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Offshore Financial Centers and the financial crisis

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Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

Prague, June 30, 2010   Signature

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Abstrakt

Tato diplomová práce se zabývá identifikací hlavních offshore finančních center a vlivu nedávné globální finanční krize na ně. Identifikace vychází ze studie Ahmeda Zoromého (2007) a je dále rozvedena v modelu, používajícího data za jednotlivé země pro HDP, toky finančních služeb, IIP a CPIS aktiva za roky 2001-2008. Diplomová práce začíná přehledem hlavních konceptů offshore finančních center, nejdůležitější literatury, věnující se tomuto tématu a vysvětluje vývoj definic, podle kterých jsou offshore centra identifikována. Dále je představen původní model Zoromého a na něj navazující rozšířený model, pracující s panelovými daty. Práce dále poskytuje popis hlavních offshore center identifikovaných v novém modelu spolu s následnými dopady finanční krize. V poslední části jsou analyzovány preference českých firem ohledně offshore center. Práce je ukončena souhrnem hlavních zjištění z předložených modelů a nabízí možnost, jak mapovat vývoj offshore center v době po finanční krizi.

JEL klasifikace: F21, F23, G15, G20, H25

Klíčová slova: Offshore finanční centra, finanční služby, CPIS, International Investment Position, finanční krize, přímé zahraniční investice

Abstract

This thesis considers the identification of main offshore financial centers and the impact of the recent global financial crisis on them. The identification follows the ideas proposed by Zoromé (2007) and is developed further in a model based on data for each country's GDP, financial services and portfolio assets (International investment position, CPIS) for the years 2001-2008. The thesis begins with an overview of the main concepts of offshore financial centers and explains the development of definitions by which they are identified. The original model by Zoromé is introduced and a new model based on the panel data is presented. It then provides a summary of the main offshore financial centers identified by the proposed model and the influence of the financial crisis on them. In the last part, outlook on the preferences of the Czech companies is provided. The thesis concludes with the main findings from the proposed models and offers a further possibility to map the development of the offshore centers after the financial crisis.

JEL classification: F21, F23, G15, G20, H25

Keywords: offshore financial center, financial services, CPIS, International Investment Position, financial crisis, foreign direct investments

Table of contents:

List of abbreviations

AML   Anti-money Laundering

BIS   Bank for International Settlements

BOP   Balance of Payments

CIA   Central Intelligence Agency

CPIS   Coordinated Portfolio Investment Survey

FATF   Financial Action Task Force

FDI   Foreign Direct Investments

FSF   Financial Stability Forum

IFC   International Financial Center

IBC   International Business Company

IIP   International Investment Position

IMF   International Monetary Fund

OECD   Organization for Economic Cooperation and Development

OFC   Offshore Financial Center

PPP   Purchasing Power Parity

SIFC   Small International Financial Center

TJN   Tax Justice Network

Introduction

The first references about what the Offshore Financial Center actually is can be found in literature in the beginning of 1970's. At this time, a couple of small areas of the world slowly began to take over a significant amount of the global financial transactions. Prior to this time, most of these areas were recognized as "Tax Havens", known especially for tax avoidance and the reduction of tax liabilities. The first signs of such activities can be found in the mid 1920's, when Liechtenstein was trying to attract foreign investments by establishing the Offshore Trust Law. Later on in the 1930's Bermuda created Offshore Company Laws and became the first recognizable Corporate Tax Haven[1].

Scientists and politicians all over the world were in search for the proper definition of this emerging issue. The main point was that from the 1970's, all the above mentioned small areas were no longer considered only as Tax Havens. As Zoromé (2007) states, "many variants of the term [Offshore Financial Center] have been used, including International Financial Center (IFC), International Banking Center (IBC), International Banking Facilities (IBFs), and Offshore Banking Center. All these terms broadly refer to the same concept of offshore financial center." Since the name became commonly used, many people have attempted to come up with a definition, which would clearly define the Offshore Financial Center (OFC). However, Zoromé pointed out the limitations of all the definitions which were so far proposed and with a model using regression is looking for main characteristics, which are needed to be covered when looking for a definition of the OFC.

The thesis is divided into several parts. In the first part, main reasons of the worldwide interest in the OFCs are explained. Moreover, evolution of the OFC definitions and the main literature focusing on the OFCs is described. Second chapter deals with the original study by Ahmed Zoromé. It describes the main characteristics of the original model, based on the premise that the OFCs can be

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[1] More from the history of the tax havens can be found at
http://www.offshoreoverseas.com/

identified by substantially high level of financial services to GDP. Furthermore, the limitations of the original study are mentioned.

New model, elaborated in chapter three and four eliminates possible limitations of Zoromé's approach to obtain more significant and better results. Data for the model are arranged as a panel (time series over the years 2001-2008) and cover up to 609 observations of 195 countries, which is in terms of observations about five times more than the original model. There is also a comparison to the findings by Zoromé and description of countries newly identified as OFCs. Chapter four extends the model by adding total sum of financial services instead of their difference.

Fifth part of the thesis puts together results from the two introduced models and shows the impact of financial crisis on the offshore centers. Because of the lack of the data for the year 2009, main emphasis is laid the development between the years 2007 – 2008.

Chapter 6 characterizes the world's most important OFCs, according to the estimated level of net exports of financial services to GDP from the third part of the thesis. Description is important to understand the advantages offered by the OFCs. Furthermore, mostly used legal forms in the OFCs are discussed.

Last chapter provides the outlook on the Czech Republic. Main offshore destinations favored by the Czech companies are described and the development of the number of offshore owners of the Czech companies between the years 2006 – 2009 is provided. Moreover, data on foreign direct investments for the years 2007 and 2008 are compared to show the difference in these two years.

The thesis concludes with the main findings from the proposed models and offers a further possibility to map the development of the offshore centers after the financial crisis.

1   Definitions of the OFCs

1.1   Reasons of worldwide interest in the OFCs

The main thoughts from this part of my thesis will be based on the paper by Zoromé (2007). As I mentioned in the introduction, many researchers have tried to come up with the all-embracing interpretation of OFC, so that it would be easy to recognize which countries comply with it and which do not.

The difference between tax avoidance and tax evasion is the thickness of a prison wall.

There are many reasons for the discussion about an exact definition of OFC. First of all, it is needed to take a look at some numbers. As stated in the report by the IMF (2000), "Staff calculations based on BIS data suggest that for selected OFCs, on balance sheet OFC cross-border assets reached a level of US$4.6 trillion at end-June 1999 (about 50 percent of total cross-border assets), of which US$0.9 trillion in the Caribbean, US$1 trillion in Asia, and most of the remaining US$2.7 trillion accounted for by the IFCs, namely London, the U.S. IBFs, and the JOM."[2]

Rohatgi's estimates about the OFCs are even higher, about USD 5 trillion, divided as follows:

- USD 1 trillion – asset protection trusts
- USD 1 trillion – other offshore trusts
- USD 1 trillion – shipping
- USD 1 trillion – bank deposits

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[2] Just short explanation of the abbreviations used in the text – IFC stands for the International Financial Centers, IBFs are the "International banking facilities, which allow depository institutions in the United States to offer services to foreign residents and institutions free of some Federal Reserve requirements and some state and local income taxes" (Federal Reserve Bank of New York, 2007) and finally, JOM stands for Japanese Offshore Market, which is Japanese version of the IBF

- USD 750 billion – captive insurance companies
- USD 250 billion – mutual funds[3]

Furthermore, Zoromé (2007) comes up with a more detailed description of the banks in the offshore centers: "Calculations based on BIS data suggest that, by end-December 2003, the external position of offshore banks in terms of assets (in accordance with the BIS list) had reached US$1.9 trillion, compared with US$16 trillion of total bank assets. By the same date, external loans (i.e., claims of OFCs on the rest of the world) had reached US$1.5 trillion or 13 percent of the world cross-border bank claims, as reported to the BIS (US$11.9 trillion). However, because not all banks or OFCs report to the BIS, it is more likely that these figures are underestimated […] Regarding securities, although OFCs are recognized as significant hubs for the administration of mutual funds, assets under management in OFCs are estimated at around US$400 billion, a rather small portion of the assets managed worldwide (estimated at US$12 trillion)"

Already the first mentioned amount of total cross-border assets is more than interesting. When taking a look at the bank's assets and the fact that about six of the main offshore centers account for most of the world's offshore deposits (Rohatgi, 2002), it is obvious why OFCs are a point of such great interest by various international organizations (IMF, OECD, Forum2000…) and governments all over the world.

