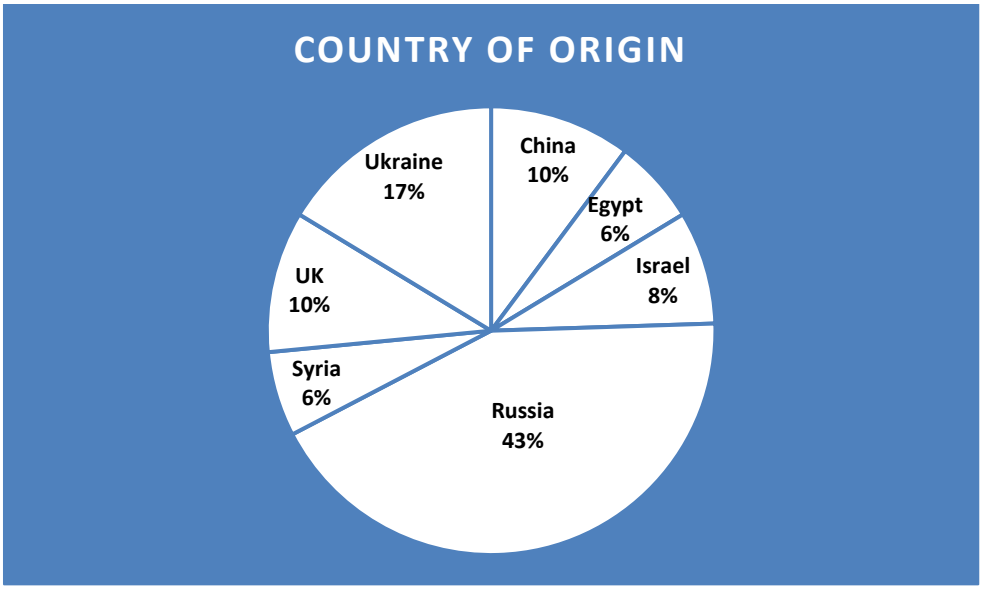

Chart 1, Country of origin.

4.2.1.2 Property ownership.

The following chart shows the division of respondents in accordance to the number of property units they own. Individual buyers who own 1 property in Cyprus, small-scale investor owning 2-4 property units, and large-scale investors with more than 5 properties in Cyprus.

55% of respondents are individual buyers, 25% small-scale investors, and 20% large-scale investors participated in the present survey.

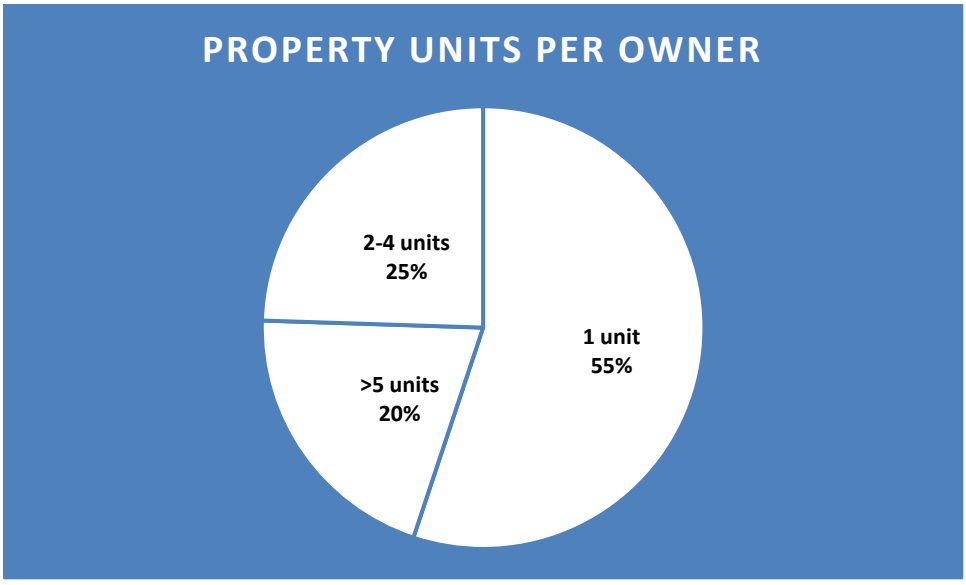

Chart 2, Property units per owner.

4.2.1.3 Purchased property purpose.

The chart below shows what is the purpose of the property/properties respondents purchased in Cyprus.

Even tough, we have previously considered that 55% of respondents are individual buyers, 61% of respondents confirm that property in Cyprus was purchased for the investment purposes. Only 8% of respondents use property as a holiday home and 31% bought property in Cyprus to relocate.

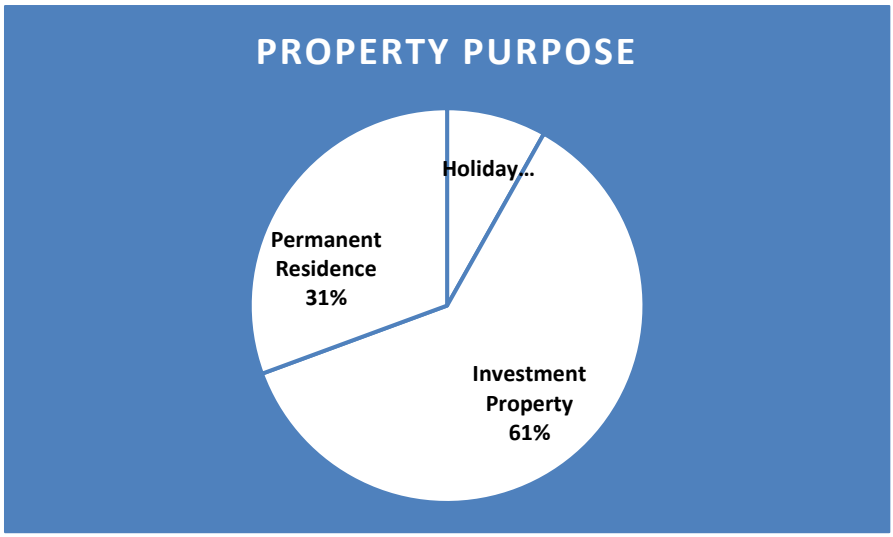

Chart 3, Property purpose.

4.2.1.4 Knowledge of currency fluctuation risk

66% of all the respondents express interest either through experience sharing with friends and family or through individual studing of the risk involved in currency exchange. It can be

assumed that more than half of the respondets can cut through confusion concerning the currency fluctuation exchange and have at least basic knowledge of the processes of dealing with foreigner currencies, which can be complicated at the best of times.

