VYSOKÁ ŠKOLA EKONOMICKÁ V PRAZE

Fakulta financí a účetnictví

katedra bankovnictví a pojišťovnictví

BAKALÁŘSKÁ PRÁCE

2017 David Svoboda

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Department: Banking and insurance

Field of study: Finance

Vývoj cen nemovitostí v Londýně

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Year of defence: 2017

Čestné prohlášení:

Čestně prohlašuji, že jsem bakalářskou práci na téma „Vývoj cen nemovitostí v Londýně od 1995 do 2016 vypracoval samostatně a veškerou použitou literaturu a další prameny jsem řádně označil a uvedl v přiloženém seznamu.

V Třebíči, dne 18.5. 2017

podpis

Abstrakt:

Úkolem této bakalářské práce je analyzovat trh rezidenčních nemovitostí v Londýně během období od roku 1995 do roku 2016. V první polovině práce je kladen důraz na vymezení teorie vztahující se k tématu. To obnáší důvody, pro které se nemovitostí trhy obecně analyzují nebo ekonomické fundamenty, jimiž jsou ceny nemovitostí ovlivňovány.

Hlavním tématem a výsledkem práce je hloubková analýza vývoje cen nemovitostí v Londýně za účelem možnosti v závěru práce zhodnotit stabilitu tohoto nemovitostního trhu. Zejména je řešena v současné době Londýňany často skloňovaná problematika stále se zvyšujících cen a snižující se dostupnosti nemovitostí.

Práce soustřeďuje data z mnoha odvětví ovlivňujících nemovitostí trhy v jednom dokumentu a nabízí přehledně zpracovaná data od statistických autorit, kterými jsou například HM Land registry nebo Office for National Statistics včetně užitečných porovnání důležitých fundamentů.

Klíčová slova: Anglie, Londýn, trh nemovitostí, ceny nemovitostí, dostupnost, nedostatek nabídky

Abstract:

The subject of this bachelor thesis is to analyze London residential housing market in the period of time from 1995 to 2016. In the first part of the thesis the emphasis is put on the definition of theories related to the topic. It includes the reasons why house prices are worth measuring. Another point of the theory are the economic fundaments which influence the house prices.

The main topic and result of this bachelor thesis is a deep analysis of the development of house prices in London. Based on the analysis, in the conclusion, it is enabled to evaluate the stability of the market. It is particularly the problematics of high house prices and affordabulity, which is solved in this document. These topics have become increasingly popular in London, recently.

The work concentrates data from many fields, which affect developments housing markets, in one document. Thanks to it, the work provides comprehensibly processed data from statistical authorities such as HM Land Registry or Office for National Statistics including useful comparisons of important fundamentals.

Keywords: England, London, property market, house prices, affordability, shortage of supply

Contents

Introduction

This bachelor thesis provides an overview of a development of house prices in London, one of the most unafforadble cities in the world. The observations deal with the period of time from 1995 to 2016. Due to the fact of rising unaffordability, London housing crisis has become an increasingly burning problem for Londoners in last few decades. What makes this bachelor thesis even more interesting, is that there were events such as BREXIT or restructuralization of Stamp Duty Land Tax in England, which may completely change the trend in house prices.

The aim of this bachelor thesis is to analyse the London housing market from different points of view and decide, whether the it is in equilibrium or if the rising house prices are supported by other equally developing economic fundaments. The work is divided into two parts. The first part is interested in theory, explaining the main reasons why house prices are worth measuring. It describes how property markets work, what their typical features and characteristics are. At the very end of the theoretical part, the factors determining the development of house prices are described.

In the practical part, the long-tern trends in the development of housing market in London by comparing the prices in London with those ones in the rest of the England are analyzed. The situation in London is analyzed in details by studying the situations in individual London boroughs, as they may vary significantly. Due to the burning issue of the fast pace of rising house prices in London, affordability of housing market will be analysed. The emphasise will be put on London and its boroughs again. Also a comparison with other major housing markets in different countries is included. Concerning the short-term trends, I will look at the impact of newly restructuralized Stamp Duty Land Tax, introduced in 2014 and consequences of referendum about BREXIT, which was held on June 24th.

Finally, at the end of the bachelor thesis I will look at one of the main issue of housing market in London – Shortage of supply, which is according to lots of experts the main reason for housing crisis in London. After this chapter the conclusion follows, stating if the analysis is succesfull and if the goals were accomplished

1 Reasons for measuring house prices

To have the development of house prices under the control is important for many reasons. In general, it is, because the development of house prices may have far-reaching impact on the economic situation of a country and the influencing indicators such as well-being or unemployment. Changing the house prices may also be a significant indicator predicting developments of other fundamentals regarding the economic health of the country.

Not only the house prices but the prices of assets in general are necessary indicators to unveil future development of the economy of the state. They are very important and believe, they contain important information about the present situation and stability of the economy. (International Labour Organisation, 2013, p. 17)

Based on the below mentioned indicators, politicians and experts from different fields make decissions affecting the economy for example in order to conduct a monetary policy.

As regards **the monetary policy**, targeting inflation is becoming increasingly popular worldwide. But these experts have to consider that the inflation is an issue which is closely related to the development of house prices. So when targeting the inflation, the mpact of targeting the inflation on future house prices is needed to be taken by central bankers into account. It is reasonable to say that in the future the residental house prices are highly likely to play a more important role in the conduct of monetary policy. To outline the importance of the issue, in the Appendix A, all the countries using the inflation targeting policy are included. (International Labour Organisation, 2013, p. 17) The relation between the property prices and inflation is discussed in depth in the chapter 2.

Another reason for observing the house prices is that housing markets are considered **a tool to determine a wealth in an economy by agregating it**. Existing dwelling units are a part of the balance sheet accounts in the System of National Accounts. It is for the reason that the rising house prices will generate wealth effect that can lead to increases in consumption and increased household borrowing. Based on that, it is important to monitor a house price index so that predictions of real household wealth can be made on a regular basis. (International Labour Organisation, 2013, p. 18)

An indicator quantifying the risk exposure – There are indicators called „Financial Soundness Indicators“, the role of them is to identify the current state of the financial system, namely health and stability. They were created by Internaional Monetary Fund so that financial systems could survive difficult times during crises, similar to those, which came in last decades. In order to compute these indicators, house price indices are used as an existence of a close relation between house price changes and the stability of financial system has been proven. (High-Level Conference on Financial Crisis and Information Gaps, 2010) For example: „A sudden fall in the property market would have a negative impact on the financial system due to worsening credit ratings caused by lower values of collateral or the debt to equity ratios.The importance of these indicators is necessary especially in the countries where real properties play a big role for the economy by their high proportion of the national wealth and profitability. Such an example can be the UK or the USA.

Decision making from the side of inhabitants accounts for a significant consequence of house price changes. It is because the subsequent behaviour of people, meaning deciding whether to buy or not, will certainly affects the current state of the economy as paid sums of money when buying or selling a house are considerable. After all, purchasing a house/flat is the biggest investment of most of the normal people. Such a transaction usually leads to spending most of the savings of a household, optionally to a growth in lending.

It cannot be ommited that a role in the developments of house prices is played by indirect investments, too. It means, when the money is invested by individuals into a large variety of funds that invest into blocks of flats, etc.

Last but not least, the important reason why the changes of house prices are measured is for the purposes of **domestic and international comparisons**. There are plenty of reasons, why the developments of house prices should be compared on regular basis (transparency, comparison of living cost differentials). A problem might occur when comparing something. In such matters comparable subjects are needed. However, as it is mentioned in the chapter 2.3, the real properties are very complex and unique assets that are hardly comparable in one country, let alone in the international field. The process of making prices comparable is in the interest of the European Central Bank in cooperation with central banks in individual countries. They create a comparable way of measuring changes in the house prices across the countries. In 2001 the European Central Bank compiled an agregate index for Eurozone countries to compare house prices. In this field has been done many but the qualities still do not meet the standards applied to other economic statistics and price indicators for the Eurozone. The inaccuracies are mainly caused by differences in methodology, frequency or timeliness of the data and disunited sources are a problem. (International Labour Organisation, 2013, p. 18)

According to International Labour Organisation (2013, p. 18) Although the house prices are measured in most of the countries in the world, the way of doing it varies within them. Sometimes, in one country, there are more than one way in use how to measure the house prices in one country. Due to this fact, the situation in the international field might be considered little bit more complicated, as the developments in different countries cannot be perfectly compared.

2 Investment point of view

To analyse the development of house prices in London and see the logic behind it, some theory about the property market needs to be defined and explained. Therefore, the following chapter explains what kind of an investment instrument the properties are. The typical features of the property market are described including the participating subjests in the property markets, the factors determining the house prices and the property market as a whole.

From the point of view of the financial market, the properties are so called real investment instruments.

According to Veselá (2007, p. 201-272) **an investment instrument** is defined by a financial theory as an asset that creates an entitlement to future income for an investor, either in a form of dividend or as coupon payments, interests and incomes in a form of foreign exchange gains. All investment instruments can be divided in two big groups, namely: financial instruments and real instruments. These two groups vary in a form and frequency, popularity, characteristic features or a rate of return.

Among **financial instruments**, which usually do not have a physical form belong different types of securities excluding commodity securities. For example: financial derivatives, insurance contracts, deposit and saving accounts. However, the most usual representative of the group of financial instruments remains a security.

Real instruments, those, this academic work deals with, are not so numerous as the previous group. Their characteristics indicates that they have a tangible and palpable form. To be specific, among them belong precious metals, gemstones, works of art, properties or minerals.

These two groups mainly differ in movements of a return rate but also in their features. The most striking differences between the real and financial assets are possible to be registered in a form of their utility, they provide to their owners. Also the ways how their analyses are done and their relation to the inflation are different.

Relation between real investment instruments and inflation

Unlike the financial instruments, the real instruments are known for one specific reason. Experience of the investors and measuerements of the analytics showed that the real instruments proved to be a good way how to hedge against the inflation risk. The reason for this is that during a period of high inflation prices (rate of return) of real investment instruments grow in general. It has been confirmed that the value of these types of investments tends to rise with inflation because of the permanent and tangible nature of real assets. Concerning the physical resources, goods and services associated with real assets, they are often related to inflation. For example, when it is a period of a high inflation, rents can be easily adapted to it by increasing them accordingly. (Veselá, 2007, p. 258)

According to Veselá (2007, p. 256-257) The real instruments bring to their investors non-cash utilities such as pleasure caused by the ownership of a given instrument, happiness or pride. However, these benefits are highly individual and impossible to be measured by money since a value will certainly vary for every investor depending on their characters, experience, preferences etc.. For that reason, sometimes it may be too difficult to analyze a real value or price of the asset. Every real asset is unique somehow. This applies to paintings, jewelry, stamps or properties. For example: Properties may differ in a construction, location, age, condition or previous owners. On the other hand, two shares of a given company from the same emission will be both evaluated for the same price. The specific factors, market prices of properties can possibly depend on, will be analyzed in depth later in the chapter 2.3. To sum it up, rather than evaluating real assets, it is uncomparably easier to evaluate financial assets.

2.1 Property market

A market is a setting or an environment at which buyers and sellers come together to exchange goods and services and at which price-determining forces operate. (Abdul Hamid Mar Iman, 2006) Below, it can be seen the most important of its features.

Limited liquidity

Firstly, every real estate market is typical for its limited liquidity in comparison with other markets. Specifically, the time needed to sel lor buy a property may differ siginificantly from other commodities. Although we own a valuable house, it is probably not possible to sell it immediatelly unlike a share of the Apple company. Depending on the facts such as a location or wealth of the society, the selling proccess may take incredibly long time. (Abdul Hamid Mar Iman, 2006, p.) The liquidity can be measured through DOM (Days on Market) indicator. The DOM measurement provides us with the information about how long it takes to sell a property in average, how many days the property is active at the market respectively. Such a measurement is important for two main reasons. Firstly, sellers are interested so as to get to know, when to expect the property to be sold and mainly, when they can count on receiving the payment in order to make a reliable cash flow plan. Secondly, the DOM is regularly checked by a prospective investors, who are considering investing in that market. It testifies both the popularity of the market and the risk exposure. (Veselá, 2007, p. 260)

Table 1: Top 10 fastest moving towns in Britain

Rank	Town	Region	Average days to secure an offer
1	Northampton	27	£245 288
2	Milton Keynes	29	£299 079
3	Croydon	30	£374 342
4	Edinburgh	32	£266 146
5	Glasgoq	33	£175 552
6	Bristol	34	£309 807
7	Southampton	34	£279 769
8	Coventry	35	£191 658
9	Salford	36	£152 784
10	Ipswich	36	£259 844

Source: The fastest moving property market in whole of the UK is revealed. Mirror [online]. 2017 [cit. 2017-05-18]. Dostupné z: http://www.mirror.co.uk/news/uk-news/fastest-moving-property-market-whole-10044384

Narowness of the market

Secondly, the real property market is well known for its narownness, meaning, there is a small amount of participants in the market. (Veselá, 2007) This closely relates to the previous point dealing with limited liquidity. The narrower the market is, the more limited the liquidity should be.