1.2   Literature focusing on the OFCs

On the field of identification of the countries according to their economic activity, Zoromé (2007) was the first one trying to estimate their importance using the macroeconomic values and statistical methods. This paper will be more described in the next chapter. However, Zoromé was not the only one focusing on the OFCs in general.

Lane and Milesi-Ferreti (2010) focus on the cross-border investment in group of states and jurisdictions, which they call the Small International Financial

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[3] (Rohatgi, 2002)

Centers (SIFC). Even though there is used a similar approach to a paper by Zoromé (2007), namely the dataset structure using the CPIS, IIP and the balance of payments data, the other work is surprisingly not mentioned at all. Main goal of the paper is to assess the role of small in international financial centers in the global financial system. The paper shows a global comparison of external balance sheets, the share in global aggregate and other comparison to the other financial centers. In the appendix to the paper, there is the list of countries and territories assumed as SIFCs. However, no key for choosing the particular country to the sample of SIFCs is provided. For example, due to the fact that values for other countries including financial centers like Cyprus, Hong Kong, Ireland, Luxembourg and Singapore were already estimated in the previous papers (Lane, Milesi-Ferretti, (1999) and (2006)), these countries are omitted from the sample.

Rose and Spiegel (2006) perform the cost-benefit analysis of the OFCs and their consequences for their neighbors, based on the effects on the banking system. They say that the "financial activity in OFC is usually dominated by the provisions of intermediation services for larger neighboring countries". Moreover, they are trying to show that OFCs provide "considerable benefits in the form of competitive stimulus for their neighbor's financial sectors, which might outweigh the adverse effect in a form of possible tax evasion or illegal activity". Not only bilateral, but also multilateral approach in the testing is applied, showing that the closer the distance from an OFC, the higher effect on competitiveness of the specific country's banking sector.

Banking sector of the OFCs is also discussed in another earlier IMF working paper by Errico and Musalem (1999). They take a look at regulation of the offshore banking sector. According to this paper, OFCs are an "important and growing intermediation channel for emerging economies, as suggested by a large and growing share of OFC assets and liabilities in relation to these countries." They mention three main reasons why the IMF should stay involved in offshore banking system control. Firstly, offshore banks are in general more vulnerable to solvency and foreign exchange risks due to the favorable regulation frameworks. Moreover, financial systems of offshore economies are more vulnerable to reversals in capital flows, rapid accumulation of short-term external debt, unhedged exposure to

currency fluctuations and selective capital account liberalization. Last, but not least, offshore banks suffer from bad governance due to the lack of transparency. Errico and Musalem further discover that not only banks, but also the non-banking corporations play an important role in offshore markets. From all the above mentioned, role of offshore banking in the earlier financial crises in Asia and Latin America in the 1990's is explained.

On the other hand, according to Loomer, Maffini (2009), role of the offshore financial centers in a recent financial crisis is often "exaggerated or misconstrued". This opinion is further developed in paper by Raftopoulos and Banks (2009), who say that "there is no evidence that OFCs played any role in the economic crisis and little evidence that fraud in conjunction with offshore accounts is any worse than fraud within onshore countries." They also point out that actually the welfare states and their "excessive tax burdens […] encourage tax evasion, leading to capital flight to OFCs".

Unlike the rigid analyses in the case of Rose and Spiegel (2006) or Ericco and Musalem (1999), Christensen and Hampton (2005) deal with the connection between offshore centers and tourism in small island economies (SIE). They start the article with saying that both industries have "common characteristics including a high degree of mobility, rising global demand and labor-intensive customer service operations (and that both) require advanced transport and telecommunication infrastructure." Furthermore, they realize there is a positive relationship and a connection between offshore finance and tourism and that both of them can be seen as "highly advanced global forms of capitalism." However, no direct links between the development of tourism and the further development of offshore finance in SIEs was found.

Dharampala and Hines (2006) examine factors influencing which country becomes a tax haven. They say that the "returns to becoming a tax haven are greater for well-governed countries." Moreover, they add that the "inability to tailor tax policies to maximum national advantage simply adds to the many woeful costs of poor governance."

1.3   OFC or a Tax Haven?

In this chapter, main features the OFCs and the tax havens will be discussed. Tax Justice Network (TJN), independent research organization launched in the British Houses of Parliament issued a briefing paper to identify tax havens and OFCs. In public opinion, tax havens and offshore centers are usually synonyms. However, TJN paper (2007) provides a different outlook. They say that "tax havens and OFCs are closely related, although not every jurisdiction would fall into both categories. They are also similar in that, while almost any jurisdiction can have some tax haven or OFC features, a smaller number are usually identified as `pure' tax havens or OFCs." Main idea behind the tax haven is such system of law, which enables the jurisdiction to impose low or zero taxes.

The Organisation for Economic Cooperation and Development (OECD) formed a list of possible harmful preferential tax regimes of all their member countries. As we can find in the text, "it focuses on identifying the factors that enable tax havens and harmful preferential tax regimes in OECD Member and non-member countries to attract highly mobile activities, such as financial and other service activities." (OECD, 1998)

Furthermore, four main key factors in identifying tax havens are mentioned:

a)   *No or only nominal taxes;* No or only nominal taxation on the relevant income is the starting point to classify a jurisdiction as a tax haven.

b)   *Lack of effective exchange of information;* Tax havens typically have in place laws or administrative practices under which businesses and individuals can benefit from strict secrecy rules and other protections against scrutiny by tax authorities thereby preventing the effective exchange of information on taxpayers benefiting from the low tax jurisdiction.

c)   *Lack of transparency;* A lack of transparency in the operation of the legislative, legal or administrative provisions is another factor in identifying tax havens.

d)   *No substantial activities;* The absence of a requirement that the activity be substantial is important since it would suggest that a jurisdiction may be attempting to attract investment or transactions that are purely tax driven (OECD, 1998).

The first part regarding low or zero taxes is clear; as it was explained above. The second factor mentions the lack of effective exchange of information, which basically equals the secrecy rules to protect the companies. Lack of transparency of the legislative forces is also in a way connected to the secrecy keeping. As stated in the report of TJN (2007), "the fourth criterion of no substantial activities was rejected by the new US administration as announced by Treasury Secretary O'Neill in July 2001 and it was formally withdrawn in the OECD's 2002 Progress report."