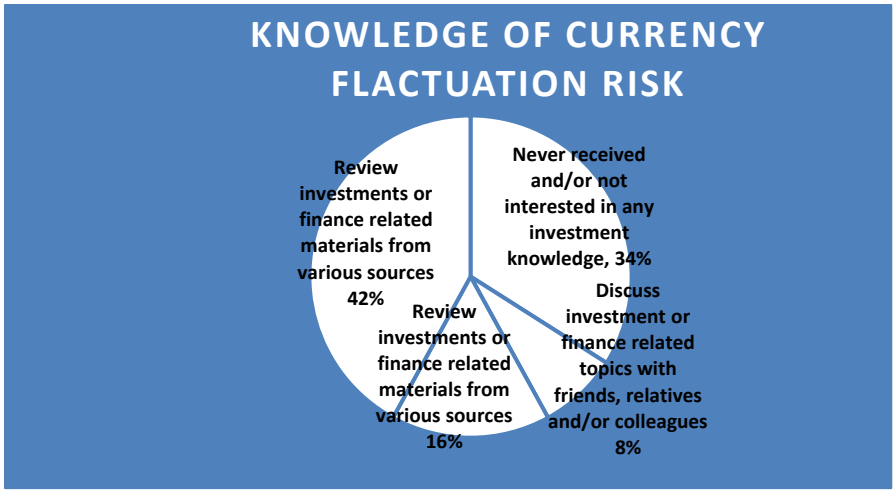

Chart 4, Knowledge of currency fluctuation risk.

4.2.1.5 Possession of other investment assets

54% of all the respondents held or currently hold investments in foreigner currencies, 6% are involved in commodities, investment-linked insurance products, open-end mutual funds, closed-end funds. And 40% of the survey participants keep bank deposits, certificates of deposits and cash.

It is notable, that the respondents can be divided into 2 main groups: those who keep funds in foreigner dominators and those who stick to the deposits domestic currency. With reference to the section of this study "2.4.5 Diversification", we can notice on the chart below the evidence of the so called home bias and diversification.

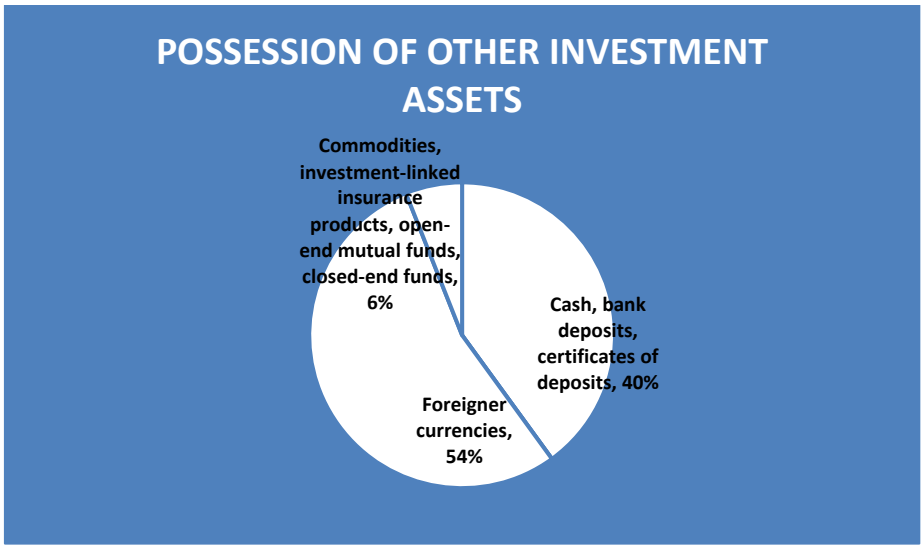

Chart 5, Possession of other investment assets.

4.2.1.6 Investment time-frame

78% of respondents prefer a short-term investment with asset disposal in the time frame of 1-5 years.

It comes as no surprise that investors do not follow strategies with long-term objectives due to the volatility of present global economic situation. The impacts of the Eurozone crisis and political and economic disaster in situation with Ukraine, sanctions against Russia and other war-related problems greatly influence investors' behaviour patterns that currently have a tendency for the short-term investments.

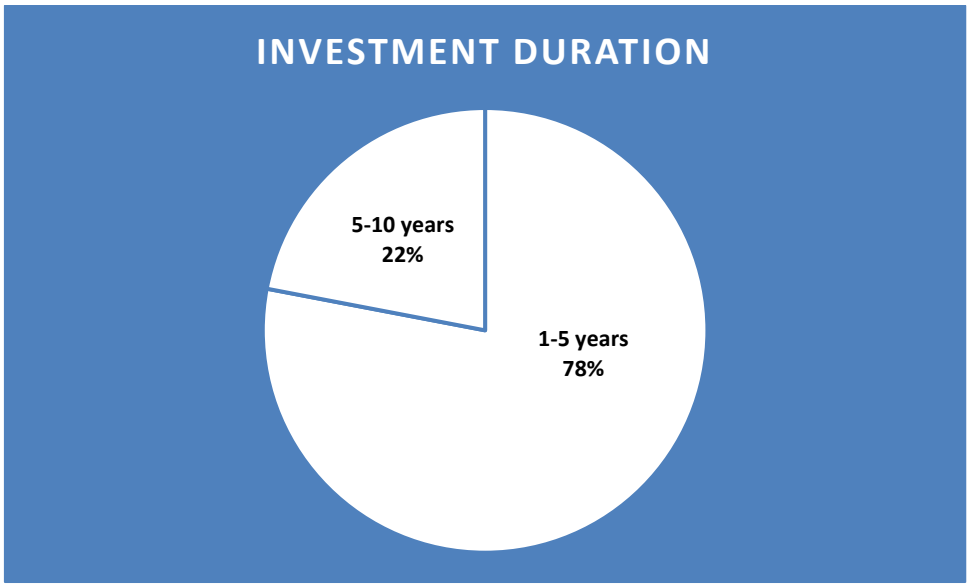

Chart 6, Investment duration.

4.2.2 Inferential statistics.

4.2.2.1 Awareness of currency fluctuation risk

56% of the survey participants are aware of the currency fluctuation risks when purchasing property in Cyprus.