Lack of market information

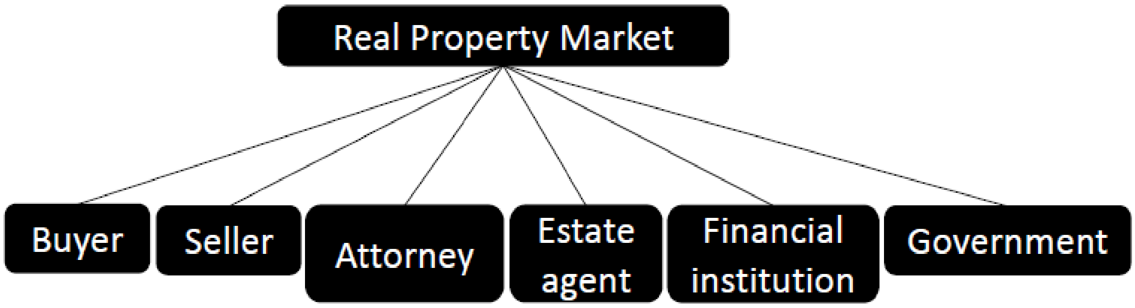
The lack of market information is one of the main problems in terms of analysing the market. The data that can be reached, is ususally incomplete, approximate and collected from a large variety of sources, often unreliable and disunited. (Abdul Hamid Mar Iman, 2006, p. 71)

Due to the inefficiency of the property market and possible difficulties (complicated legislative and administrative proccesses), while selling a property, fees to agents are necessary to be paid in order to avoid possible penalties, fines or other more serious problems. These usually move around 10% of the prices. Aditionally, when transferring a property, taxes are needed to paid. The so called Stamp Duty Land Tax (SDLT) is described in the chapter 3.2.1.

2.2 Subjects participating in the property market

For the property market it is typical that certain subjects are participating at it and each of them has their tasks to do, possibly in the presence of a conflict with each other.

Scheme 1: Participants in the Real Property Market



Source: GODDARD, G. Jason a Bill MARCUM. Real estate investment: a value based approach. Berlin: Springer, 2012. ISBN 978-364-2235-269.

First of all, there need to be a **buyer and a seller**, the most important subjects. Two subjects which sign a contract about buying or selling a property.

As real estates usually cost an enormous amount of money, it is highly likely that a certain role will be played also by **a financial institution** acting as a lender. This might be either a commercial bank, an investment bank, a pension fund or an insurance company. The commnon theme is that these entities provide a portion of the purchace price to the investor in the form of debt. (Goddard, 2012, p. 3-5)

The role of a **government** is also necessary so as to keep the property market organised. According to (Abdul Hamid Mar Iman, 2006, p. 70-71) it is highly likely that there are no other goods that are so much controlled by the law or regulations. Its target is to create a legal environment, in which the property market will work. The most important task is to secure a property right and a tenant law for its citizens. The task is also to set certain rules and keep an eye on them to be followed. Specifically, every state should secure a proper collection of taxes or suppress money laundering, which is quite a serious problem in the field of real estates. For example, in the UK, there can be observed an issue containing money laundering from east countries such as Russia etc.

Regarding the taxation, government is able to influence the demand and supply for housing by imposing different types of taxes. However, the government has also a responsibility for deciding about the existence of building plots. It is them, who decide whether a house or a flat can be built at a given place so as to protect the environment and keep the cultural values of specific areas. (Poredský, 2012, p. 11)

When a real property is being sold or bought, pivotal roles are played by three more participants. These are **estate agents, appraisers and attorneys**. (Goddard, 2012, p. 3-5)

The property market is highly imperfectly competitive and it may be difficult for some buyers and sellers difficult to meet a counterparty. For that reason, at the property there are distinguished the **estate agents**. The estate eagent is a person doing work as an intermediary between a buyer and seller. Basically, the job description is to concentrate the demand and supply at one place in order to make the property market at least a little bit more competitive. Often, they even seek the demand or supply so as to make a profit in a form a commission. Except for the mentioned activities, they usually use their knowledge for a professional advisory provided to clients, who are buying or selling a house or flat. And also while transfering the ownership, they can be helpful, when arranging things around. (Poredský, 2012, p. 11)

According to Goddard (2012, p. 3-5) **appraiser's help** is needed in order to get more information about the market. The output, they are paid for is that they perform three different approaches to valuation. At the end they work out an appraissal, which is submitted to a lender to persuade them about the credibility of the investment.

Attorneys are said to be people helping facilitate the proper conveyance of real estate from the seller to the buyer. (Goddard, 2012, p. 3-5) To put it in other words, the responsibility, they are charged with, is the legal process of the property transfer from one side to another one. They are also entitled to intervene to the whole process by asking for information etc.

2.3 Characteristics and features of properties

As regards the properties, they are absolutely unique due to their special characteristics. In following lines, their specific features and the impact on the property market is described.

According to Poredský (2012, p. 12) in the first place the real properties excel by the fact that they are **heterogeneous, complex and multi-dimensional goods**. Every single house or flat is original and there are no two pieces of the same value. These differences are mainly caused by the amount of determining factors, some of them cannot be the same at more than one house or flat. For example: a plot size, its exact location and direction, design, age, quality of used materials. In case of properties, associated facilities such as a garage, cellar, garden, etc. play a role. The value may be given to a house by an infrastruture facility, too. As an example can be outlined public transport, shopping centres, parks, cultural monuments.

A location of properties is fixed. There is no way, how to move a house and for that reason the demand from the side of buyers is limited depending where the house is situated. It is a fact, which simply contradicts a hypothesis of a perfect competition. Apart from that, according to its location the value of a house may differ. Considering that the house is located in a vilage with no UNESCO monuments or other specialities, we may assume, the price will be lower than in the center of a city. (Poredský, 2012, p. 12)

Immutability and inertia are relevant for the characteristics of properties. Not only are they in a fixed location but have a **long lasting service life** and trends in the markets are fasty. Long lasting service life means a durability. The properties in cities having approximately up to five owners before the current one, mainly due to the lack of space in the cities, can be presented as an example. As regards the fusty markets, this feature is closely connected to a thinking of people, opinions of whose are constant, usually inherited from previous generations because buying a house is the most important and life-long investment for most people. (Poredský, 2012, p. 12)

High value given by a costly construction is another important characteristic of properties. A big role is played by the affordability. It is the variable being influenced by the state of the economy. This problematics is solved in depth in chapter 3.1.2. High value also causes an effect that properties are worth arranging an insurance. (Poredský, 2012, p. 13)

Transaction costs when buying a property or when moving from one property to another one can reach high sums of money due to paying large variety of comissions to real estate agents, attorneys or paying for stamp duty taxes. Such processes usually require time to be spent on them as filling many types of forms and getting in contact with different authorities may be unexpectedly time consuming. As a consequence, property markets adapt themselves very slowly on changes in incomes of people in comparison with a hypothesis that there would not be such transaction costs. (Poredský, 2012, p. 12)

Impossibility of a perfect knowledge of the market. Neither buyer, nor does the seller are able to analyse the whole market which is very diffused. There is no chance for none of them to get a perfect knowledge of all advertisements and their detailed characteristics. (Poredský, 2012, p. 13)

A relatively significant interference by the states to the property market may be also a reason why this market is highly imperfect. For instance, among others, the role of the state is to take care of its citizens and provide a housing for more friendly prices to certain groups of people as a compensation for a certain handicap such as refugees, homeless people or disabled people. (Poredský, 2012, p. 13)

2.4 Factors affecting house prices

Demand side factors

Economic Growth/recession is one of the main fundamentals determining house prices everywhere in the world, not only in London. Economic Growth usually brings more wealth and higher disposable income for a whole society. This theory is based on a constant height of the „house prices to income“ ratio. What is clear is a fact that the growth in house prices makes building industry more profitable and that is why building companies are motivated to construct new houses and flats. Subsequently employment becomes higher and higher incomes can be observed. Especially, employees in the construction industry and real estate agents will register higher wages. This situation, when the growth in house prices is expected, is interesting for investors, too. They find the real property market more profitable and may start pouring money into it.

On the other hand, when the economy is slowing down, house prices usually fall. It is when a recession comes. Then incomes of people decline, people tend not to spend so much and suddenly there is considerably a lower demand for buying houses. This is closely connected to unemployment, which is typical for recession. Regarding unemployment, among other conseuences except for lower incomes belongs instability, too. This is a negative aspect which especially provokes suspicion among investors. (Factors That Affect House Prices, 2015)

According to the web page „Factors That Affect House Prices" (2015) **Consumer confidence** is an unmeasurable indicator of stability in the state. It is a general fact that the more stable the country is, the higher demand for buying properties is as properties serve as a store of wealth. When the consumer confidence among people reaches a certain level, then they believe, it is real to repay even a mortgage with a higher debt to income ratio. For that reason they borrow more money and spend more on new houses or flats. As an example can be shown the year 2000 and on when people accepted taking higher loans despite higher interest rates.

Higher interest rates are for investors and potential buyers considered to be a reason to postpone buying a properties. Especially because high interest rates make mortgages more expensive. As a result, debtors have to spend more money on their repayments, which are of inconsiderable height. A typical period, when central banks increase interest rate, comes during an economic growth so as to prevent the economy from overheating. Another case when higher interest rates are asserted is when a government wants to preclude an inflationary effect. (Factors That Affect House Prices, 2015)

Mortgage regulation is another demand side factor, which influences the house prices. Looking back on 70s and 80s, we may say that the loan culture did not exist due to high level of regulation. However, later came the deregulation, new financial institutions were established and competition was created. Subsequently many new products were introduced including less secured mortgages with lower interest rates. What is more, governments or banks can support providing loans. As a result people are able to collect more money and buy a property, subsequently their liquidity constraints is not so strict. This may bet the reason why demand and the house prices in last few decades have been growing. (Factors That Affect House Prices, 2015)

As an irreplaceable factor is considered **a demographic situation** in a country. Regarding this, following aspects should be mentioned: life expectancy, if the population is getting older, the age when children leave their homes, number of families or single people, divorce rate, marriages, growth of demand at places with limited supply (close to prestigious universities) and last but not least immigration. Generally, the more people live at one place and the higher life expectancy is, the higher demand for properties should exist. On the other hand, all the factors must be taken into account. If the population gets older and too few children are being born in the world, it is real to expect a decline in house prices. Similarly, the higher divorce rate is, the more flats are needed. When establishing a family, also a new flat or a house is needed. But, it is mainly the immigration, which can completely change the rules in the development of house prices. (Factors That Affect House Prices, 2015)

The demand from abroad appears to be an enormously important factor in some countries which have been proving themselves to be a „safe heaven“ for ages. Such a status is reached through a lasting highly stable government, economic activity of the citizen, international relations, globalisation etc.