1.4   Evolution of the OFC definitions

From all the possible definitions, just the most important ones will be mentioned. These definitions can be also found in the paper by Zoromé (2007). The classification is made according to the year in which they were first used:

"Offshore centers are defined as cities, areas or countries which have made a conscious effort to attract offshore banking business, i.e., nonresident foreign currency denominated business, by allowing relatively free entry and by adopting a flexible attitude where taxes, levies and regulation are concerned." (McCarthy, 1978)

"An offshore banking centre may be defined as being typically a small territory in which the conduct of international banking business is facilitated by favorable and/or flexibly administered tax, exchange control and banking laws, and in which the volume of banking business is totally unrelated to the size and needs of the domestic market. Offshore banking activity is essentially entrepôt business with foreign currency funds being deposited in a given centre from one foreign source and then on-lent to another foreign borrower." (Jonhston, 1982)

"International financial centers are distinguished from their domestic counterparts by three important characteristics. First, international financial centers deal in external currencies, which are *not* the currency of the country where a center is located. […] Second, offshore centers are generally free of the taxes and exchange controls that are imposed on domestic financial markets. […] Third,

offshore financial centers are primarily but not exclusively for nonresident clients." (Park, 1982)

"Offshore banking is financial intermediation performed (primarily) for nonresident borrowers and depositors. The principal attraction of an offshore banking center (for banks as well as participants) is simply the absence of intrusive and expensive official regulation, including taxation and controls over the portfolio decisions of the banking community." (Dufey G., Giddy, I., 1994)

"An OFC [is] a centre that hosts financial activities that are separated from major regulating units (states) by geography and/or by legislation. This may be a physical separation, as in an island territory, or within a city such as London or the New York International Banking Facilities (IBFs)." (Hampton, 1996)

"An OFC is a country or jurisdiction that provides financial services to nonresidents on a scale that is incommensurate with the size and the financing of its domestic economy." (Zoromé, 2007)

1.5   Financial Stability Forum report

In the report on the offshore centers made by Financial Stability Forum (2000) there are criteria, which are to some extent similar to the definitions proposed so far. It consists of the definitions of pure tax havens, as mentioned above and it also uses some of the pure OFC definitions stated in the previous chapter:

"Offshore financial centers (OFCs) are not easily defined, but they can be characterized as jurisdictions that attract a high level of non-resident activity. Traditionally, the term has implied some or all of the following (but not all OFCs operate this way):

- Low or no taxes on business or investment income
- No withholding taxes
- Light and flexible incorporation and licensing regimes
- Light and flexible supervisory regimes
- Flexible use of trusts and other special corporate vehicles

- No need for financial institutions and/or corporate structures to have a physical presence
- An inappropriately high level of client confidentiality based on impenetrable secrecy laws
- Unavailability of similar incentives to residents." (Financial Stability Forum, 2000)

Furthermore, the report mentions the fact that for the OFCs, the most important clients are the non-residents. As they further mention, the "volume of non-resident business substantially exceeds the volume of domestic business. For most OFCs, the funds that are on the books of the OFC are invested in the major international money-centre markets." (Financial Stability Forum, 2000)

1.6 Zoromé's definition of the OFCs

In the already well mentioned paper (Zoromé, 2007), OFCs are identified based on the economic statistics. For Zoromé, definitions of OFCs don't properly capture the main feature of the offshore centers, which is for him the provision of financial services to nonresidents, namely export of financial services. He says that "although one could argue that any given economy, to some extent, provides financial services, the peculiarity of OFCs is that they have specialized in the supply of financial services on a scale far exceeding the needs and the size of their economies." As already mentioned in the previous chapters, Zoromé proposed his own definition of the OFCs, which, according to him captures its most important characteristic:

"An OFC is a country or jurisdiction that provides **financial services** to nonresidents on a scale that is incommensurate with the size and the financing of its domestic economy." (Zoromé, 2007)

He further continues by stating that it does not matter what the main motivation is for the nonresidents using the OFCs (if it is the low level of taxation, high secrecy or any kinds of missing regulations) or the nature of the activities (banking, tax vehicles…), but mainly "the setting up of an OFC usually results from a conscious effort to specialize the economy in the export of financial services, in

order to generate revenues that often constitute a critical proportion of the national income. The receipts of these exports typically consist of:

- financial services billed to nonresidents by entities domiciled offshore (bank fees for advisory services and financial engineering; intermediary service fees, such as those related to lines of credit, financial leasing, and foreign exchange; commissions on funds administration, and on securities transactions, including brokerage, placements of issues, underwritings, arrangement of swaps, options, and other hedging instruments; services related to asset management; and security custody services, etc.)

- registration/renewal fees for licensed entities (offshore banks, insurance companies, collective investment vehicles, international business companies, trusts and estates, etc.)" (Zoromé, 2007)

It is important to notice that Zoromé uses the term "critical proportion of the national income". On the example of the British Virgin Islands and the Cayman Island he shows that the amount of fees collected accounts for 55 and 14.5% of government revenues respectively and for 13 and 4.1% of the whole GDP for the year 2000.

Similarly to this approach, IMF mentions in the Coordinated Portfolio Investment Survey Guide (2002) that "From a statistical point of view, SEIFiCs [note: small economy with an international financial center] can be characterized as jurisdictions that have financial institutions engaged primarily in business with nonresidents and having financial systems

1. with external assets and liabilities out of proportion to domestic financial intermediation designed to finance domestic economies and

2. where enterprises owned or controlled by nonresidents play a signifiant role in providing financial services to nonresidents. (International Monetary Fund, 2002)"

1.7 Tax Justice Network – Financial Secrecy Index

TJN, above mentioned government organization, prepared a list of countries based on a group of different economic and non-economic criteria – the

Opacity Score. There are twelve indicators used for the Opacity Score. First four of them are about the knowledge of beneficial ownership, three indicators deal with the key aspects of corporate transparency regulation and the last five check the international cooperation of the jurisdiction. Combining the Zoromé approach (which will be explained later in detail), the opacity score and created set of Global Scale Weights, TJN obtains a list, which, according to them "offers a measure of the potential harm done by each jurisdiction (Tax Justice Network, 2009)."

2 Empirical model by Zoromé

This chapter is devoted to the original study by Ahmed Zoromé from IMF. It is a baseline for a model, which will be elaborated in the next two chapters. This part describes the main characteristics of the original model. Furthermore, the limitations of the model will be mentioned. New model on panel data will try to eliminate all the possible limitations to obtain more significant results

2.1 Data collection

Zoromé's approach is different to all the previous proposed definitions mainly because he doesn't focus on the regulatory characteristics, but rather on the economic statistics. Use of these data makes defining OFCs less dependent on subjective characteristics like the level of taxes, transparency, effective change of information or use of special corporate vehicles. As stated above, Zoromé's definition takes the export or provision of financial services as the main feature used for identification of OFCs:

"An OFC is a country or jurisdiction that provides *financial services* to nonresidents on a scale that is incommensurate with the size and the financing of its domestic economy."

To calculate the amount of the export of financial services, Zoromé uses a combination of three main indicators/ratios. The first one is the statistics which can be calculated from the balance of payments, ratio of net financial services exports to GDP. However, as Zoromé states, it is problematic to use this ratio, because most of the countries or jurisdictions tend not to report all the financial services entries in their balance of payments, some of them don't collect data about the balance of payments at all.