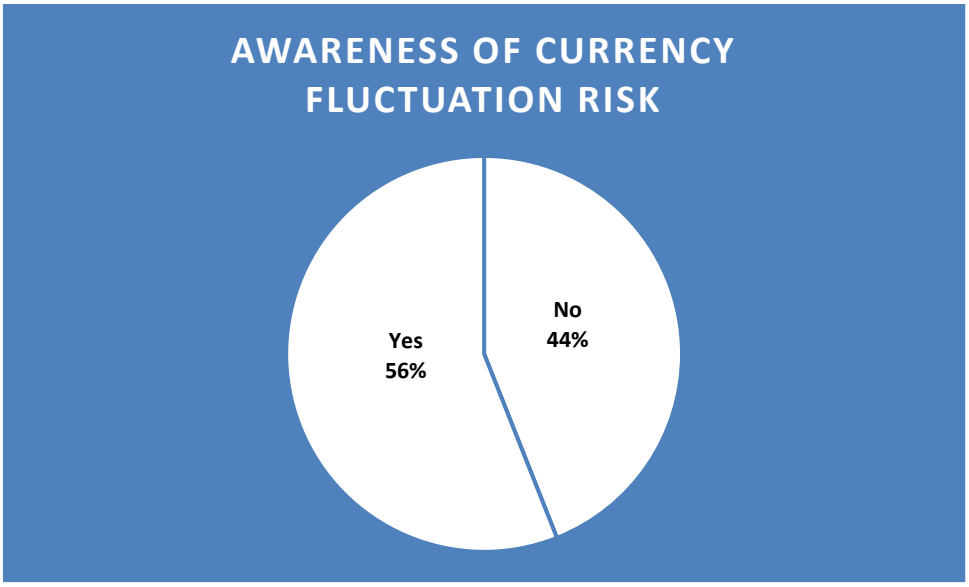

Chart 7, Awareness of currency fluctuation risk.

It is rather important to notice that the Russian, British and Chinese buyers are more aware of the currency fluctuation risks. Most of the respondents who take into consideration currency fluctuation risks never received and/or not interested in any investment knowledge. Are mainly investors, which is not a revelation. However, what is significant, that most of the investors who perceive this risk are the investors with long-term strategy.

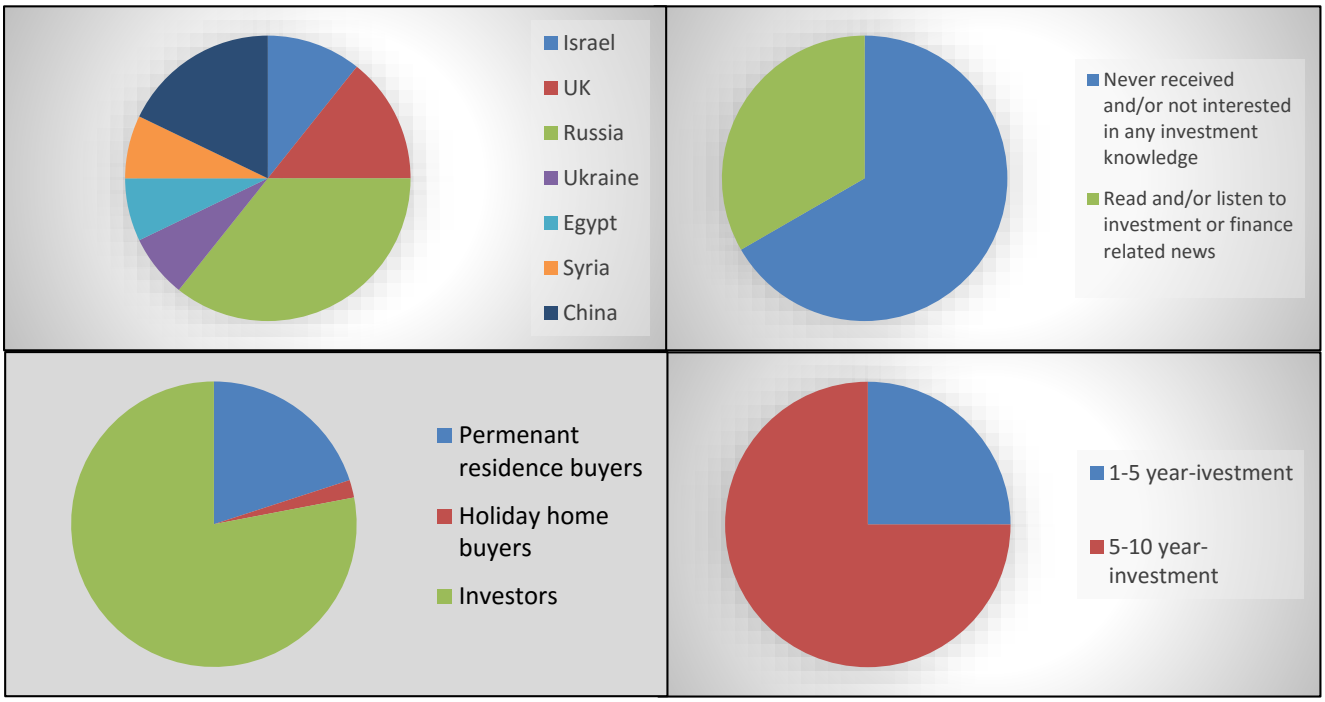

Chart 8, Respondents characteristics according to the risk awareness aspect.

4.2.2.2 Awareness of the currency fluctuation risk when applying for loan in foreigner currency

64% of the respondents do not pay attention to the currency fluctuation risk when obtaining a loan to purchase property in the foreigner denominators, which means that those people who are aware of the risk, 20% of them do not consider is when attain a loan. It should, however, be noted that lots of property purchasers in Cyprus are more concerned with the rather attractive mortgage interest rate, which is substantially lower than, for instance, in Russia or Ukraine. It could be assumed, that the attractive interest rate cancels the risk of currency exchange in the eyes of the property purchasers in Cyprus.

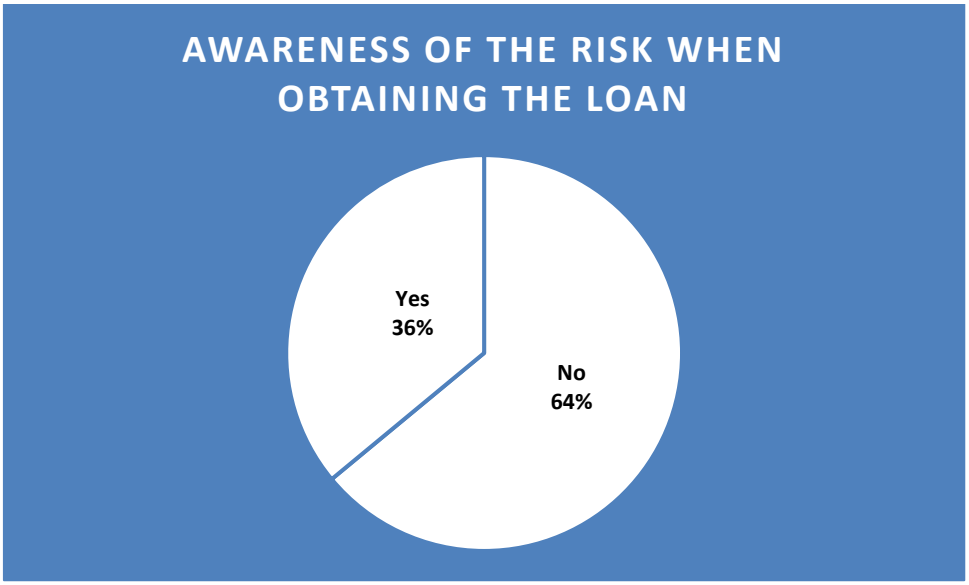

Chart 9, Awareness of the risk when obtaining the loan.