In some cases capital gains may be so high that even speculators need to be taken into account. For example, when mortgages are cheap or easy to obtain and the house prices are expected to rise in the near future, speculants buy these properties. In addition, the investors may subsequently rent these flats or houses. They are called the „buy-to-let“ investors. (Factors That Affect House Prices, 2015)

Supply side factors

Generally, supply in the property market in a short-term is considered fixed, as no house can be built in a short term. The above mentioned fact results in a conclusion that in a short term house prices are determined solely by demand for housing, not supply. What is more, when supply remains the same, and demand rises, the house prices will probably increase rapidly. However, in a long term, the house prices should be elastic. Below, there are mentioned the factors that influence the supply of housing. (Factors That Affect House Prices, 2015)

Profitability of the construction industry is an indicator that might tell us, what to expect in a long-term. Although the supply is fixed in a short-term, in a long term in a case of high profitability it is real to expect that new buildings will be constructed in order to meet the demand. The amount of newly built flats or houses and their prices are dependent on many factors such as available room, constraints imposed by local authorities and primarily on the excess of the demand. Regarding this problem, it is worth mentionig „a degree of saturation of housing needs“. It is an indicator, which is able to show, how strong the pressure on an increase/decline in house prices is. The logic wording is as follows: „number of flats/1000 Inhabitants“. As a dynamic express we would use a following pattern: „Number of newly built flats/1000 Inhabitants.“

There is a need for **a sufficient number of building parcels** where new houses or flats can be placed. This usually depends on a permision given by a government and other authorities. Unless there is a vision for places, where new buildings could be built, then the house prices will be continuously expected to increase. (Factors That Affect House Prices, 2015)

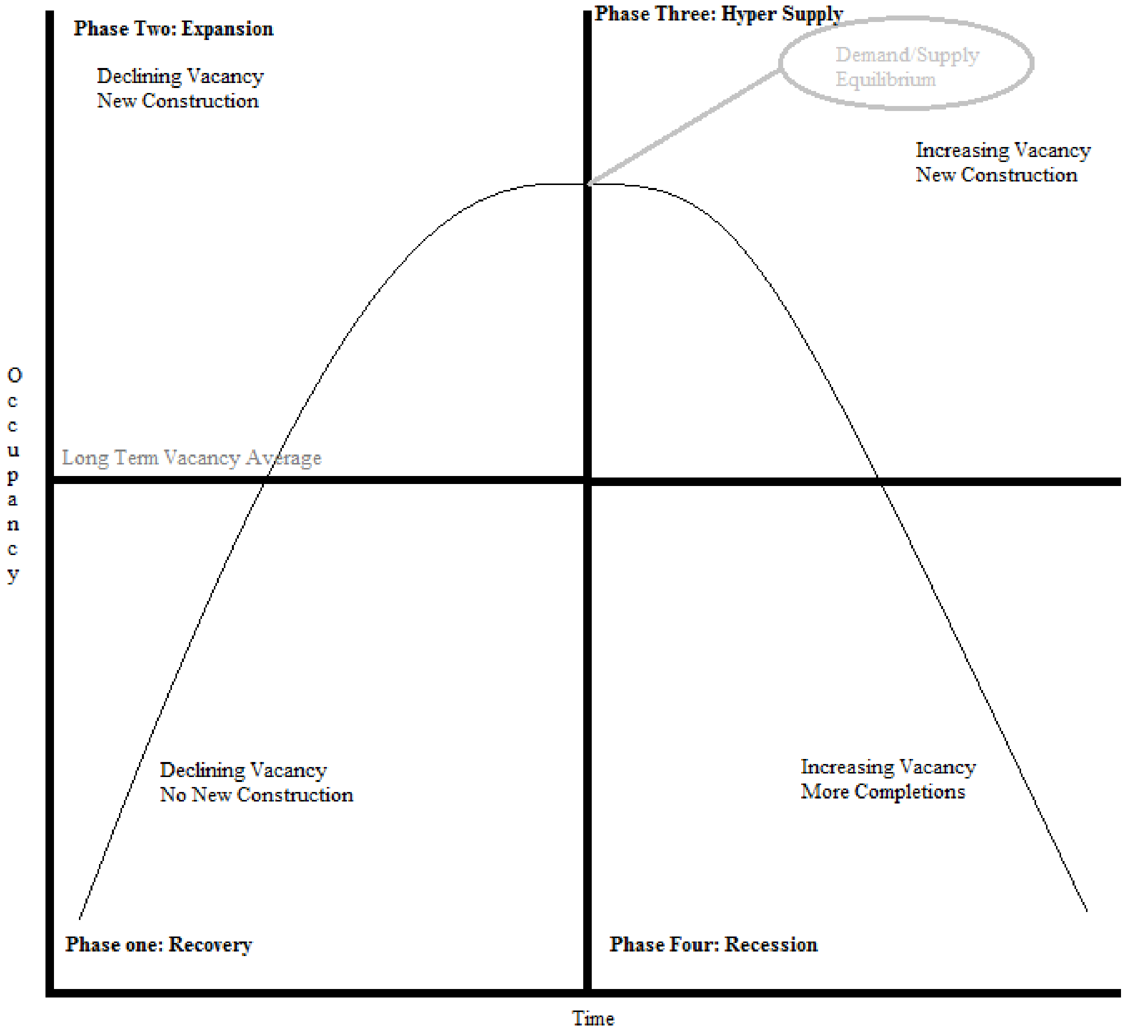
To build a block of flats is an enormous commitment, either financially or timely. Investors might be afraid of **taking such a risk**. Also a problem with liquidity or solvency can appear, because it is a lengthy proccess unti thel first flats are sold or rented. (Factors That Affect House Prices, 2015)

When **the costs of building** rise, then even properties become more expensive. This should lead to a smaller amount of demanded houses. (Factors That Affect House Prices In Uk, 2015) For these reasons an indicator of acquisition value can be used. This agregates all the investment costs for constructing the building or an index of construction costs can be used. The concequences of this usually emerge with a long delay due to a long time, which is taken by the construction.

Considering all the above mentioned factors, either demand side factors or supply side factors, by observing them individually, the exact current state of the housing market cannot be identified. What is needed, is to undertake complex research involving all the factors.

As most of the indicators depend on the economic cycle, it is desirable to introduce the Graph 1 shown below. The dependence between the economic cycle and house prices can be seen there.

Graph 1: Market Cycle quadrants (Mueller 1999)



Source: GODDARD, G. Jason a Bill MARCUM. Real estate investment: a value based approach. Berlin: Springer, 2012. ISBN 978-364-2235-269.

According to the Graph 1, it can be seen that the real estate market cycle consists of 4 stages. In the first stage called recovery, the economic activity after the crisis is growing slowly, but there is still no construction of houses. However, when vacancies drop under a certain level, rental prices start growing. This subsequently works as motivation for investors, who begin in the stage called „Expansion“ build new vacancies, as they see a real chance to make a profit in the field. Finally, an eqilibrium is achieved, when there is no excess or a lack of demand against the supply. This, however, is not sustainable. When the economic indicators start showing to be negative (declining rental prices, rising interest rates, unemployment), a stage called „Hyper supply“ comes. It basicaly means the excess of supply over the demand. As a result comes a recession. It is, when there are plenty of vacancies in the property market. The length of it depends on the expectations of the economic entities and the preparedness of the government to react. (Goddard, 2012, p. 16 – 30)

2.5 Consequences of high/low house prices

In fact, when the house prices grow, the market grows, too. As a result of the increased sales of houses/flats even tax revenues are getting higher. This leads to a friendlier budget constraints of the country, resulting in further stimulating by the state through some contributions, such as those for social housing and many others. As regards the influence of taxes, they can be used as a tool to reduce the growth of house prices or to motivate participants in the property market to behave in a certain way.

Rising the real estate prices will certainly have a positive wealth effect for households already owning a house or flat. Such a fact causes that the balance sheets of a household sector will develop positively, too. These circumstances lead to higher consumption among households and to an increased apetite to invest as households feel to be more wealthy. More intensive consumption can be seen at houses which are being reconstructed and upgraded.

It is obvious that another situation, when house prices are low, brings the opposite effects on the economy. It is therefore important for authorities (politicians or economists) to have correct information so that they can react on the changes properly to sustain the stability in the market.

3 Analysis of London housing market

The analysis of London housing market which follows below, is mainly based on the data from HM Land Registry for England and Wales. The information about all residential housing transactions can be reached in the Price Paid Dataset, whether for cash or with a mortgage since January 1995. This dataset comprises details such as a sale price, the date of the transaction, address details, a type of property and if it is newly built or if it is an established residential building. There are a few registrations excluded from the Price Paid Data (PPD). According to UK House Price Index (2017) they are:

- all comercial transactions
- sales that were not for full market value
- transfers, conveyances, assignments or leases at a premium with nominal rent:
- right to buy sales at a discount
- subject to an existing mortgage
- to effect the sale of a share in a property
- by way of a gift
- inder a compulsory purchase order
- under a court order
- to trustees appointed under Deed of appointment
- vesting Deeds Transmissions or Assents
- of more than one property
- leases for seven years or less

What might be considered by someone as a limitation is that it provides nominal house prices not adjusted for the inflation. However, such a step enables its users to adjust the house prices by their inflation assumptions accordingly.

The difference between the data presented by HM Land Registry and others

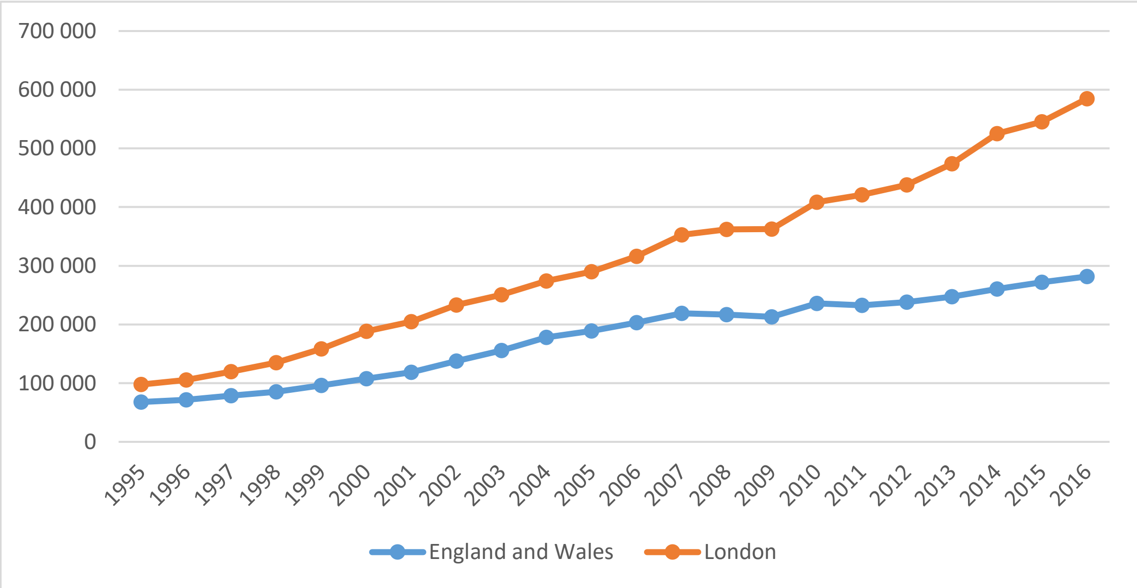
Basically, there are number of sources providing information regarding the house prices development. While the data published by HM Land Registry is based on every single transaction (with mentioned exclusions), those presented by Rightmove are based on asking prices. Agencies such as Nationwide and Halifax do their research according to their own mortgage approvals which results in a fact that no cash transactions are included. On the other hand, thanks to using their own internal data, it takes far less time to make an analysis compared to Price Paid Data from HM Land Registry. (UK House Price Index, 2017)

3.1 Long-term trends in the London house prices

3.1.1 Development of average prices and total sales

Based on the data from HM Land registry, it can be seen in the Graph 2 that average house prices in London are noticably higher than those in England and Wales as a whole. By looking at the Graph 2 it is possible to observe quite a clear trend. It says that the difference between average prices in Greater London and in England and Wales as a whole is getting constantly bigger. While in 1995 the average house prices in England and Wales were 67 891 and 97654 in Greater London, in 2016 they accounted for 281 809 and 584 846 respectively. It provides us with the information about a certain inconsitency of the development of house prices across England and Wales. Only the period, when the rising spread in prices slowed down, was from 2007 to 2009, when the crisis occured. In that time the house prices in Greater London almost stopped rising and in England and Wales as a whole they decreased sligthly.

Graph 2: Development of average house prices in Greater London compared to those in England and Wales



Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

To compare the average house prices in Greater London and England and Wales in more detail is enabled by the Table 2. Based on this, you can see that while in Greater London and England and Walles in 1995 the nominal house prices accounted for 97 654£ and 67 891£ respectively, in 2016 it was 584 846£ and 281 809£. It means, there was an overall increase in the nominal prices of 498,90% in Greater London and 315,09% in England and Wales only.