2.2 Proxy indicators

To get over the limitations of missing data regarding the balance of payments, Zoromé introduces two more proxy indicators, which are to supplement

the B/P statistics. He states that the "[proxy] indicators based on the premise that exports of financial services from OFCs are generally matched by underlying capital flows from partner countries, which in turn, affects the assets and liabilities position of the OFCs."

There are two indicators used in the model, IMF's Coordinated Portfolio Investment Survey assets and the balance of payments' International Investment Position assets. Further description of these data can be found in the next chapter.

2.2.1 *CPIS assets*

The first indicator is based on the Coordinate Portfolio Investment Survey (CPIS). It is an IMF statistics, which "provides information on individual economy year-end *holdings of portfolio investment securities-equity securities and debt securities*-valued at market prices, cross-classified by the country of issuer of the securities."[4] Because of the fact that the same variable will be used in the new model, further description can be found in the next chapter.

2.2.2 *Filtered IIP*

The second statistics is the filtered International Investment Position (IIP). The reason for using another indicator is that although there are 75 countries participating in the CPIS survey, Zoromé wanted to cover highest possible number of jurisdictions. Data for this ratio are based on the IMF's International Financial Statistics (IFS). IIP is explained in the BPM5 balance payment manual:

"The international investment position is the balance sheet of the stock o external financial assets and liabilities. The financial items that comprise the position consist of claims on nonresidents, liabilities to nonresidents, monetary gold and SDRs (Special Drawing Rights)."[5]

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[4] Source: International Monetary Fund: http://www.imf.org/external/np/sta/pi/cpis.htm

[5] Source: http://www.imf.org/external/pubs/ft/bopman/bopman.pdf, section 461

Total external assets of the IIP are divided into foreign direct investments, portfolio investments, financial derivates, reserve assets and other investment assets. Filtered IIP assets are then total IIP assets, excluding foreign direct investments, reserve assets and all assets belonging to general government and monetary authorities (Zoromé, 2007). In his regression, Zoromé uses a sample of 70 jurisdictions, which contributed to the IIP report.

On the grounds that submission of neither CPIS nor the IIP statistics is required, a last slight adjustment had to be made. Series of CPIS and IIP portfolio assets were combined to obtain one series containing CPIS assets for countries submitting only CPIS, then the filtered IIP for countries submitting only IIP and in the end the highest value of the two series for economies that submitted both CPIS and IIP portfolio data with different values (Zoromé, 2007).

2.3   Regression

From all the data mentioned above, ordinary least square (OLS) estimate was run. Dependent variable in this model is the ratio of net exports of financial services to GDP. Some of the countries provided this value directly. In the other cases, the ratio was estimated in order to construct a homogenous series for all jurisdictions. As Zoromé (2007) mentions, "for countries/jurisdictions providing CPIS and international investment position data, the series Max (CPIS, IIP) […] was first assembled. Then, an ordinary least square regression was run on the sample of countries for which both series (net exports of financial services and Max (CPIS, IIP) were available…For countries and jurisdictions for which filtered IIP and financial services net exports were available [another] regression was run"

For this reason, there must be two regressions run separately. Furthermore, jurisdictions were divided in two groups according to their level of national income, thus each regression is run twice for different datasets according to the income groups. The equation for countries providing only CPIS or both of the two proxy variables (CPIS, IIP) plus the data on the net financial services exports looks as follows:

$$NFSE = \alpha + \beta(Max[CPIS, IIP]) + \mu \ ^6$$

For countries providing only the data to the IIP and the net financial services exports is the equation following:

$$NFSE = \gamma + \delta(IIP) + \varepsilon \ ^7$$

Results of the regressions are basis to estimate the data on the net financial services exports for the rest of the countries which didn't provide one.

2.4   Regression results

In both groups of countries (high income, low and middle income), the filtered IIP statistics gave better results in terms of significance. Further comparison of the groups between each other shows that the high income countries are better in both datasets when it comes to significance and the coefficient of determination (R-squared).

Combination of the values of the financial net services exports observed by countries with estimates used from both types of regressions makes the required series of data on the net exports of financial services for all the jurisdictions. The series is an important cornerstone for creating an OFC indicator.

First of all, the mean for both of the income groups was calculated. The standard deviation was chosen as the main indicator of qualification of country as OFC. As Zoromé explains, "although it is classically interpreted by statisticians as a measure of the degree of dispersion of the data from the mean value, we can also, based on its very construction, state the standard deviation is an "average" or "expected" variation around an average. *It indicates how far a typical member of a sample is from the mean value of that sample."* Hence, the standard deviation is

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[6] NFSE is the ratio of net financial services export, α and β are parameters and μ represents the error term.

[7] Similarly to the previous case, γ and δ are the parameters for the regression and ε is the error term.

used as the cut-off point and all the data above this level are considered to be suspicious and thus the indicator of the OFC.

2.5   Limitations of Zoromé's approach

In the previous sub-chapters, the basic idea of Zoromé's model to identify the offshore centers was introduced. Even though it is the first serious attempt to determine the offshore financial centers based on economic statistics, the model still faces certain limitations. First of all, as always when defining the OFCs, the model suffers from lack of good and detailed data. That is the reason why the model uses two proxy indicators (CPIS and filtered IIP) and runs regressions to estimate the net financial services export.

Furthermore, the categorization of countries into the income groups handicaps some of them. In the Tax Justice Network report (2007), there is an example of two countries (Barbados and Uruguay), which are in the previous model considered to be OFCs and under one single ratio would fall below the level of standard deviation.

The TJN report further refers to the significance of choosing the proper cut-off point. To be more precise, according to TJN, two times the level of standard deviation should be considered to be the main breaking-point between the "normal" countries and OFCs.

The fourth issue is the sample of countries, which were used. The sample of 104 countries used in the model didn't include several jurisdictions generally considered to be OFCs, in particular, Andorra, British Virgin Islands, Liberia, Liechtenstein, Monaco and others. However, this omission is caused by a lack of data provided by these countries. To cover all areas, different measure would have to be used. However, no other suitable economic indicators for above mentioned countries are available.

The TJN report (2007) also mentions the fact that Zoromé " largely captures offshore management on personal wealth, but largely overlooks offshore management of corporate structures, which is an integral part of the OFC and tax

haven criteria […] Including these activities in a statistical framework would require additional indicators of a different nature."

The last but not least limitation is that the model uses data only for one year, which provided the best coverage at that moment. This measure restricts the model for a particular year and doesn't allow estimating of the overall development of the particular country's OFC status. The model also consists only of about 100 observations for both CPIS and filtered IIP assets and it is further even more divided.

The model, which will be introduced in the next chapter, will eliminate the limitations of Zoromé's study. However, when it comes to the sample of the countries, there isn't any possibility to obtain reasonable economic data about some of the offshore jurisdictions like British Virgin Islands, Liechtenstein or Monaco.

3 Empirical model based on the panel data

This part of the thesis will be devoted to the new model, which is based on the previously explained ideas. The original model was changed in order to obtain more significant and better results. According to the high numbers of the cross border assets held in the OFCs it is evident that there is a possibility to assess the offshore centers only by the economic indicators, thus none of the extra dummy variables will be used.

Zoromé use the year 2003 as a baseline for his identification and his model consists only of 63 observations for the CPIS/IIP data and 58 for the filtered IIP. These two datasets are further divided into two income groups, which lower the quality of the model significantly. This paper introduces a new way how to identify the OFCs, based on the data on financial services, GDP at the purchasing power parity (PPP), CPIS assets and IIP portfolio assets from the years 2001 – 2008. The fact that the observations over eight years were taken into account makes the model and the final estimates way more accurate. Countries providing data only for some of the mentioned years were also taken into the sample.