4.2.2.3 Risk influence on property purchase

The present survey shows that foreigner currency exchange risk does not influence the property purchase as no respondents suggested that they delay or void purchase of the property or any transactions that are involved in the process of acquisitions due to the exchange rate fluctuations.

4.2.2.4 Risk hedging

72% respondents do not use any risk hedging techniques, and those who put in place risk vehicles to avoid it, mainly use future contract approach and diversification.

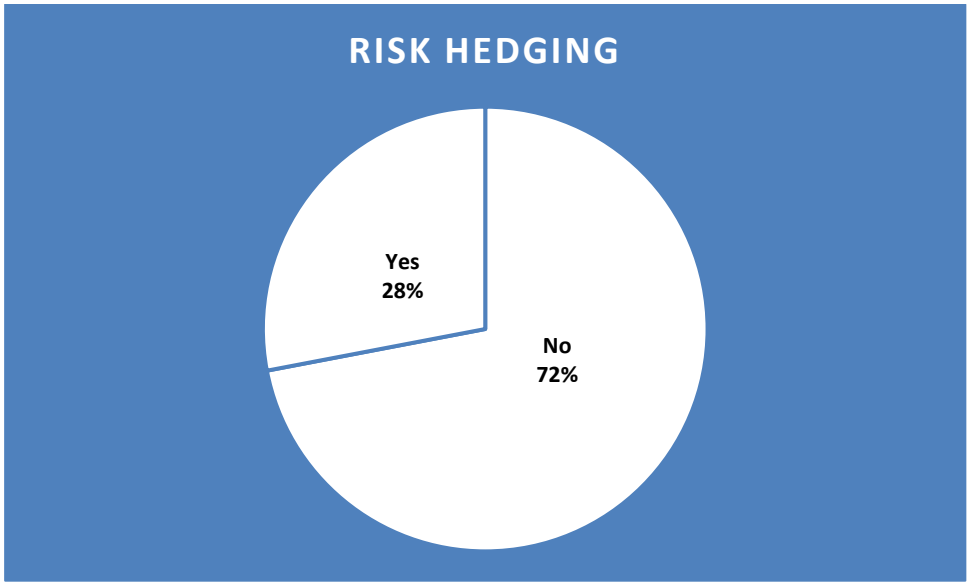

Chart 10, Risk hedging.

Those who implement risk hedging are mainly investors, although, with no knowledge of the investment field. It can be suggested that currency exchange risk hedging carries intuitive sense.

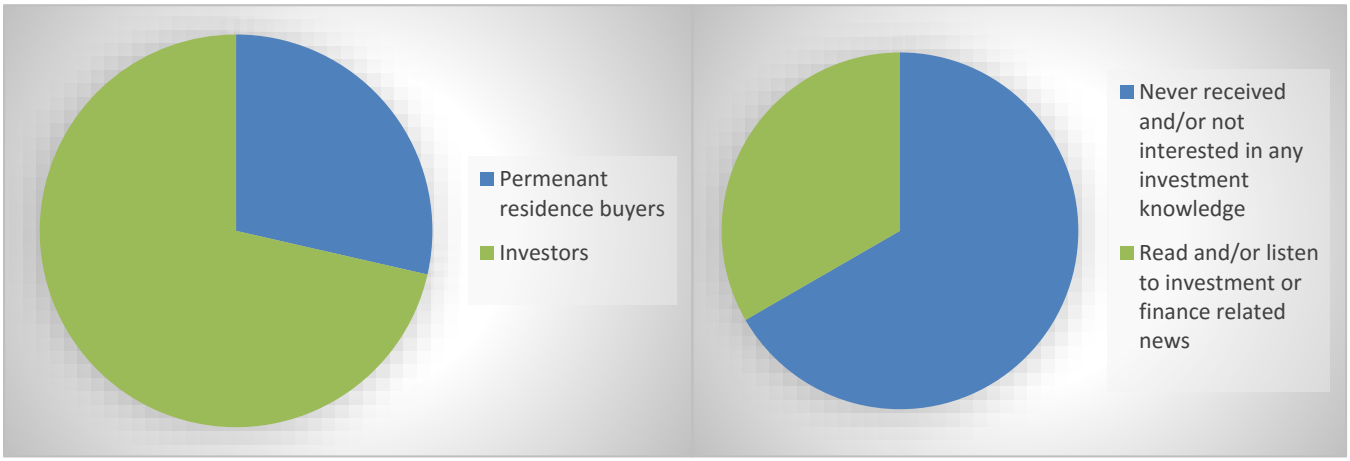

Chart 11, Respondents characteristics according to the risk hedging aspect.

4.2.2.5 Role of risk in property purchase

54% of respondents disagree that currency fluctuation risk plays a major role when deciding on property purchase in other than domestic currency denominators. However, as we have previously discovered 100% of respondent mentioned that there is no influence whatsoever on the purchase decision in general.

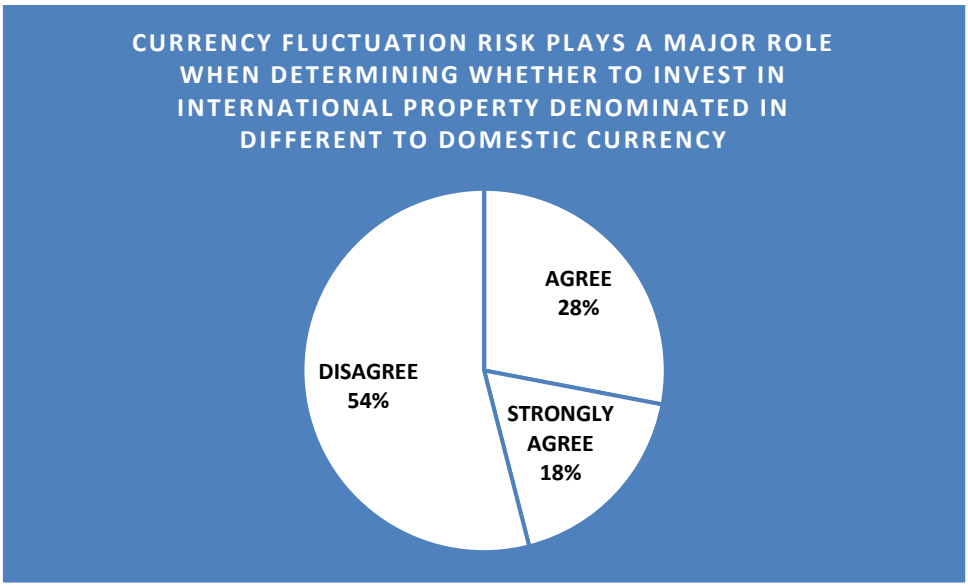

Chart 12, Role of risk in property purchase.