To show the impact of crisis, the following data needs to be presented: Since 1995 until the downturn in 2007 the nominal house prices in Greater London increased by 261,26% and in England and Wales by 222,92% only. An average anual growth accounted for 21,77% and 18,58% respectively. During the crisis from 2007 to 2009 Greater London experienced a slight increase only (2,81%) while the average house prices in England and Wales decreased by 2,71%. When the country recovered from the crisis, expansion came and suddenly the prices in London rocketed with the pace of 8,75% p.a., while in England and Wales they were growing just approximately half of it, 4,59% p.a..

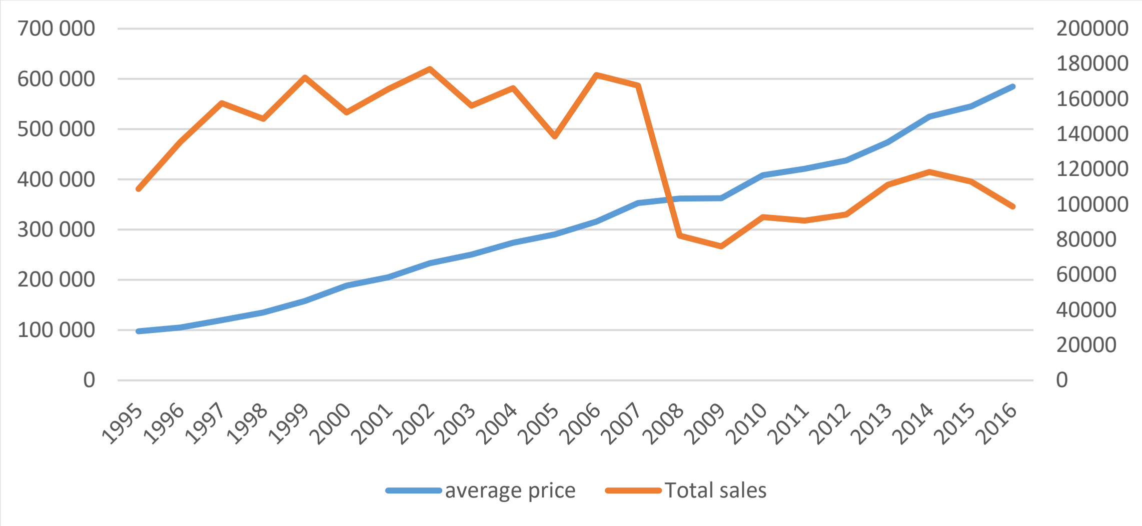
Table 2: Changes in average house prices

Changes of average house prices				
County/country	Average house prices			
	1995	2007	2009	2016
Greater London	**£97 654**	**£352 787**	**£362 706**	**£584 846**
England and Wales	£67 891	219 234	213 282	281 809
	Percentual changes in prices			
	1995-2016	1995-2007	2007-2009	2009-2016
Greater London	498,90%	261,26%	2,81%	61,25%
England and Wales	315,09%	222,92%	-2,71%	32,13%
	Average yearly changes			
	1995-2016	1995-2007	2007-2009	2009-2016
Greater London	23,76%	21,77%	1,41%	8,75%
England and Wales	15,00%	18,58%	-1,36%	4,59%

Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

By putting the history of house prices in London in contrast with total sales in the Graph 3, we may say that an average volatility in the volume of sales from 1995 to 2006 did not have any significant impact on the permanent and stable increase in the London house prices. Only in the period from 2006 to 2009, when the crisis happened, London experienced a dramatic fall in total sales, which acounted approximately 56,11% of total sales in 2006. This caused that the average prices in Greater London almost stopped rising.

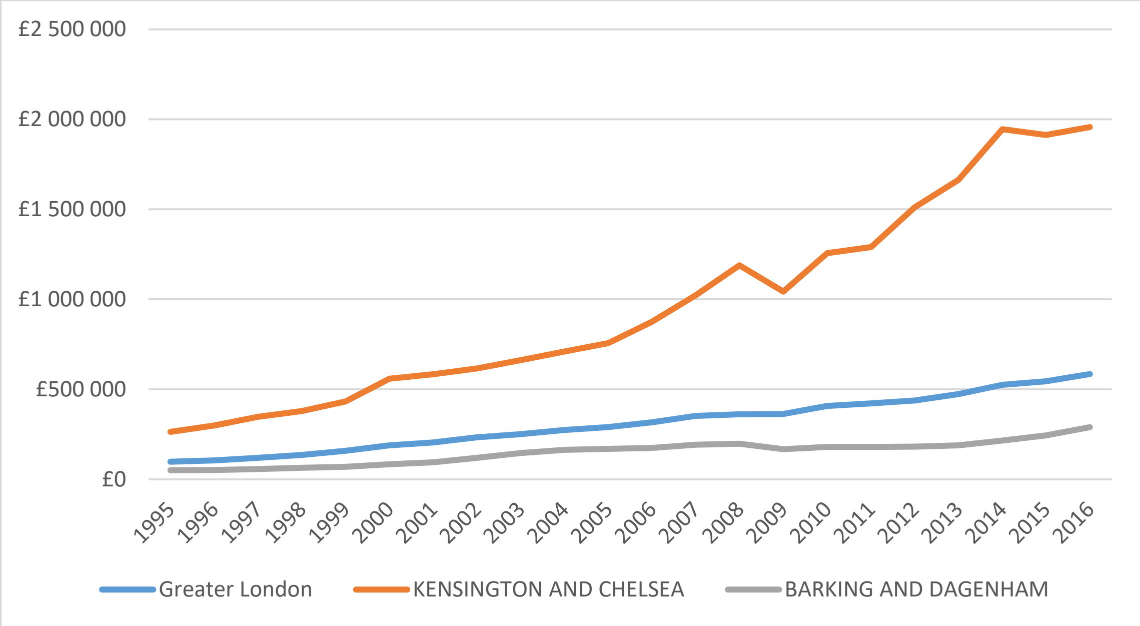
Graph 3: Relation between development of house prices in Greater London and total sales from 1995 to 2016



Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

Below, in the graph 4 there can be observed the importance of taking into account individual London boroughs, when analyzing the house prices in London. It provides us with the information about the development of average house prices in Greater London as a whole and then in two selected areas. These are „Kensington and Chelsea" and „Barking and Dagenham" due to their specificity. Based on the data published by HM Land Registry, „Kensington and Chelsea" is the most expensive borough of London and on the contrary „Barking and Dagenham" is the one with the lowest average house prices since 1997 onwards. The graph clearly shows that the average prices in Greater London are closer to those in „Barking and Dagenham" rather than „Kensington and Chelsea". Considering this fact, it is relevant to state that there are a few extremely expensive boroughs in London such as Camden, City of Westminster or Kensington and Chelsea distorting the average prices in the whole Greater London. A table, where the average prices by London boroughs from 2009 to 2016 are listed, can be reached at the end of the document as the Appendix B.

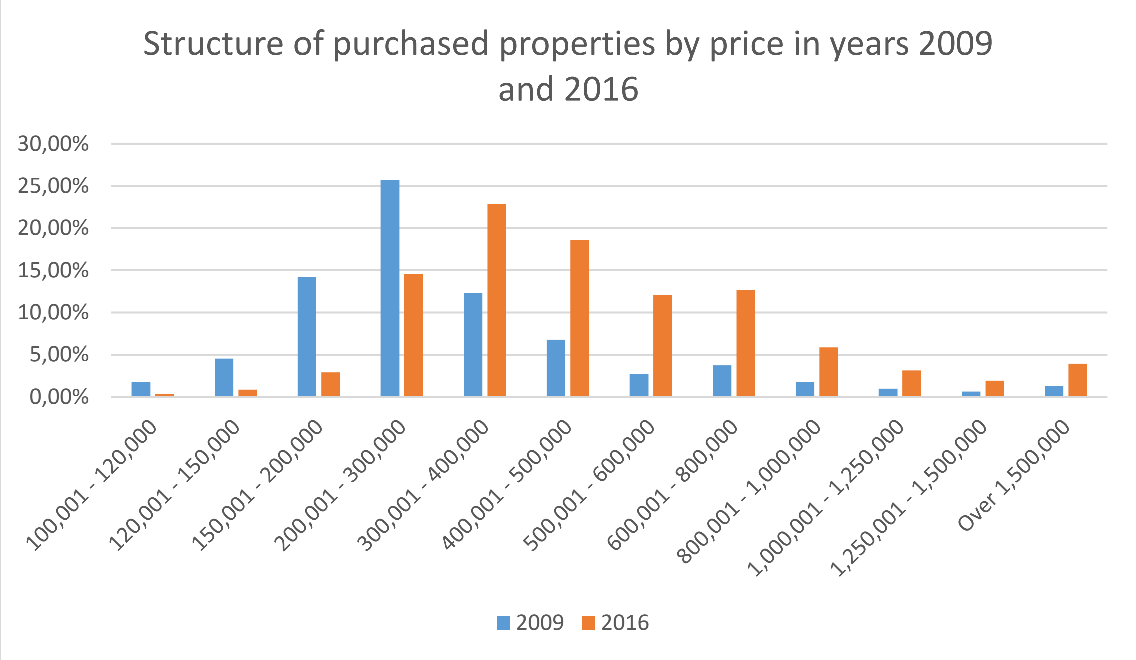
Graph 4: Development of house prices in Greater London as a whole in contrast to the most espensive and the cheapest districts of London



Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

According to the data registered by HM Land Registry, there were made 76 199 transactions in 2009 and 98 877 in 2016. Analysis of these provides the Graph 5. It divides volumes of sales by price band. The volumes are expressed relatively so that a better comparison can be made. It is obvious that in 2009, shortly after thee strong recession, the volumes of sales were significantly lower and made trasactions accounted less money than in the year 2016, when the total volume of sales was by 29,76% higher. For example, the most striking aspect of proportions is that one in 2009 when the biggest share of transactions was made between 200 001£ and 300 000£, namely 25,7%, followed by the range 150 001£ – 200 000£ with 14,22%. On the other hand, in 2016, the main role was given the band from 300 001£ to 400 000£ and at second place to that from 400 001£ to 500 000£ with 22,87% and 18,61% respectively.

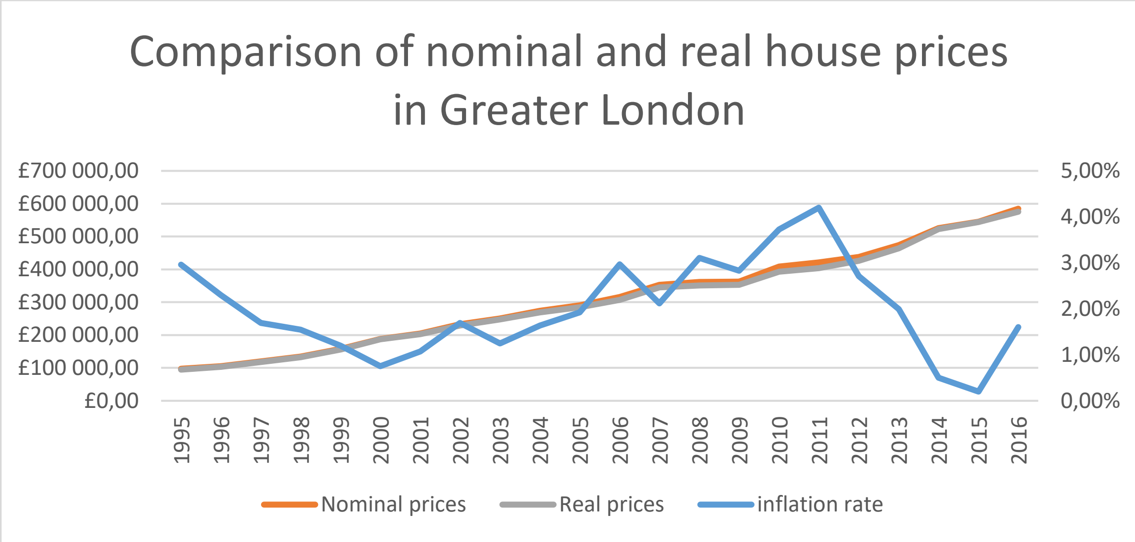
Graph 5: Structure of purchased properties by price in years 2009 and 2016



Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

The Graph 5 provides us with the comparison of nominal and real house prices in Greater London as a whole. As the United Kingdom did not experience any significant changes in inflation rate, it can be seen that nominal prices are more or less followed by the real prices except for the period of time from 2009 to 2012, when the inflation rate reached the top and the nominal prices differed from the real prices the most. In 2011 they were £421 208 and £404 230,33 respectively. In the observed period of time it can be seen that since 1995 the inflation rate was declining from 2,96% to 0,75% in 2000. Then the trend changed and the rising inflation rate reached a new peak of 2,97% in 2006. In the period of time from 2007 to 2015, in which the United Kingdom experienced an instability in inflation rate, the rate rocketed up to 4,20% in 2011 and suddenly in 2015 the bottom was hit, when it accounted for 0,20%. In 2016, the rate was 1,60%.