3.1 Indicators of the OFC and the data structure

The main indicator of the OFC used in this paper is the net export of financial services to GDP. The importance of using financial services as a measure of the OFC comes from the fact that the records in balance of

Even though this approach was sometimes criticized for its lack of detailed data (see TJN report (2007)), it is still the best possible way to identify the offshore financial centers using economic indicators.

GDP in US dollars is used as the overall indicator of economic activity of the particular country. However, PPP adjustment is used instead of GDP calculated in current prices. Reason for this change is following –all the models dealing with the offshore centers always suffer from lack of the data. When the data for the financial services are available, there can be problem finding GDP estimates in current prices for jurisdictions, which don't publish the official GDP statistics

(Bermuda, Cayman Islands, Guernsey, etc.). Because of the fact that GDP in this model is used only as a *measure*, results should not be much affected as far as the dataset is consistent. Zoromé for example uses in his study for the "problematic" jurisdictions GDP estimates from CIA World Factbook, which are however PPP adjusted. Moreover, PPP adjustments to GDP can be found in some other papers about the OFCs (see IMF Offshore Financial Centers Report (International Monetary Fund, 2008)).

To help estimate the net financial services exports for the countries that didn't provide the data for them, there will be similar proxy indicators used in this new model – CPIS assets and IIP portfolio assets. However, because of the fact that this model takes the advantage of the highest possible amount of observations, only one series will be used – maximum of the two values.

The first indicator is based on the Coordinate Portfolio Investment Survey (CPIS). It is a statistics supported and collected by the IMF, which "provides information on individual economy year-end holdings of portfolio investment securities-equity securities and debt securities-valued at market prices, cross-classified by the country of issuer of the securities."[8] As mentioned in the CPIS Survey guide (2002), the main purpose of the CPIS is "to improve statistics of holdings of portfolio investment assets in the form of equity, long-term debt, and short-term debt." The whole idea behind CPIS started already in the year 1992, when IMF published the Report on the measurement of International Capital Flows. During the years 1992-1997, data on the portfolio investments suffered from different measures taken by the participating countries. IMF's goal was to "promote the idea of an internationally coordinated benchmark survey of long-term portfolio investment holdings to facilitate cross-country comparisons, permit data exchanges, and encourage standardization and best practice."

As we can find further in the description of this statistics, coverage of the CPIS is augmented with information from two other surveys, namely Securities Held as Foreign Exchange Reserves, and Securities Held by International

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[8] Source: International Monetary Fund: http://www.imf.org/external/np/sta/pi/cpis.htm

Organizations. However, these data sets are not disclosed at a detailed level, as the data are reported on a confidential basis. (International Monetary Fund, 2002)

The second indicator is taken from the IIP statistics and also comprises the portfolio investment assets. Some of the countries derive the CPIS assets directly from the computed IIP portfolio assets. According to the IMF, "portfolio investment is a significant component in many countries' IIP, and the Fund-sponsored Coordinated Portfolio Investment Survey (CPIS) helps countries develop stock data on portfolio investment assets on a consistent basis in accordance with the *BPM5* methodology." (International Monetary Fund, 2002). Differences in these two values might occur by using incorrect valuation, adjustments or because of a different coverage.

As Zoromé (2007) explains, because of the fact that the CPIS is compiled on a market-value basis (which makes it more accurate), it should be used in instances where it is higher than IIP. On the other hand, when IIP is higher than CPIS, the first mentioned statistics will be used, because CPIS is in general more limited than IIP due to the reasons of confidentiality.[9]

Zoromé also came with the idea of the filtered IIP; nevertheless, in this case the IIP portfolio assets offer already satisfactory coverage and are the only ones which can be combined with the CPIS in order to get the longest series possible. For the same reason, categorization of countries in the income groups will be omitted. This precaution should give better results in the end.

3.2   Data sources

Data for the model were collected from various different sources. First of all, main source for GDP (PPP) was the IMF World Economic Outlook database. However, this database doesn't provide data for some of the countries which are considered to be offshore centers. Due to this fact, the list was extended by the information from the CIA World Factbook. The IMF data were in US Dollars and

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[9] See more on the report on CPIS, pp.4: https://www.imf.org/external/pubs/ft/bop/2003/03-11.pdf

the data provided by the CIA World Factbook were in the billions of US Dollars, rounded for three decimal places. The Coordinated Portfolio Investment Survey (CPIS) data were taken from the global tables from the IMF website. Data on the International Investment Position (IIP) portfolio assets were available also from the IMF; however, they were retrieved from DSI Campus Solution, which collects the whole IMF's International Financial Statistics. All the financial stock assets data were compiled in US Dollars.

Last but not least, the data on the exports and imports of financial services were taken from the International Trade in Service Database by the United Nations (UN) Statistics Division. Reason to use UN instead of the IMF database was that the IMF provides in their public external database on the BOP data on services only as a whole and doesn't report the financial services extra according to the BOP 5 manual.

3.3 Regression

First of all, the regression needed to be run in order to estimate the values of net exports of financial services for countries that didn't provide one. Because of the lack of the CPIS data for the year 2000, the model starts with the observations from the year 2001. In this case, the dataset was based as a panel data for 195 countries through 8 years 2001-2008[10].

Gretl statistical software was used to estimate the model and the original dataset was prepared in Microsoft Excel. In order to find the most suitable data, a brief check and adjustment of the dataset was needed. From the first regression it was clearly seen that Luxembourg is an outlier, which lowers the quality of the model. Thus, its data on the net exports of financial services were excluded from regression as well as from the cut-off point estimates. Similar procedure was used also in the other papers on OFCs.

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[10] Some of the countries didn't provide the data for the whole period 2001-2008. However they were still included in the model in order to get more precise estimates of the financial services to GDP.

Because of the fact that the dataset is made as a panel, an ordinary OLS estimate wasn't the best suitable. Instead of it, one of the main approaches to the fitting of models using panel data – fixed effect model was chosen as the best possible estimator. Use of the fixed effects (group dummies) eliminates the unobserved effect and thus reduces the threat of omitted variable bias. The equation looks as follows:

$$NET\_GDP_{it} = \alpha + \beta MAX\_GDP_{it} + \varepsilon_{it}$$

The index i refers to the unit of observation (country) and t refers to the time period, α and β are the coefficient and ε_{it} is the error term for i-th observation at the time t. Dependent variable – "NET_GDP" is the percentage of the net exports of financial services to GDP. Variable "MAX" was first calculated as the maximum value of the two variables - CPIS assets and IIP portfolio investment assets. Reason to combine the two variables was to obtain a larger dataset for the regression. Then the new values "MAX_GDP" were calculated as a percentage to GDP. Const is the constant generated by the model. Below are the results of the regression, more detailed output can be then found in the appendix 2:

Dependent variable:	NET_GDP			
Variable	Coefficient	std. error	t-statistics	p-value
Const	0,00126534	0,000249092	5,08	5,73e-07***
MAX_GDP	0,00046534	3,70E-05	12,58	6,17e-031***
coefficient of determination	0,49949			

Table 1, Fixed effects model, net exports/GDP (PPP) 2001-2008, own calculations

Because of the fact that the model is used only to show the positive correlation between the financial services statistics and the proxy variable, there is no need to perform the tests for variables. Coefficients from the model are used to estimate the amount of net services to GDP – "NET_PPP" for countries that provided at least one of the data used as a proxy (IIP portfolio or CPIS assets). In this case, the proxy variables were used as a kind of instrumental variables to help estimating the flows of financial services[11]. Significance of the empirical results

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[11] Same method can be also found in the paper by Zoromé (2007)

supports the idea that even though the values of net exports of financial services are taken from the balances sheet and thus they are counted as flows from residents to non-residents, they can be still interpreted by the stock values of CPIS or IIP assets.