There is a contradiction in the respondents' responses. The reason behind it might be the awareness of the risk in conflict with the uniqueness of the asset or investment attractiveness in terms of revenues which subdues the importance of the risks in general.

4.2.2.6 Small loss in exchange for growth opportunity

100% of the respondents agree or strongly agree to suffer a small risk loss and somewhat larger fluctuations in currency at the moment of property purchase in exchange for conservative growth opportunity. Property purchasers are ready to take the currency fluctuation risk in exchange for higher profits.

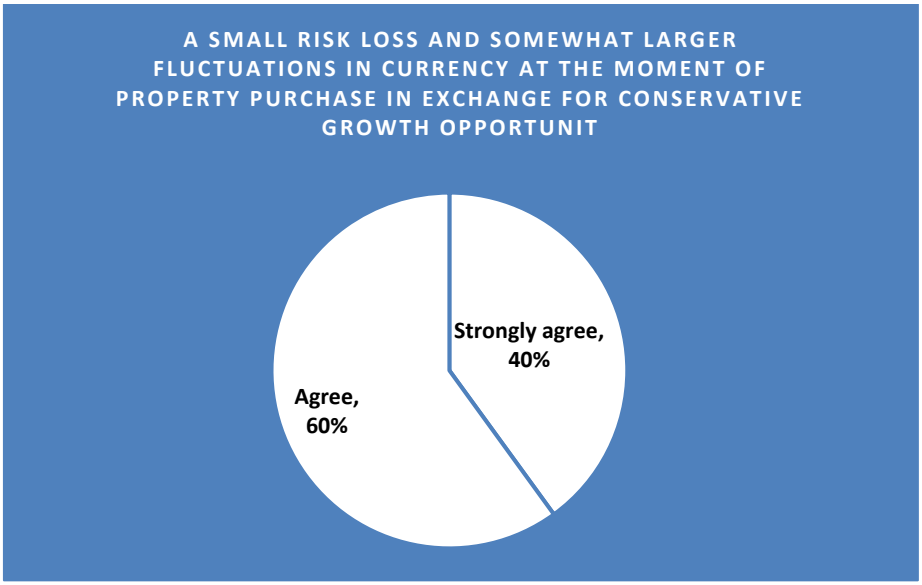

Chart 13, Small loss in exchange for growth opportunity.

4.2.2.7Knowledge of property market intermediaries

62% of the respondents strongly disagree, that real estate market intermediaries should have knowledge of risk hedging associated with currency fluctuations.

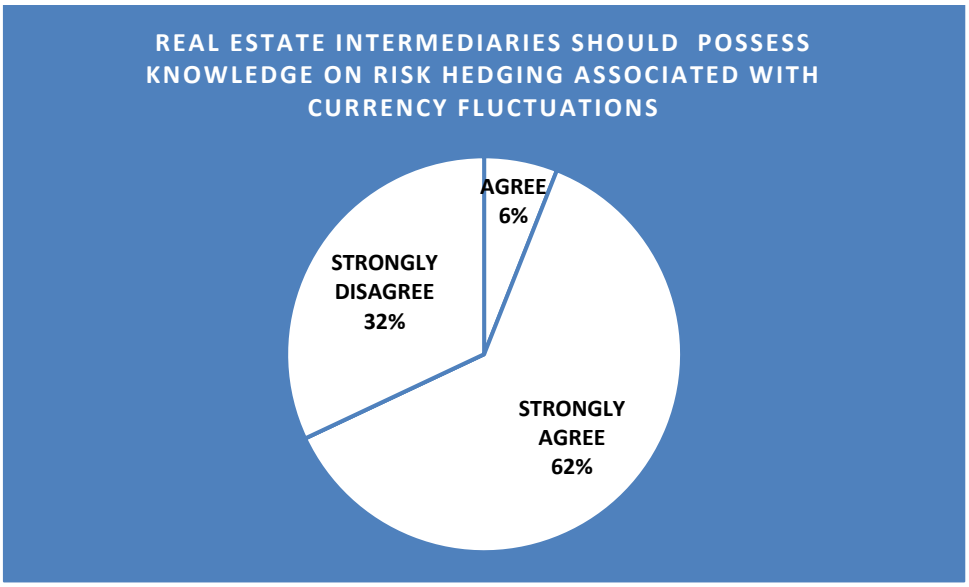

Chart 14, Knowledge of property market intermediaries.

38% of those who insist on real estate brokers and other market intermediaries to have a currency hedging knowledge are primarily residents of Russia, Egypt and Israel,

including both investors and permanent residence buyers. Remarkably, the necessity of intermediary's currency hedging knowledge is demanded by both those who have no knowledge of the industry and those who are educated in the field. It could have been assumed that only those clients who lack the expertise would demand real estate intermediaries to advise them on the hedging techniques. However, both groups wish the mediators to have this specific knowledge.

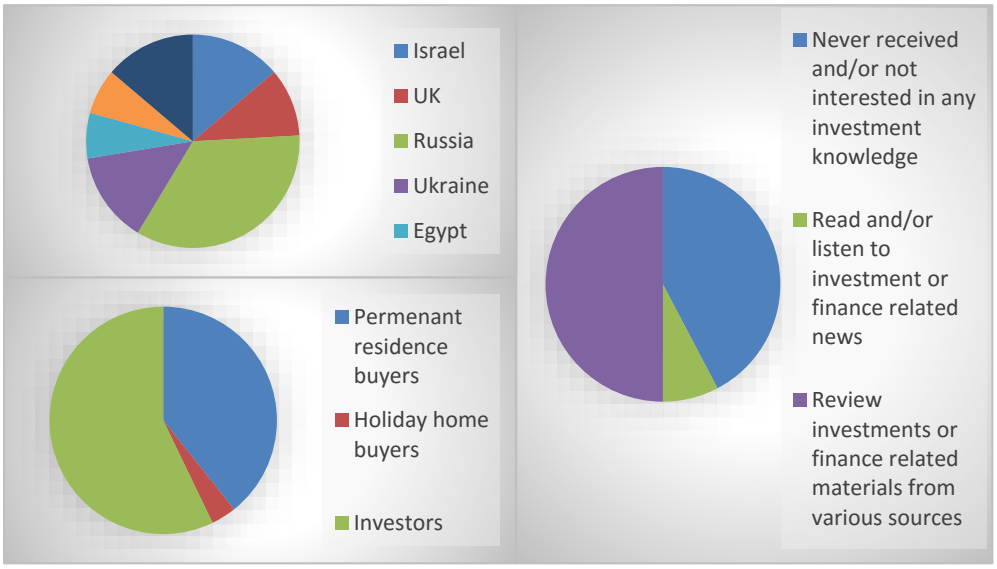

Chart 15, Respondents characteristics according to the risk awareness aspect

4.2.2.8 Cyprus as a member of Eurozone is less risky in terms of currency fluctuation risk

56% strongly agree that Cyprus property market provides safe investment opportunities and decreased currency fluctuation risk due to fact that Cyprus is a member of Eurozone. A common currency of an immense economic region provides property purchasers in Cyprus with the sense of safety to some extent in terms of currency fluctuations risk.