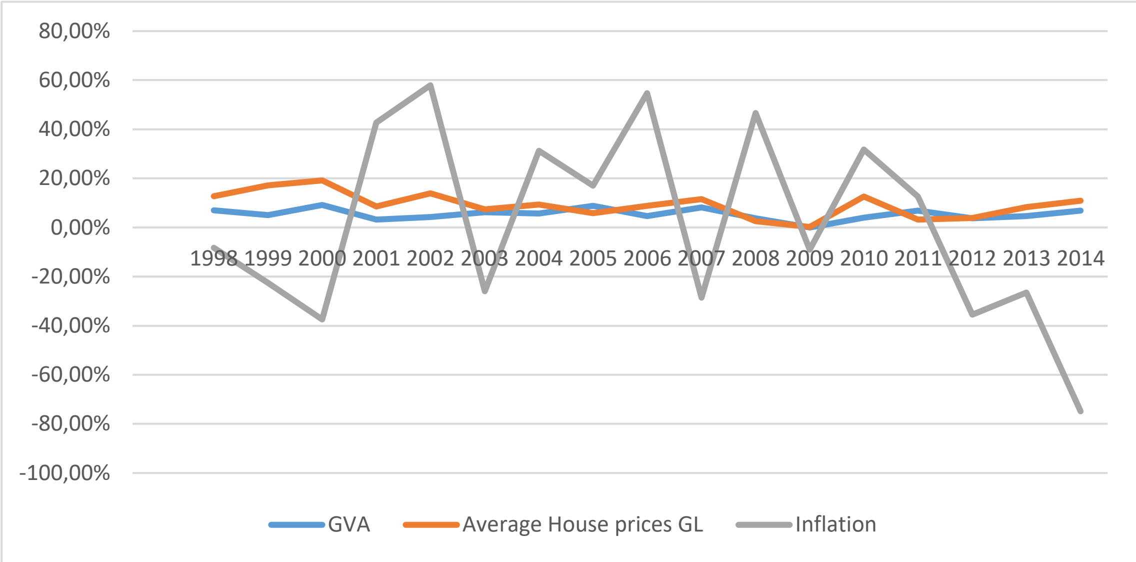
Graph 6: Comparison of nominal and real house prices in Greater London



Source: Own creation, Data for nominal prices produced by HM Land Registry © Crown copyright 2017, Source of data for inflation rate: Historic inflation Great Britain - CPI inflation. Inflation.eu, Worldwide Inflation Data [online]. [cit. 2017-05-18]. Dostupné z: http://www.inflation.eu/inflation-rates/great-britain/historic-inflation/cpi-inflation-great-britain.aspx

The relation between the percentual changes of nominal house prices in Greater London, Gross Value Added (GVA) in Greater London and Inflation is putt into contrast by the following graph, called Graph 6. Compared to the rest of the indicators, inflation is the most volatile one. There can be seen a slight positive correlation between the changes in inflation and average nominal house prices in Greater London. Regarding the relation between the changes of average nominal house prices in Greater London and the changes of GVA, there exists also a positive correlation, however, the dynamics of changes is stronger in case of the house prices than the GVA.

Graph 7: Relation between GVA Average house prices in Greater London and Inflation



Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017, Source of data for inflation rate: Historic inflation Great Britain - CPI inflation. Inflation.eu, Worldwide Inflation Data [online]. [cit. 2017-05-18]. Dostupné z: http://www.inflation.eu/inflation-rates/great-britain/historic-inflation/cpi-inflation-great-britain.aspx Source of data for the GVA: Gross Value Added and Gross Disposable Household Income. London Datastore [online]. 2016 [cit. 2017-05-18]. Dostupné z: https://data.london.gov.uk/dataset/gross-value-added-and-gross-disposable-household-income

3.2 Affordability

Except for observing average the nominal and real house prices, there exists also another way, how to analyse a housing market. It can be examined in terms of affordability. Based on such research, it should be discovered, if the house prices are changing consistently with fundamentals determining their prices or not.

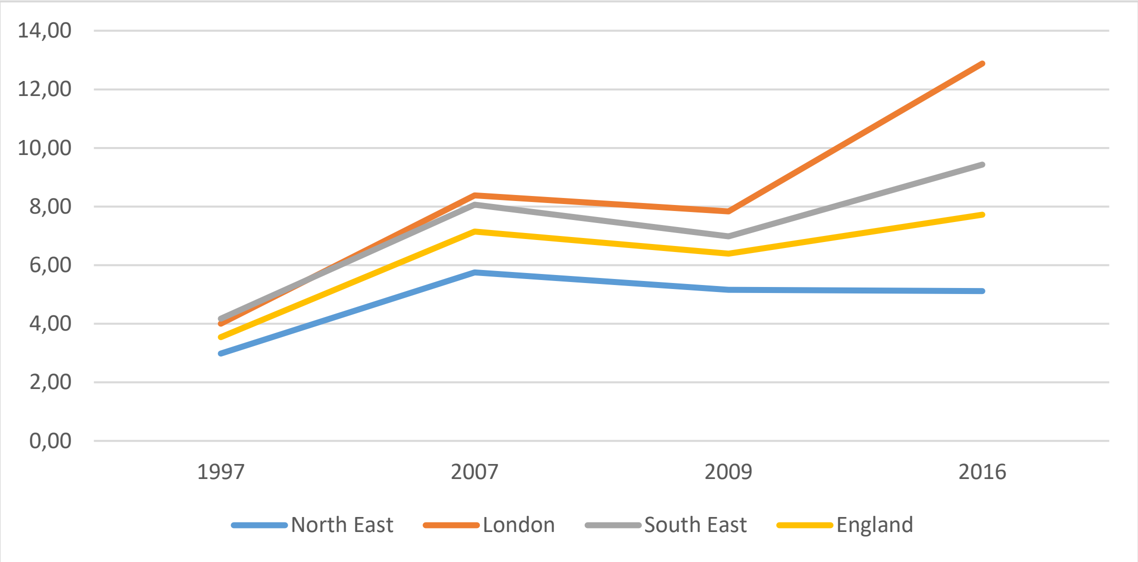
There are various measures enabling to undertake the research of affordability of housing one of them is a price to earnings ratio. In this indicator, only a paid income frome work is considered as an earning. The development of the price to earnings ratio in the Graph 8 below presents the data published by the Annual Survey of Hours and Earnings. ASHE is based on 1 per cent sample of employee jobs. (Ratio of House Prices to Earnings, Borough, 2017)

The data from 1997 to 2001 shown below relates to the fact where respondents officially live but from 2002 to 2016 a better statistics was made. This analyzes the price to earnings ratio based on the workplace, which is more relevant for the purpose of this academic work.

By looking at the Graph 8, there can be seen a clear trend of rising unaffordability in the whole England from 1997 up to date. What is more, apart from the same trend in rising affordability, even the differences between individual parts of England are diverging. While in 1997 the ratio accounted 4 in Greater London (the least affordable part of England) and 2,98 in North East (The most affordable part of England), in 2016 the values were 12,88 and 5,11 respectively. To put it in other words the percentual changes were +71,48 per cent compared to +222 per cent in Greater London.

What next stands out in 2016 is that the ratio in London with 12,88 largely exceeds even that one in South East (9,43), the part of England considered as the second least affordable. This only confirms the speculations about the rising unaffordability of housing in London as a burning problem needed to be dealt with.1

Graph 8: Median price to earnings ratio



Source: Ratio of house price to workplace-based earnings (lower quartile and median). Office For National Statistics [online]. 2017 [cit. 2017-05-18]. Dostupné z: https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/ratioofhousepricetoworkplacebasedearningslowerquartileandmedian

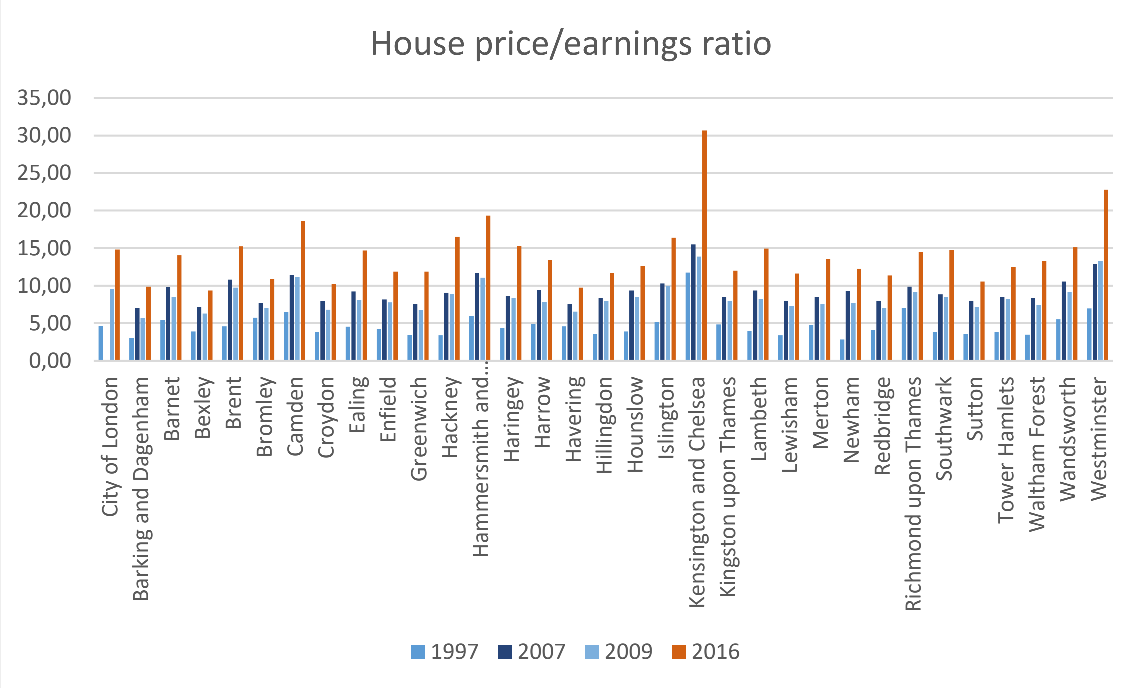
When the attention is focused on London, with emphasis on its individual boroughs, the differences in affordability are even more striking. This view enables us the Graph 9 provided below, presenting the data from years 1997, 2007, 2009 and 2016.

[1] Reference na nějaký článek, zdůrazňující unaffordable housing in London

In this graph it is recognisable that the most expensive borough is simultaneously the least affordable one due to high house prices not being compensated by equally higher earnings. The ratio in Kensington and Chelsea accounts for 30,68 followed by Westminster 22,78. As could be expected, Hammersmith and Fulham and Camden as those considered the most popular boroughs in Inner London belong among the unaffordable, too.

Regarding the development of affordability from 1997 to 2016 the House price to earnings ratio was rising with a similar pace as in the whole England following the rule that the most popular areas of Inner London remained the most expensive and with the highest growth rate.

Graph 9: House price to earnings ratio by London borough



Source: Ratio of house price to workplace-based earnings (lower quartile and median). Office For National Statistics [online]. 2017 [cit. 2017-05-18]. Dostupné z: https://www.ons.gov.uk/peoplepopulationandcommunity/housing/datasets/ratioofhousepricetoworkplacebasedearningslowerquartileandmedian

3.2.1 Comparison of affordability with abroad

To indicate whether the housing market in London is affordable or not and to what extent, an international comparison may help.

As opposed to the national affordability analysis above, the international comparison is not made based on the median house price to the median earnings ratio but the median house price to the median income ratio, which is slightly different. MARSDEN (2015, p. 21)

While by earnings is meant paid income from work only, household income used in the price to income ratio comprises in addition income from pensions and investments, social benefits and is taken as the combined income for all members of the household. Such a ratio is called „Median Multiple“. It is, however, important to highlight that comparing the house prices across boarder is not as accurate as analysing on national basis due to individual measurement procedures used in each country. Apart from this differences may be caused by a different quality of houses and flats and their size. MARSDEN (2015, p. 22)

Having said this, Median Multiple is considered an easy to understand, reputable and one of the basic indicators for determining the health of the housing market. Last but not least it provides a transparent comparison.