3.4   Results of the regression

The observed values of the net exports together with the estimates using the value of "MAX_PPP" amount to a very high number of 1065 observations. In the paper by Zoromé, the standard deviation was used as the threshold to indicate the OFC. As mentioned above, the standard deviation is not perfectly suitable, thus a different measure was made. From all the countries that provided the data for financial services and GDP, 90% percentile was counted and this number (0,2406%) was used as the indication limit of the offshore centers[12].

Over all the years for which the data were available, there were all together 23 countries identified as the OFCs. Identification of a country as OFC means that its value of net exports of financial services to GDP (PPP) was for at least one year above the level of the 90% percentile. The countries indicated as offshore centers are Austria, Bahamas, Barbados, Bermuda, Cayman Islands, Cyprus, Guernsey, Hong Kong SAR, Ireland, Isle of Man, Jersey, Latvia, Lebanon, Luxembourg, New Caledonia, Panama, Republic of Korea, Singapore, Sweden, Switzerland, United Kingdom, USA and Vanuatu. However, some of the countries' net exports got over the limit number only couple of times; Austria, Lebanon, New Caledonia and Republic of Korea only once within the observed time period, The Bahamas twice and Sweden three times. The whole list of countries according to their appearance as OFC is in the next table.

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[12] The percentile was counted from the whole sample of countries over the years 2001-2008, with excluded values for Luxembourg.

Number of times country identified as OFC							
Austria	1x	USA	3x	Bermuda	8x	Luxembourg	8x
Lebanon	1x	Latvia	5x	Cayman Islands	8x	Singapore	8x
New Caledonia	1x	Cyprus	6x	Guernsey	8x	Switzerland	8x
Rep. of Korea	1x	Barbados	7x	Ireland	8x	United Kingdom	8x
Bahamas, The	2x	Hong Kong SAR	7x	Isle of Man	8x	Vanuatu	8x
Sweden	3x	Panama	7x	Jersey	8x		

Table 2, OFC status - frequency

Furthermore, in the table below, there is a comparison of the year 2003 with the findings by Zoromé. The countries determined to be OFCs by both of the studies are typed in bold:

Countries identified by the model based on the panel data, focus on the year 2003	Countries identified by the study by Zoromé (2003)	All countries identified by the model based on the panel data
		Austria
	Bahamas	Bahamas, The
	Bahrain	
	Barbados	Barbados
Bermuda	**Bermuda**	**Bermuda**
Cayman Islands	**Cayman Islands**	**Cayman Islands**
Cyprus	**Cyprus**	**Cyprus**
Guernsey	**Guernsey**	**Guernsey**
Hong Kong SAR	**Hong Kong SAR**	**Hong Kong SAR**
Ireland	**Ireland**	**Ireland**
Isle of Man	**Isle of Man**	**Isle of Man**
Jersey	**Jersey**	**Jersey**
Latvia	**Latvia**	**Latvia**
		Lebanon
Luxembourg	**Luxembourg**	**Luxembourg**
	Malta	
	Mauritius	
	Neth. Antilles	

		New Caledonia
Panama	**Panama**	**Panama**
		Rep. of Korea
Singapore	**Singapore**	**Singapore**
		Sweden
Switzerland	**Switzerland**	**Switzerland**
United Kingdom	**United Kingdom**	**United Kingdom**
	Uruguay	
		USA
Vanuatu	**Vanuatu**	**Vanuatu**

Table 3, identified OFCs, source: Zoromé, own calculations

Out of 22 countries in the other study, 15 were identified by the new model. The Bahamas and Barbados are countries which were identified in different years, but not in the year 2003. Their results of net exports to GDP were 0.2361% and 0.2003% respectively, which means that they were very close to the cut-off point. Moreover, Bahamas level of CPIS assets to GDP is more than 235%, which is very alarming.

There are five countries that have been identified by the other study, but not in any year in the model based on the panel data – Bahrain, Malta, Mauritius, Netherlands Antilles and Uruguay. On the following graph there is a situation what would happen if the data provided by these countries were substituted by the estimates based on the value of CPIS or IIP assets.
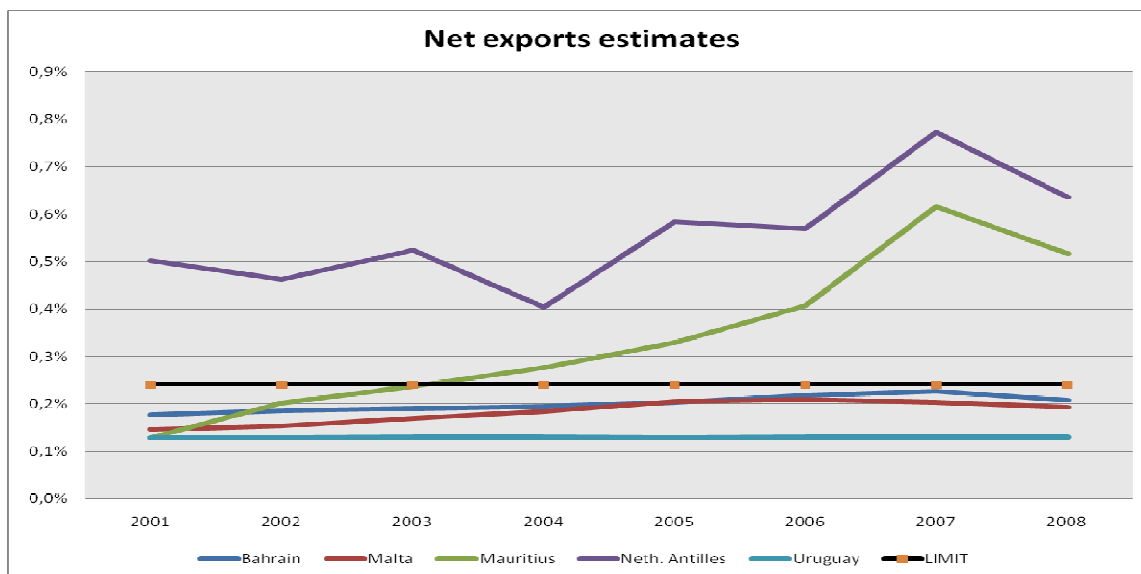
Chart 1, Net exports of financial services to GDP, estimates, source: own calculations

It is clearly seen that in case of Netherlands Antilles and Mauritius, the data on the flows of financial services do not correspond to those provided by CPIS. This probably means that all the offshore activities of these two countries are excluded from the financial services exports[13], however still included in the CPIS.

Compared to the estimated values in the chart two, in the next chart, there are the original values of financial services net exports for the observed countries. To make it easier to understand, color pattern is maintained in both of the charts the same.