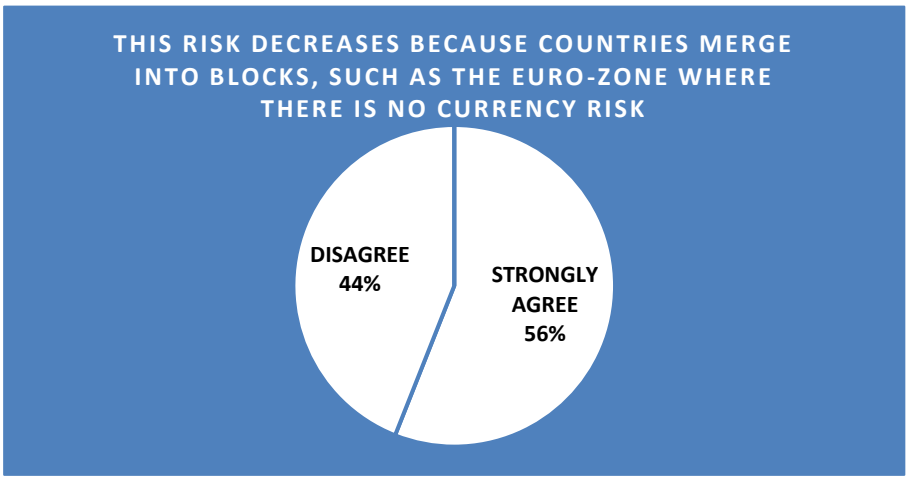

Chart 16, Cyprus as a member of Eurozone is less risky in terms of risk.

4.2.2.9 Risk in Eurozone

As it has been already mentioned, Baum and Hartzell, 2012 suggested that a level of the currency risk has been reduced in Europe since the introduction of the Euro and it is easier now for a foreign investor to enter the Euro-zone.

The opinions of respondents in the survey have been divides into almost equal groups of supporters of the statement that the foreigner currency exchange risk decreases in the country unions or blocks and the adversaries. The results also confirm the outcome of the analysis on the previous category of the questionnaire.

Russian, Ukrainian, Israeli and British property purchasers believe that Eurozone provides conditions of the safe investment due to the decreased foreigner currency exchange risk. The majority of the respondents that agree to the statement above are those who held or currently hold investments in foreigner currencies. They are both investors and permanent property purchasers. The knowledge of the market in this questions does not play a major role, as both experienced investors and individual property buyers with no familiarity with the currency exchange market agree to the statement.

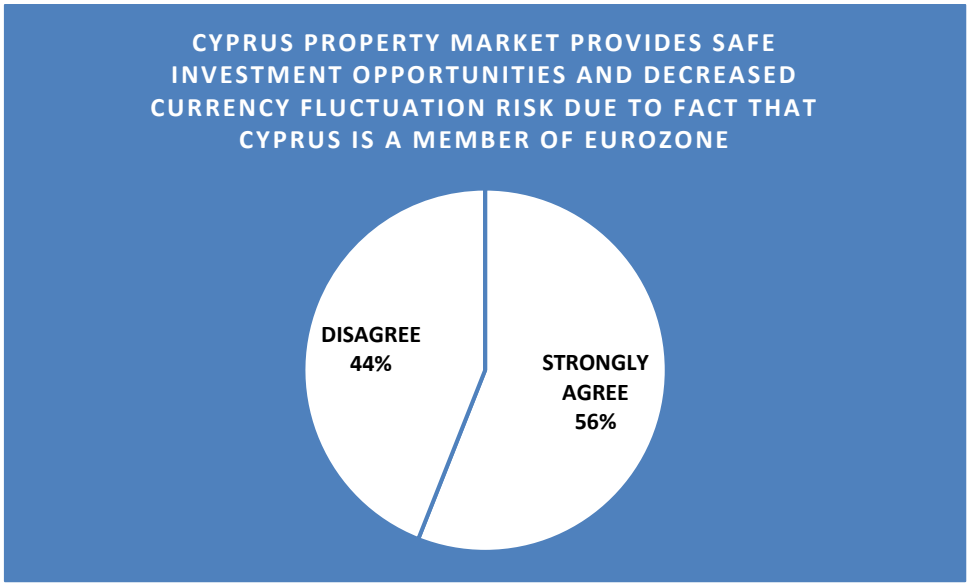

Chart 17, Risk in Eurozone.