According to Hartwich (2017, p. 7)n, the housing affordability rating is set based on the following table 3.

Table 3: Housing Affordability Ratings

Demographia International Housing Affordability Survey Housing Affordability Ratings	
Housing Affordability Rating	Median Multiple
Affordable	3.0 & Under
Moderately Unaffordable	3.1 to 4.0
Seriously Unaffordable	4.1 to 5.0
Severely Unaffordable	5.1 & Over
Median multiple: Median house price divided by median household income	

Source: HARTWICH, Oliver. 13th Annual Demographia International Housing Affordability Survey: 2017: rating Middle-Income Housing Affordability. 13. New Zealand: Demographia (Wendell Cox Consultancy), 2017, 2017(1), p. 7.

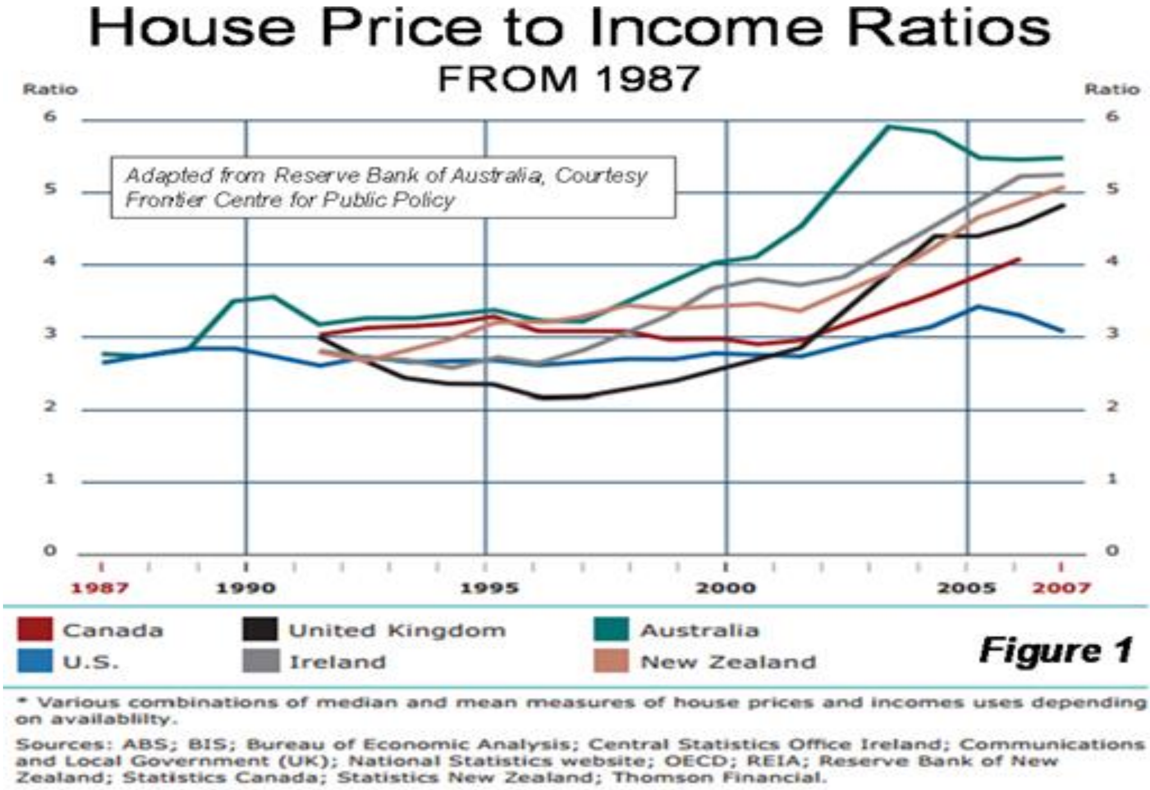
History of affordability in the world housing market

To be concrete, Graph 10 is attached so as to compare the affordability of major housing markets in 6 countries (Canada, U.S., UK, Ireland, Australia and New Zealand). Other important markets such as Hong Kong, Japan or Singapore are ommited due to the absence of needed data.

As it can be seen, in 1992 ratios of all the observed countries tended to hover around the level of 3, but reaching completely different levels in 2007, except for the U.S. and

Canada which remained stable around the level 3 or 4. While most of the analysed countries remained at this level approximately until the year of 2002, Australia started experiencing a sharp increase in the ratio from 1997 until reaching the level of 6 in 2004. Another country varying from the trend was the UK, where the ratio was declining reaching the bottom of 2,2 in 1996. Subsequently, the trend changed and properties started becoming steadily less affordable hitting the level of 3 in 2001 and then the level of ratio rocketed reaching 5,8 in 2005. Before the crisis, in 2007, the ratio of the UK accounted for 5,4 belonging among unaffordable markets. According to the ranking in the Table 2, the housing market in the UK was Seriously Unaffordable.

Graph 10: House price to Income Ratios from 1987 to 2007



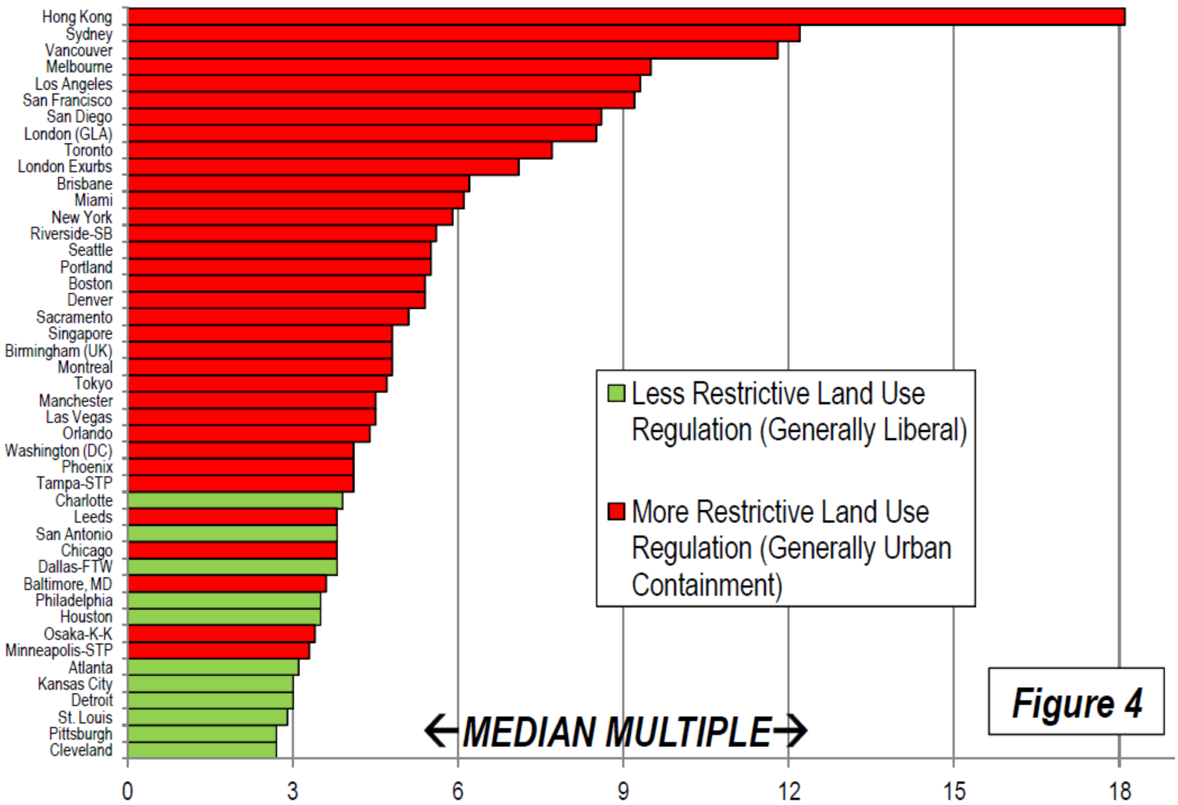
Source: HARTWICH, Oliver. 13th Annual Demographia International Housing Affordability Survey: 2017: rating Middle-Income Housing Affordability. 13. New Zealand: Demographia (Wendell Cox Consultancy), 2017, 2017(1), p. 8.

Current situation of the affordability at the world housing market

According to the Graph 10, which puts in contrast housing affordability and Land regulation, it can be seen that in 2016 London (8,5) belonged among the least affordable housing markets in the world being overcome just by seven other cities. As the most unaffordable market in 2016 was Hong Kong with a clear leadership of price to income ratio 18,1 followed by Sydney (12,2). What stands out is that most of the least affordable cities were by UBS Global Real Estate Bubble Index rated as those with the most intense „bubble risk“. They are namely: Vancouver, London (2nd place), Sydney, Hong Kong and San Francisco. (Hartwich, 2017, p. 8)

Another striking piece of information which the Graph 10 provides, is proving the dependence between rising unaffordability of the housing market and strict urban containment policy. The logic behind this is that the more pressure is put on the urban containment policy, the more difficult and more expensive it is to build new homes. In other words, it is difficult, time-consuming and expensive to increase the supply so that the demand can be met and equilibrium in the housing market reached. It also partly explains, why the ratio in Greater London Acounts for 8,5 and only 4,5 in the UK as a whole. For this reason and some other such as out-migration, which London experienced, the supply should be unlocked so as to create a free market environment.

Graph 11: Housing affordability and Land Regulation (2+ Million metropolitan areas: 2016)



Source: HARTWICH, Oliver. 13th Annual Demographia International Housing Affordability Survey: 2017: rating Middle-Income Housing Affordability. 13. New Zealand: Demographia (Wendell Cox Consultancy), 2017, 2017(1), p. 13.

3.3 Short-term trends in london house prices

In a short term many new circumstances such as new stamp duty taxation or BREXIT occured. These are the main, which, at least temporarilly influenced the housing market in London and in England and Wales as a whole.

3.3.1 Stamp Duty Land Tax

According to the source (What is Stamp Duty?, 2016) the stamp duty system has been existing in the UK since 1694, when the war with France was going on so that to ensure enough money to finance it. As a temporary solution it showed to be unexpectedly profitable and convenient for the government that it was adapted to the whole UK taxation system. The Stamp Duty Land Tax (SDLT) as we know it today, has been in England and Wales in use since 1st December 2003. In fact, this is a tax collected when a land in the UK is purchased, independently whether both a buyer or ventor are residents or not.