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[13] It is seen especially in the case of Netherlands Antilles, where the originally provided data on the net exports of financial services to GDP were even below zero in the years 2002-2004 and 2007-2008.
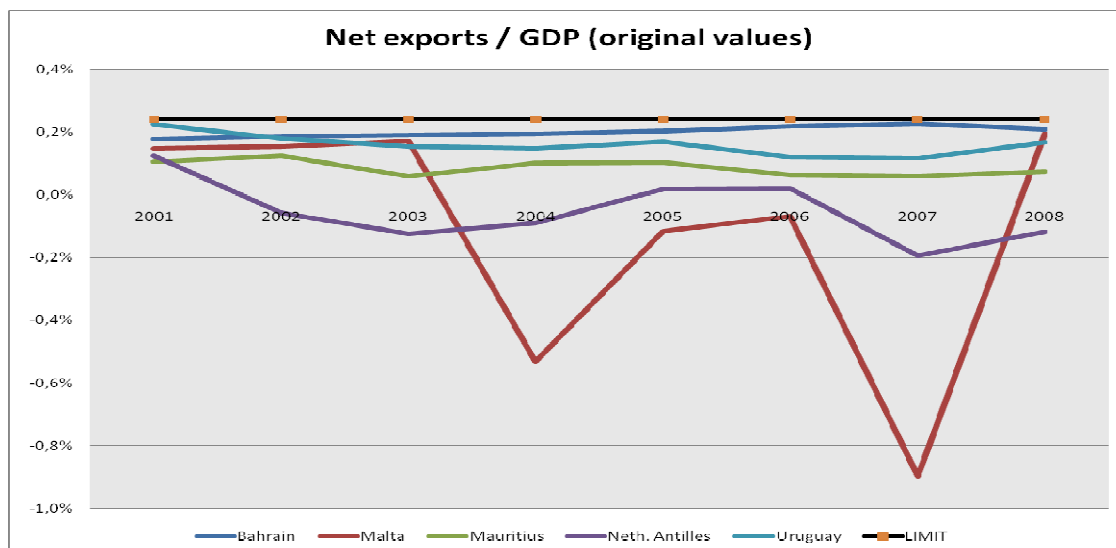
Chart 2, Net exports of financial services to GDP, original values, source: own calculations

For the other three countries, results based on the CPIS/IIP assets correspond to the level of the balance of payments data provided by the UN database. However, there is a very high level of the value of CPIS/IIP assets to GDP for Bahrain and Malta, which should be also alarming and possible indicator of offshore activity[14]. On the other hand, the level of CPIS/IIP assets to GDP for Uruguay never goes above 9%. This supports the hypothesis that Bahrain and Malta should be counted as the offshore centers while Uruguay is just a victim of the Zoromé model configuration.[15]

3.5   Average values

In the following chart, average net exports of financial services to GDP are shown. The average is based on the values from the years 2001-2008. It shows that according to the financial services, major offshore centers over the whole observed period are Bermuda, Switzerland and Channel Islands, getting over the

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[14] Level of Bahrain's IIP assets to GDP is highest in the year 2007 and counts for more than 215%. In case of Malta, the highest value can be found in the year 2006 (177% of GDP).

[15] If it wasn't for the division of the countries in the income groups, Uruguay would not get above the level of one standard deviation.

level of 99% percentile, followed by Luxembourg, Cayman Islands, Hong Kong, Ireland, Singapore and Vanuatu getting over the 95% percentile.[16]
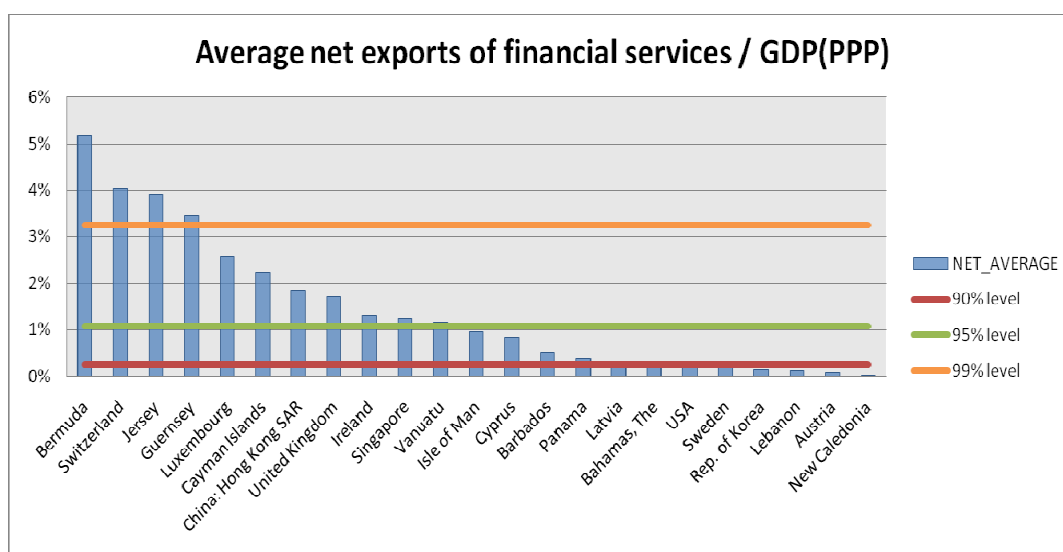
Chart 3, Average net exports of financial services, 2001-2008, source: own calculations

3.6   Newly identified countries

There are six countries which were over the years at least once identified as the offshore centers and which are missing in the other model. The countries identified as new are Austria, Lebanon, New Caledonia, Republic of Korea, Sweden and the USA.On the graph below, there is clearly seen that most of the countries got above the level in the last year or two of the observation period (2007 – 2008).

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[16] Original values for Luxembourg were omitted and substituted with the estimates using CPIS. Otherwise, Luxembourg would be high above all the other countries with the average amount of 33.67% of net exports of financial services to GDP.

Net exports / GDP (original values)

Legend: Austria, Lebanon, New Caledonia, Rep. of Korea, Sweden, USA, LIMIT NET/GDP
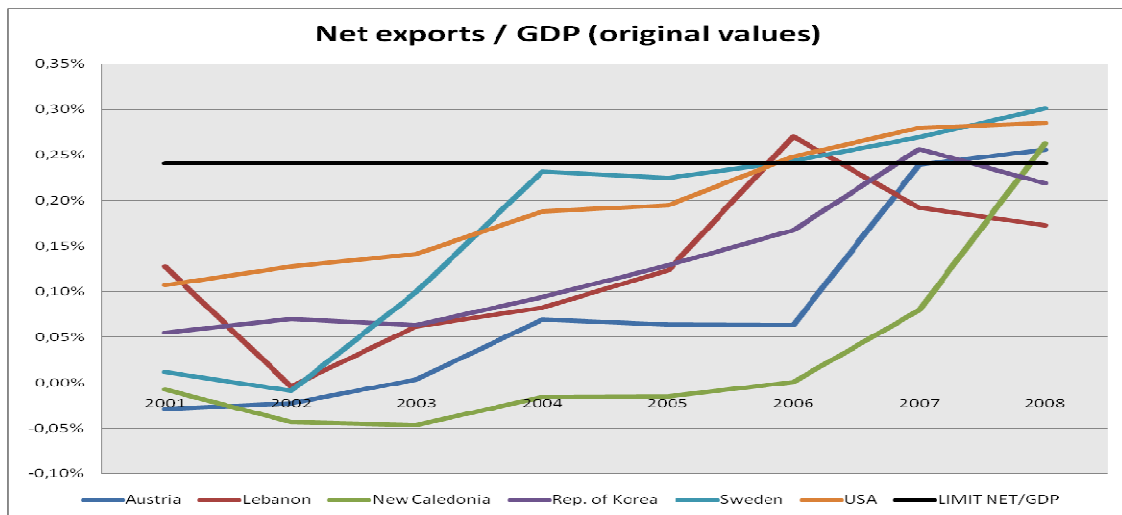
Chart 4, Newly identified countries - Net exports of financial services to GDP, source: own calculations

The only exception is Lebanon which got over the limit of 0.2406% of net exports to GDP in the year 2006. The growth of net exports to GDP in these countries is interesting and should not be left without explaining.