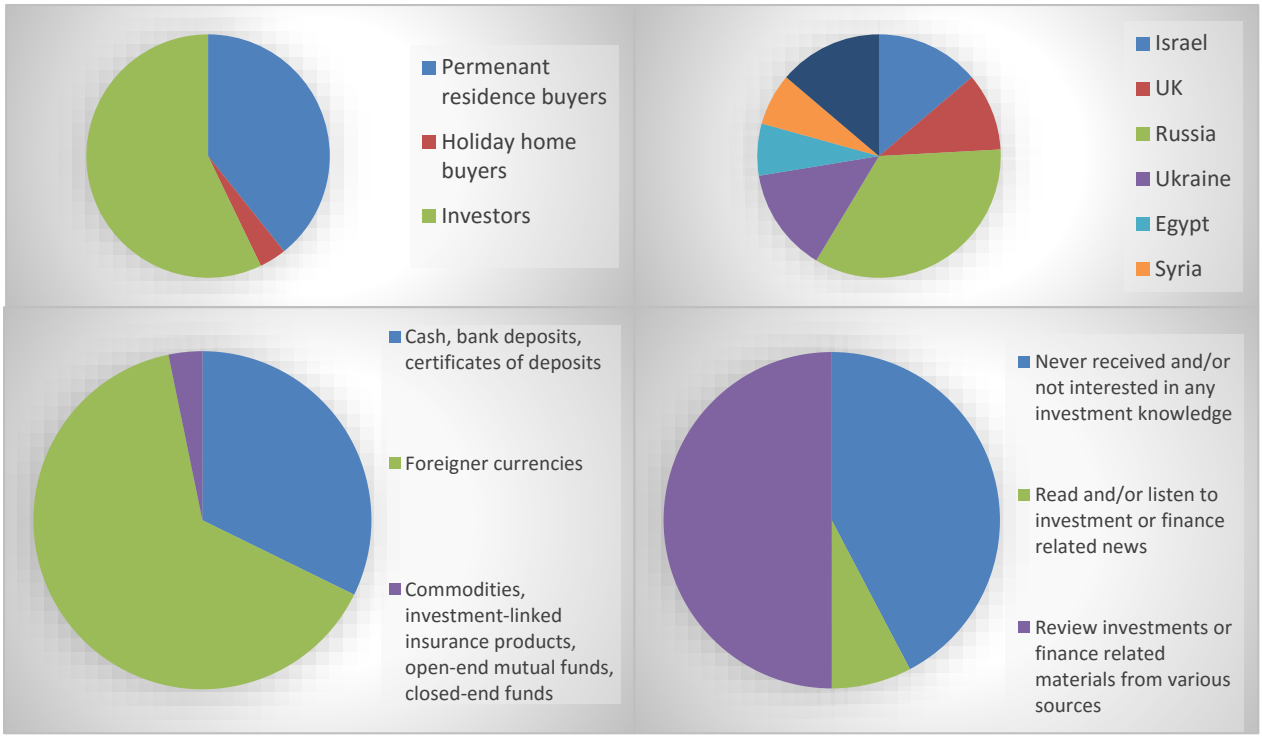

Chart 18, Respondents characteristics in terms of the perception of risk in Eurozone.

5. Conclusions

The present research shows that currency fluctuation risk does not affect a buyers' willingness to purchase property in Cyprus. The hedging strategies used on the market seem to primarily be future contract approach and diversification.

The currency exposure when investing in real estate is somehow different than in many other businesses in the fact that it is both a transaction, and periodical cash-flows and then there might be an exit on an unknown day in the future which make the hedging strategies different in this type of business.

Real estate market intermediaries suggest that in the recent years investors and individual buyers are more aware of this risk and keep it in mind when making decision to purchase property here in Cyprus. The significant role in this change of currency risk perception played rouble crash in the beginning of this year. The interviews also imply a shared idea of real estate intermediaries' lack of knowledge in applying risk hedging strategies and difficulty to forecast any market perspectives.

The risk is well understood by property purchasers; however, it does not affect the property purchase in Cyprus. Most of the property purchasers have a basic understanding of the currency risk; nevertheless, the majority does not use any hedging

vehicles. Most of the respondents held or currently hold investments in foreigner denominators. All the respondents stress the necessity of real estate intermediaries to have expertise in currency fluctuations risk.

It cannot be determined whether respondents agree that the currency risk in Eurozone is reduced due to the use of common currency, as answers between the surveys participants split equally. It neither disproves, nor proves Baum and Hartzell, 2012 idea that a level of the currency risk has been reduced in Europe since the introduction of the Euro and it is easier now for a foreign investor to enter the Euro-zone.

5.1 Future development of the study

The possible future development of this study can be directed with the focus on other European Union country real estate markets, their comparison to Cyprus property purchaser behaviour patterns.

Another side of the research can include historical data on Cyprus property market before the joining of European Union. Comparison of buyers' behavioural patterns when purchasing property in times of Cyprus pounds and in times of Cyprus being a member of Eurozone. However, it is quite challenging to analyse these two periods as they represent two extremes. There was a property bubble in Cyprus before the joining of European Union and today Cyprus is recovering from a haircut events.

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Appendix I

Interview Questions

1. What is your main clientele?

1.1 Private purchasers or investors?

1.2 Where the majority of your clients come from?

2. What are Cyprus property market trends?

2.1 Is the overseas buyer market larger than the domestic market?

2.2 Did the interest from overseas buyers decreased/increased, what are the reasons?

3. Do you think investors and private purchasers consider 3the currency risk when making an investment in Cyprus property?

3.1 If not, why do you think they do not take the risk into consideration?

3.2 Is that an issue in terms of Cyprus market?

4. Do investors in any cases avoid making investments because of the currency risk?

5. If the investor proceeds with the purchase of the property, does he/she use any techniques to hedge the currency risk?

6. Do you have the expertise to assist international investors with guidance on the currency risk?

7. What do you think can be improved about the currency risk management in Cyprus?

8. Future prospective? Should there be any tools created to hedge the currency fluctuation risk in Cyprus?

Appendix II

Questionnaire

Please take a few moments to complete this questionnaire. Your responses will help to address issues of the practice of currency risk management in context of Cyprus property market. Your responses will be kept confidential. This survey will take approximately 5 minutes to complete. Please fill up the gaps or mark with "tick" the appropriate answer.

1) What is your country of origin? _____

2) How many properties have you purchased in Cyprus?
☐ 1
☐ 2-4 units
☐ More than 5 units

3) Reason for the purchase of property in Cyprus?
☐ Holiday home
☐ Permanent residence
☐ Investment

4) What channels have you used or are currently using to obtain investment knowledge (multiple answers are possible)
☐ Never received and/or not interested in any investment knowledge
☐ Discuss investment or finance related topics with friends, relatives and/or colleagues
☐ Read and/or listen to investment or finance related news
☐ Review investments or finance related materials from various sources
☐ Research investment or finance related topics or attend professional courses, seminars

5) Which financial products have you ever held or are currently holding?
☐ Cash, bank deposits, certificates of deposits
☐ Bonds, bond fund
☐ Foreigner currencies
☐ Commodities, investment-linked insurance products, open-end mutual funds, closed-end funds

6) What is your current investment horizon?
☐ Shorter than 1 year
☐ Between 1 to 5 years
☐ Between 5 to 10 years

7) Do/Did you consider currency fluctuation risk at the time of purchase of property in Cyprus?
☐ yes ☐ no

8) Do you consider the currency risk when applying for loans to invest in international property?

☐ yes ☐ no

9) Have you ever voided/delayed the property purchase or any transaction involved due to the currency risk?

☐ yes ☐ no

10) Have you ever used any currency risk hedging techniques?

☐ yes ☐ no

If yes, please specify

_____

_____

_____

11) Do you agree that currency fluctuation risk plays a major role when determining whether to invest in international property denominated in different to domestic currency?

☐Strongly disagree ☐Disagree ☐Agree ☐Strongly agree

12) Do you agree to the statement "I can accept a small risk loss and somewhat larger fluctuations in currency at the moment of property purchase in exchange for conservative growth opportunity and the possibility of more income".

☐Strongly disagree ☐Disagree ☐Agree ☐Strongly agree

13) Do you agree that real estate intermediaries: realtors, appraisers, agents, brokers, insurers, mortgage lenders etc. should possess knowledge on risk hedging associated with currency fluctuations and educate and advise their clients accordingly?