However, regarding short-term changes in trends it is important to mention changes in SDLT, which took place in December 2014 and April 2016. As regards the change from December 2014, the stamp duty, which was up to this date a „slab tax“ was converted into a „progressive tax“. This resulted in a situation that payable SDLTs may vary for different property transctions depending on the sale prices. The table 4 below provides us with the information about which rates are imposed on properties within certain bands. (Stamp Duty Changes, 2017) This table also includes the change which was undertaken in April 2016. It is the 3% surcharge to the SDLT, when purchasing any additional property mostly used as a „Buy to let“ or a second home. As opposed to standard SDLT from 2014, the threshold in case of this change was stated at £40 000. Nowadays, everybody, who would like to buy the second, third, etc. property regardless of any reason, is obliged to pay the 3% surcharge. (Stamp Duty Changes, 2017)

Table 4: Stamp Duty Land Tax valid for residential properties after changes made in December 2014 and April 2016

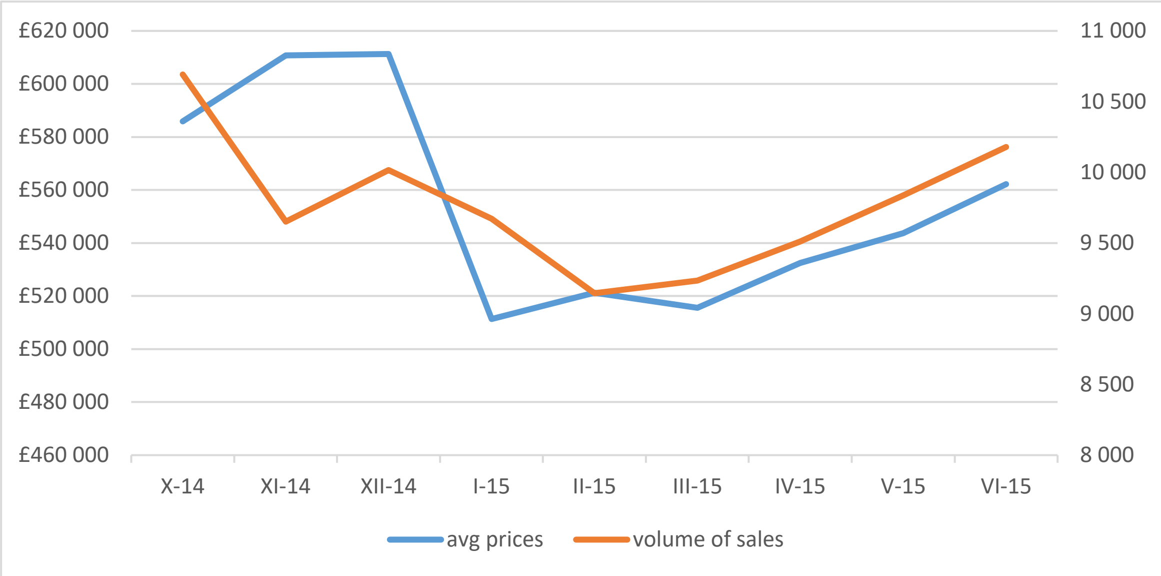
Band	Normal Rate	Additional Property
less than £125 000	0%	3%*
125 000 to £250 000	2%	5%
250 000 to £925 000	5%	8%
925 000 to £1 500 000	10%	13%
rest over £1 500 000	12%	15%
*an additional property purchased for less than £40 000 will attract 0% tax. For purchases from £40 000 to £125 000 the rate will be 3% on full purchase price		

Source: SDLT Rates in England, Wales and N.Ireland. StampDutyCalculator [online]. Wellington, 2017 [cit. 2017-05-18]. Dostupné z: https://www.stampdutycalculator.org.uk/stamp-duty-rates.htm

The logic behind the restructulisation of the SDLT originally was to reduce the extremely high demand from overseas buyers so as to stabilize the property market and prevent prices from their unfounded growth since they are becoming unaffordable for normal people or first-time buyers. The overseas buyers are mostly wealthy investors looking for an opportunity how to deposit their money to keep it safe rather than make a profit. It is highly likely that they will neither visit nor let their properties. However, according to some professionals such as those frome The Telegraph.co.uk, introducing the SDLT reform brought rather instability into the system. According to THE TELEGRAPH a (2016) Another negative result is that the new SDLT caused prices of the expensive properties to decrease while those of lower prices to increase. Especially for London the situation has been made more complicated when purchasing a property, since the average salary in London is 24,6% higher than in the rest of the UK, but the homebuyers in London are obliged to pay SDLT, which is 750% more than in the country as a whole. (THE TELEGRAPH b, 2016)

By looking at the data from HM Land registry in the Graph 10 and 11, it cannot be said that neither the renewed SDLT from 2014 nor that one from 2016 has helped to solve the problem with steadily rising house prices in London. Both of the graphs show similar trends. Shortly before the date of imposing a new stricter version of SDLT, the house prices slightly rose and the total volume of sales rocketed as potentional investors and weighing buyers wanted to finish their purchases before a new tax would be imposed. After imposing the tax both the average house prices and total volume of sales decreased remarkably as demand weakened for a few following months. However, in case of inovation of SDLT in 2014 the average house prices started steadily rising again, when the market recovered. In the case of imposing 3% surcharge on „buy to let“ and the second home the trend is not so visible as it was disturbed by the referendum about BREXIT on 24th June 2016.

Graph 12: Impact of change in Stampy Duty System in December 2014

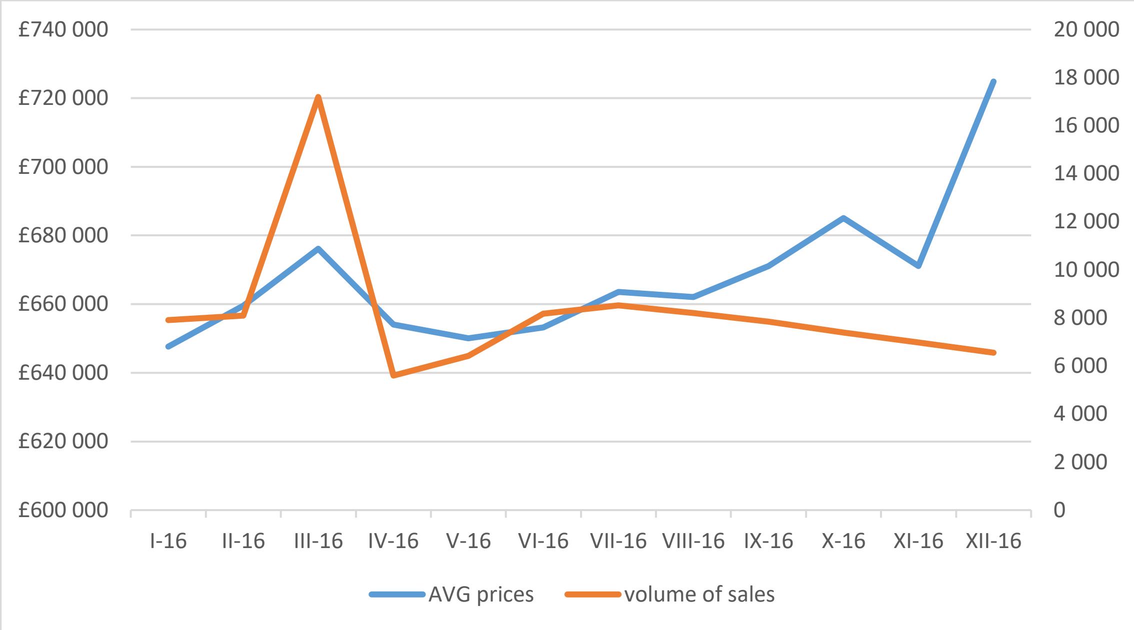


Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

3.3.2 Brexit Consequences

Although it is not clear, yet, what the exact consequences of BREXIT will be, it is at least possible to analyse the development of London housing market following six months since the referendum from 24th June 2016. The graph 13 provides the information about the total volume of sales which was slightly decreasing for the whole time after the decision about BREXIT had been made despite rising the average housing prices in Greater London. While the lower number of transactions can be explained by increased instability of the country, rising the house prices may have many reasons for such a development. The main reason for maintaing the trend of prices development is according to The Telegraph (2017) the shortage of supply, meaining that demand remains high and there are not enough houses being built to meet it. One of other reasons could be weaker sterling, development of which can be observed in the Appendix C. It says that suddenly from 23th june to 24th June it fell from 1,3072 to 1,232 and continued dropping to 1,0967 on 11th October. While Britons had no special reason for buying a property, investors from abroad saw a chance in weakened Sterling as the UK properties suddenly became cheaper for them despite restructulized SDLT. However, should the Sterling continue weakening further, inflation would surge, which would increase interest rates. Suddenly the rate of growth of house prices would probably decline. To conclude, since the referendum up to date, BREXIT contributed rather to a higher volatility in development of London housing market, than to permanent changes.

Graph 13: Impact of change in Stamp Duty System in April 2017 and consequences of BREXIT



Source: Own creation, Data produced by HM Land Registry © Crown copyright 2017

3.4 Financial Policy Committee's role in the regulation of the UK housing market

According to The Financial Policy Committee's powers over housing tools (2015, p. 8) the two ways how to enforce new rules by Financial Policy Committee are recommendations and directions. In May 2014 the Financial Policy Committee (FPC) was given a responsibility by the government to secure risks endangering the stability of the UK financial system arising from the UK housing market. Subsequently, in June 2017 the FPC received a mandate to limit the residential mortgage lending provided by regulated lenders. It is done through enabling of imposing limits on these two important indicators: Loan to income ratio and Debt to income ratio.

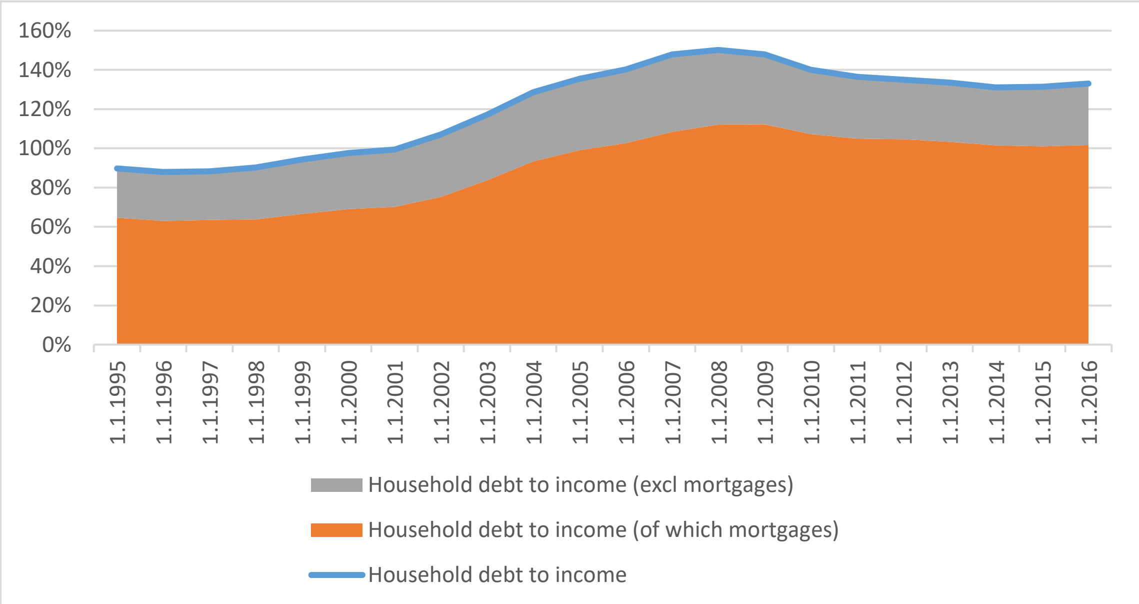
Loan to value ratio is the ratio of the value of a mortgage to the value of a property against which it is secured. The limits placed on this ratio prevent the lender from possible losses caused by borrower‘s default. Borrower defaults are proved to be more frequent in the period of times, when the prices of a properties used as a colateral decrease significantly. (The Financial Policy Committee's powers over housing tools, 2015, p. 10)

Debt to income ratio is the ratio of a borrower's outstanding debt to their annual income. It suppresses the risk arising from sudden fall in debtor's income. Such a fall may make the debtor unable to repay a mortgage, which may in larger scales lead to a crisis. (The Financial Policy Committee's powers over housing tools, 2015, p. 10)

As a result of setting the limits by FPC, regulated lenders are restricted in providing those mortgages, debtors of which exceed certain levels of the mentioned indicators. To keep the stability through this regulation helps to prevent the financial system from systemic risks caused by housing market, but not from high house prices. Imposing limits on Loan to income ratio and Debt to income ratio has a priority to that extent only, when it does not reduce a capacity of the financial system significantly. To put it in other words, the role of FPC is subordinated to the government. (The Financial Policy Committee's powers over housing tools, 2015, p. 7)

The observation of one of the ratios, namely Debt to income ratio is presented in the Graph 13. It clearly says that from 1995 to 2016 tha ratio increased from 90,09% to 133,13%. It can also be seen, that the highest proportion is created by mortgages. In the years from 2011 to 2016 it was stably hovering under the level of 140%.

Graph 14: UK household debt to income ratio



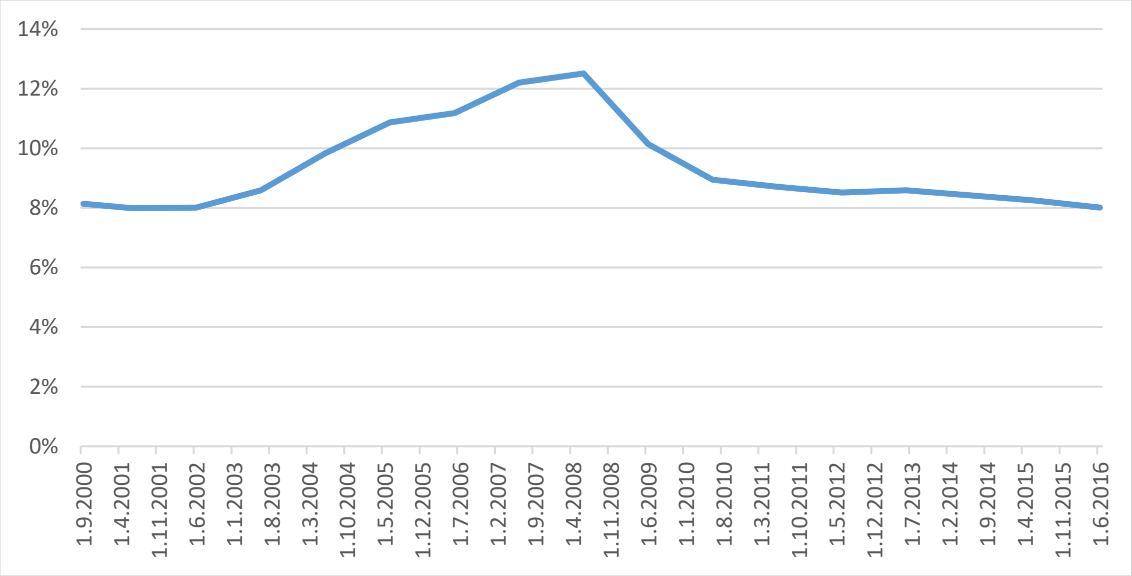
Source: Financial Stability Report, November 2016: UK household indebtness, chart 27. Bank of England [online]. London, 2016 [cit. 2017-05-18]. Dostupné z: http://www.bankofengland.co.uk/publications/Pages/fsr/2016/nov.aspx

Regarding the macroprudential policy **Estimated household debt to service** is regularly checked by the authorities. The Debt to service ratio provided below in the

Graph 14 is computed as household interest payments plus mortgage principal repayments as a share of household disposable income.

It can be seen that from the year 2000 the ratio had been constantly rising, reaching its peak of 12,82 in 2008, before the crisis came. After the crisis, the regulation was restricted and since then the value of the ratio has been hovering around 8.

Graph 15: Estimated average household Debt to service ratio



Source: Financial Stability Report, November 2016: UK household indebtness, chart 29. Bank of England [online]. London, 2016 [cit. 2017-05-18]. Dostupné z: http://www.bankofengland.co.uk/publications/Pages/fsr/2016/nov.aspx

3.5 Shortage of Supply Issue

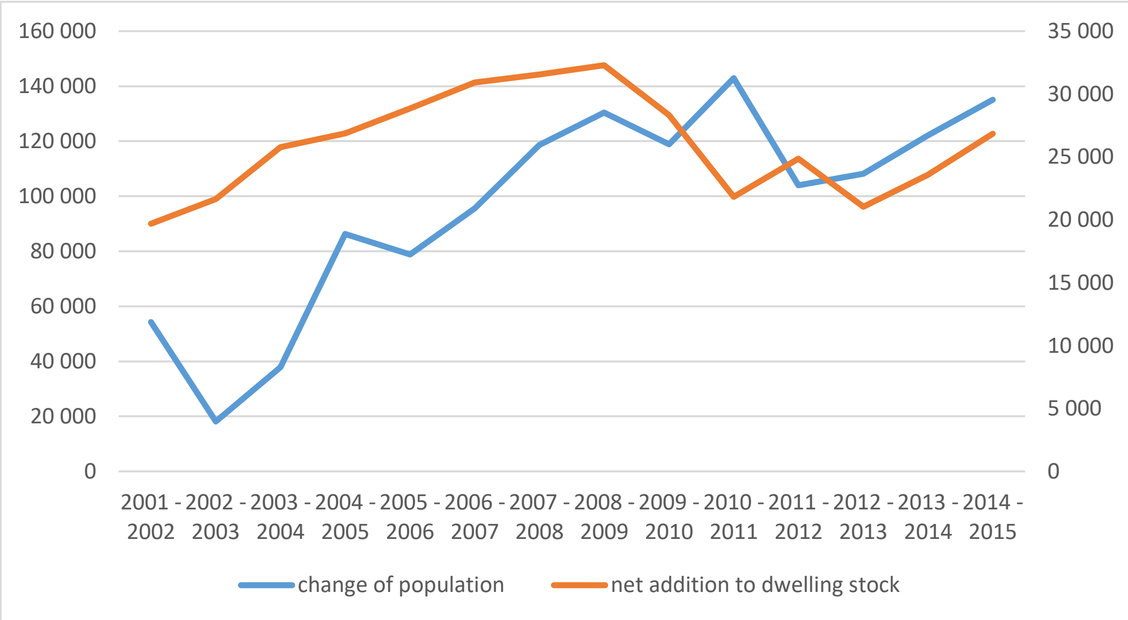
As has been proven by measuring the affordability of the housing market in London in the chapter 3.1.2, London is becoming more unaffordable by every year. This could possibly have a seriously adverse impact on the whole city, as London may not remain the attractive city, in which people can afford to live. (Marsden, 2015, p. 41)

In order to keep London in a position of an attractive city to live in, it is important to solve a problem, which is according to Holman (2015, p. 4) called London's housing crisis. According to this academic work, the way how to deal with the crisis is to make the housing supply respond to the demand flexibly enough.

To demonstrate, where the issue of the long-term shortage of supply comes from, the Graph 16 below is attached. It puts into contrast an annual growth in population and net additions to the dwelling stock in London (new builds, conversions, changes of use, demolitions). (Housing supply: net additional dwellings, 2016)

It is obvious that the population of London is growing from 2002 to 2015 by uncomparably higher average pace of approximately 96 522 people per year compared to approximately 26 007 dwellings per year. This results in a situation, when considerably increasing demand is not balanced by equally growing supply. Such a development leads to higher prices in the market, which are not based on any fundamental factor determining the house prices but on the lack of the supply responsivness.

Graph 16: Comparison of development of population and net additions to the dwelling stock in London



Source for net addition to dwelling stock: Live tables on house building: new build dwellings: Table 253a: permanent dwellings started and completed, by tenure and district (quarterly). GOV.UK [online]. [cit. 2017-05-18]. Dostupné z: https://www.gov.uk/government/statistical-data-sets/live-tables-on-house-building **Source for development of population:** Department for Communities and Local Government: 2014-based household projections: detailed data for modelling and analytical purposes. *GOV.UK* [online]. 2016 [cit. 2017-05-19]. Dostupné z: https://www.gov.uk/government/statistical-data-sets/2014-based-household-projections-detailed-data-for-modelling-and-analytical-purposes

According to Holman (2015, p. 5) the way out of this crisis may be found, when the following issues will solved.

Institutional challenges

Lengthy or impossible planning of development caused by staff and resource shortages in planning departments, lack of institutional memory within local authorities, limited partnerships working between boroughs,

Political objections to development may accurately reflect voter preferences. In such a case the main barrier is that the partnership between boroughs are limited and the important role is played by Nimbyism, too.

Procedural challenges

When the developable land is in multiple ownership, negotiations with counter parties are becoming difficult. For that reason, developers are too conservative in their applications.

To secure planning permission is costly in terms of resources and time. The uncertainty increases risk due to the asymmetry of expertise between developers and local authorities.

Fundamental resource challenges

Land does not come forward and as an effect of high land values there are expectations of continued increases of both the land and house prices.

As planning densities are too low in some areas due to already mentioned constraints usually imposed in large cities, land as a whole is inefficiently developed, which makes it more expensive. For the same reason some areas are missing infrastructure such as the underground.

As regards construction industry, it lacks capacity and in case of small companies, they are excluded by the market due to lenders‘ unwillingnes to provide the development of finance, especially to small and medium enterprises.

Conclusions

Considering all the facts mentioned in this bachelor thesis it is reasonable to state that property markets in general are highly imperfect and in reality it is impossible to reach an equilibrium, either due to the typical features of properties such as the fixed location, heterogenity, lack of market information or by interferences to the market by deep state regulations. It has been explained, however that the interferences by states are necessary so as to preserve a stability of the economy.

As regards the importance of property markets for the economies of individual states, it has been proven that a housing market relates closely to other economic fundamentals of the given country. When changes of house prices are considerable, they will highly likely influence other indicators such as GDP, wealth of households, consumption or a banking system regulation.

When it comes to the analysis, London has been experiencing a steady growth in house prices for the whole period of time from 1995 to 2016. In comparison with the pace of England and Wales as a whole it was diametrically faster. The issue that the fast pace of growth in house prices does not go simultaneously with other economic fundamentals, partly explains the affordability survey undertaken in the chapter 3.1.2. This survey shows that the pace of growth in earnings is not as high as that in house prices. Due to this fact we may assume, there is a bubble at the London property market, which may burst one day. For a confirmation of such a statement, however, a deeper analysis considering larger amount of fundamentals would be needed.

The thesis has also outlined a possible reason of the unfounded growth in the house prices in London. It is a shortage of supply, which may be the source of this problem. The main reasons are two. Firstly, too restrictive land use regulation in London. Secondly, too high demand from international buyers and investors or speculants. As an effect of these two factors the situation results in small amount of new vacancies and excess of demand at London property market.

A topic this thesis does not deal with are possible ways how to bring solutions of the London housing crisis. These might be a suitable subject for another survey.

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List of Graphs

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Appendix A

Table A1: Inflation Targeting Countries, Exchange Rate Regime, March 2001

Inflation Targeting Framework	Hungary
	Slovak republic
	Botswana
	Colombia
	Czech republic
	Ghana
	Guatemala
	Indonesia
	Peru
	Romania
	Serbia
	Republic of Thailand
	Australia
	Brazil
	Canada
	Chile
	Iceland
	Israel
	Korea
	Mexico
	New Zealand
	Norway
	Philippines
	Poland
	South Africa
	Sweden
	Turkey
	United Kingdom

Source: CARUANA, Jaime. Review of Exchange Arrangements, Restrictions, and Controls. International Monetary Fund, 2007, p 30 -31.

Appendix B

Table A2: Average prices and growth rate in house prices by district from 2009 to 2016

	2009	2016	growth rate p.a.
BARKING AND DAGENHAM	£166 509	£289 613	10,56%
BARNET	£383 371	£585 564	7,53%
BEXLEY	£209 505	£342 032	9,04%
BRENT	£322 575	£522 490	8,85%
BROMLEY	£301 857	£480 350	8,45%
CAMDEN	£599 241	£1 062 916	11,05%
CITY OF LONDON	£450 833	£907 084	14,46%
CITY OF WESTMINSTER	£742 023	£1 564 239	15,83%
CROYDON	£233 375	£372 937	8,54%
EALING	£329 077	£552 217	9,69%
ENFIELD	£266 626	£450 436	9,85%
GREENWICH	£264 893	£443 401	9,63%
HACKNEY	£313 701	£607 563	13,38%
HAMMERSMITH AND FULHAM	£555 342	£935 273	9,77%
HARINGEY	£350 110	£607 647	10,51%
HARROW	£290 974	£506 740	10,59%
HAVERING	£225 795	£360 038	8,49%
HILLINGDON	£255 468	£438 770	10,25%
HOUNSLOW	£314 123	£480 396	7,56%
ISLINGTON	£414 111	£748 891	11,55%
KENSINGTON AND CHELSEA	£1 043 375	£1 957 320	12,51%
KINGSTON UPON THAMES	£328 239	£549 179	9,62%
LAMBETH	£336 559	£588 037	10,67%
LEWISHAM	£239 504	£436 540	11,75%
MERTON	£361 685	£591 095	9,06%
NEWHAM	£206 049	£364 832	11,01%
REDBRIDGE	£255 781	£423 040	9,34%
RICHMOND UPON THAMES	£508 230	£781 295	7,68%
SOUTHWARK	£338 501	£637 340	12,61%
SUTTON	£239 867	£390 772	8,99%
TOWER HAMLETS	£334 040	£526 008	8,21%
WALTHAM FOREST	£220 072	£433 627	13,86%
WANDSWORTH	£458 798	£773 387	9,80%
Greater London	**£362 706**	**£584 846**	**8,75%**

Source: MARSDEN, Joel. House prices in London - an economic analysis of London's housing market. London: Greater London Authority, 2015. ISBN 978-1-84781-613-9, p 52.

Appendix C

Graph A1: Exchange rate GBP/EUR from May 2016 to April 2017

Source: Bloomberg Markets: GBPEUR Spot Exchange Rate. Bloomberg [online]. [cit. 2017-05-18]. Dostupné z: https://www.bloomberg.com/quote/GBPEUR:CUR