☐Strongly disagree ☐Disagree ☐Agree ☐Strongly agree

14) Do you agree that Cyprus property market provides safe investment opportunities and decreased currency fluctuation risk due to fact that Cyprus is a member of Eurozone?

☐Strongly disagree ☐Disagree ☐Agree ☐Strongly agree

15) Do you agree to the statement "This risk decreases because countries merge into blocks, such as the Euro-zone where there is no currency risk".

☐Strongly disagree ☐Disagree ☐Agree ☐Strongly agree

THANK YOU FOR YOUR TIME!

Appendix III

Summary of the questionnaire responds. Abbreviations. Numerical explanations.

	Question	1	2	3	4	5	6	7	8	9	10	10 a	11	12	13	14	15
Respondent																	
1		Israel	1	P	1	1	1-5	N	N	N	N		A	A	SA	SA	SA
2		Russia	1	H	1	1	1-5	N	N	N	N		A	A	SA	D	D
3		Russia	1	I	3	3	1-5	N	N	N	N		A	A	SA	D	D
4		Russia	1	I	3	3	1-5	N	N	N	N		A	SA	SA	SA	SA
5		UK	>5	I	4	3	1-5	Y	Y	N	N		D	SA	SA	SA	SA
6		Russia	>5	I	4	3	1-5	Y	Y	N	Y	diversification	D	SA	SA	SA	SA
7		Russia	>5	I	4	3	1-5	Y	Y	N	Y	diversification	D	SA	SA	D	D
8		UK	2-4	I	4	3	1-5	Y	Y	N	Y		D	SA	SA	SA	SA
9		Ukraine	2-4	I	4	3	1-5	Y	Y	N	Y	diversification	D	SA	SA	SA	SA
10		Russia	1	H	1	1	1-5	N	N	N	N		A	A	SD	D	D
11		Russia	2-4	I	4	3	1-5	N	N	N	N		A	A	SD	SA	SA
12		Russia	1	P	1	1	1-5	Y	N	N	N		D	A	SD	SA	SA
13		China	1	P	1	1	1-5	Y	N	N	N		D	A	SD	SA	SA
14		Syria	1	P	1	1	5-10	Y	Y	N	Y	future contracts	SA	A	SD	D	D
15		Ukraine	1	H	1	1	1-5	N	N	N	N		A	SA	SD	D	D
16		Russia	1	I	3	3	1-5	N	N	N	N		A	SA	SD	D	D
17		Russia	2-4	I	4	3	1-5	N	N	N	N		A	SA	SD	D	D
18		Russia	>5	I	4	3	1-5	N	N	N	N		A	SA	SD	SA	SA
19		Russia	>5	I	4	4	1-5	Y	Y	N	Y	diversification	SA	SA	SD	D	D
20		Egypt	1	P	1	1	5-10	Y	Y	N	Y	diversification	SA	SA	SD	SA	SA
21		Israel	1	P	1	1	5-10	Y	Y	N	Y	diversification	SA	SA	SD	SA	SA
22		Egypt	>5	I	4	3	5-10	Y	Y	N	Y	diversification	SA	SA	SD	SA	SA
23		Russia	2-4	I	4	3	1-5	N	N	N	N		D	A	A	D	D
24		Ukraine	>5	I	4	4	1-5	N	N	N	N		D	A	A	SA	SA
25		UK	1	I	3	3	1-5	Y	N	N	N		D	A	A	D	D
26		Russia	1	I	2	3	1-5	N	N	N	N		A	A	SA	D	D
27		Ukraine	1	I	3	3	1-5	N	N	N	N		A	A	SA	D	D
28		Ukraine	2-4	I	4	3	1-5	N	N	N	N		D	A	SA	SA	SA
29		Russia	2-4	I	4	3	1-5	N	N	N	N		D	A	SA	SA	SA
30		Israel	1	P	2	1	5-10	N	N	N	N		D	A	SA	SA	SA
31		Israel	1	P	3	1	5-10	N	N	N	N		D	A	SA	D	D
32		China	1	P	1	1	1-5	Y	N	N	N		D	A	SA	D	D
33		Russia	1	H	1	1	1-5	Y	N	N	N		D	A	SA	SA	SA
34		Russia	1	I	2	3	1-5	Y	N	N	N		D	A	SA	SA	SA
35		UK	2-4	I	3	3	1-5	Y	N	N	N		D	A	SA	SA	SA
36		Ukraine	2-4	I	4	3	1-5	Y	Y	N	N		D	A	SA	SA	SA
37		Russia	>5	I	4	3	1-5	Y	Y	N	N		D	A	SA	D	D
38		UK	2-4	I	4	3	1-5	Y	Y	N	N		D	A	SA	D	D
39		Russia	>5	I	4	3	1-5	Y	Y	N	Y	diversification	D	A	SA	SA	SA
40		Russia	>5	I	4	4	1-5	Y	Y	N	Y	diversification	SA	A	SA	D	D
41		Israel	2-4	I	4	3	5-10	Y	Y	N	Y	future contracts	SA	A	SA	SA	SA
42		Israel	2-4	I	4	3	5-10	Y	Y	N	Y	diversification	SA	A	SA	D	D
43		Russia	1	P	1	1	1-5	N	N	N	N		A	SA	SA	SA	SA
44		Syria	1	P	1	1	5-10	N	N	N	N		D	SA	SA	SA	SA
45		Egypt	1	P	3	1	5-10	N	N	N	N		D	SA	SA	D	D
46		China	1	P	1	1	1-5	Y	N	N	N		D	SA	SA	SA	SA
47		Syria	1	P	1	1	5-10	Y	Y	N	Y	future contracts	SA	SA	SA	SA	SA
48		Ukraine	1	I	2	3	1-5	N	N	N	N		A	A	SD	D	D
49		China	1	P	1	1	1-5	Y	N	N	N		D	A	SD	SA	SA
50		China	1	P	1	1	1-5	Y	N	N	N		D	SA	SD	D	D

ABRIVIATIONS

P	PERMINENT RESIDENCE
I	INVESTMENT
H	HOLIDAY HOME
N	NO
Y	YES
A	AGREE
SA	STRONGLY AGREE
D	DISAGREE
SD	STRONGLY DISAGREE

NUMERIC EXPLANATIONS

QUESTION 4

1 Never received and/or not interested in any investment knowledge

2 Discuss investment or finance related topics with friends, relatives and/or colleagues

3 Read and/or listen to investment or finance related news

4 Review investments or finance related materials from various sources

5 Research investment or finance related topics or attend professional courses, seminars

QUESTION 5

1 Cash, bank deposits, certificates of deposits

2 Bonds, bond fund

3 Foreigner currencies

4 Commodities, investment-linked insurance products, open-end mutual funds, closed-end fund