3.6.1 *Austria*

Austria is a developed economy and as a member of the European Union and the EMU doesn't have the prerequisites to be the OFC. However, there is certain evidence which supports this assumption. First of all, it was until the year 2009 on the OECD grey-list in "A PROGRESS REPORT ON THE JURISDICTIONS SURVEYED BY THE OECD GLOBAL FORUM IN IMPLEMENTING THE INTERNATIONALLY AGREED TAX STANDARD" (2009), as a country with zero agreements with other countries/jurisdictions on the internationally agreed tax standards. Signing the agreements gives the country the rights to receive information on individuals suspected of tax evasion. According to the Reuters, "Along with Switzerland, Belgium and Luxembourg, Austria was one of four major European financial centers on the OECD's grey list when it was first

published by the organization ahead of a G20 meeting in April."[17] After signing needed amount of the treaties, Austria was taken from the list at March 20, 2009.[18]

Moreover, Tax Justice Network in the year 2009 identified Austria as number 12 jurisdiction according to the Financial Secrecy Index.[19] On September 9, 2009 there was a new law passed, so called Administrative Execution Act (Amts-hilfedurchführungsgesetz[20]), which determines under what conditions foreign countries can get information about the bank accounts in Austria. One of the main parts is that the foreign country has to come with the proof of criminal activity. There is also a tax advantage for the nonresidents in Austria when setting up an investment fund. In case that the shareholders are tax non-Austrian tax residents, there is no need to pay the capital gains tax and the dividends are paid in their full tax exempt amount.
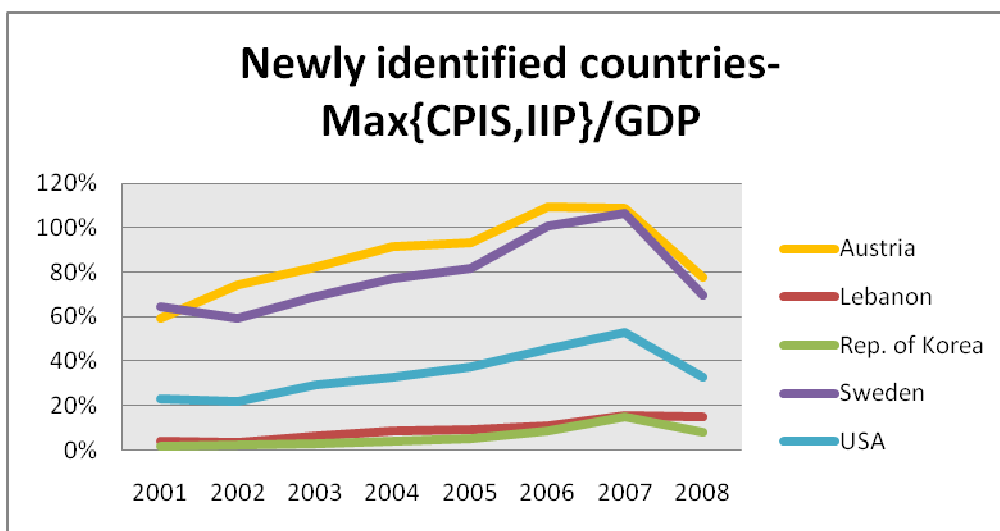
Chart 5, Newly identified countries – Max{CPIS,IIP}/GDP source: own calculations

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[17] Taken from the Reuters website, published on 23.9.2009
http://in.reuters.com/article/idINLN59687420090923

[18] http://www.guardian.co.uk/business/2009/mar/20/g20-tax-haven-blacklist

[19]http://www.financialsecrecyindex.com/documents/FSI%20-%20Rankings%20-%202009.pdf

[20] The whole body of the Administrative Execution act can be found at:
http://www.ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2009_I_102/BGBLA_2009_I_102.pdf

3.6.2 *Lebanon*

Lebanese economy was destroyed after a civil war in the year years 1975-1990. After the end, the whole country was left in ruins. In order to attract back the investors, Lebanese government announced already in the year 1983 tax laws establish the offshore companies (decree law 45 and 46). There are several advantages arising from these laws:

"Offshore companies are exempt from the income tax on their profits and are instead assessed a flat annual tax that amounts to LP 1,000,000 ($600) regardless of the amount of their profit. This tax is levied in full from the first year of the company's operation regardless of the month in which the company starts to operate. (…) Capital gains derived from the sale or transfer of offshore companies' fixed assets in Lebanon are subject to the regular tax of 6% provided in Article 45 of DL 144."[21]

On the graph of net exports to GDP there is a constant growth of the exports until the end of 2005 and then a rapid downturn after the year 2006. Possible reasons for this change in the trend are the 2006 and 2007 conflicts with Israel and Palestine respectively.

The amount of Lebanon's CPIS/IIP assets to GDP is highest in the year 2007, however it is still below 20%. Lebanon is mentioned as a country with offshore center according to the FSF's Working Group on Offshore Financial Centers (Financial Stability Forum, 2000), and also according to Erico and Musalem (1999).

3.6.3 *New Caledonia*

In case of New Caledonia, there is no possibility to compare the provided values of net exports/GDP to the financial assets, because neither the CPIS nor the IIP data are available. Nevertheless, New Caledonia is the only identified

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[21] Retrieved from :
http://www.professionalsaa.com/tax/Additional Tax information in Lebanon.htm

jurisdiction which amount of net exports to GDP is growing rapidly despite the financial crisis. The economic background doesn't support the idea of offshore center. It has 25% of the world's reserves of nickel and this industry generates 90% of all the exports. The other major sector is tourism. The corporate tax is 30% (for all the businesses except the nickel-related industries, where the tax goes up to 35%), another reason to reject the offshore center hypothesis.

3.6.4 *Republic of Korea*

Republic of Korea is in the identification very similar to New Caledonia. Both of the countries were identified only once within the observed period. Neither of them is on a blacklist of OECD or in the Financial Secrecy Index list. Unlike New Caledonia, Republic of Korea publishes the CPIS as well as the IIP data, so that there is a possibility to compare them to the net exports. From the values of the maximum of these two assets to GDP in the graph it is clear that Republic of Korea cannot be considered to be real offshore financial center.

3.6.5 *Sweden*

Swedish economy has always been well-known for their extraordinary high taxes, reporting the overall tax burden (ratio of all the taxes to GDP) up to 48.2% in the year 2007.[22] . According to the OECD, it is the world's second highest tax burden in the world after Denmark. However, Sweden offers many various investment incentives to attract foreign investors. According to the Local magazine, "by using an investment vehicle known as *kapitalförsäkring*, residents of Sweden can essentially avoid capital gains taxes from equity investments."[23] The amount of both CPIS and IIP assets to GDP is constantly rising over time. The only minor downturn is in the last year of observation. In general, the level of the assets fluctuates at about 100% of GDP, which is close to the major OFCs.

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[22] More information together with the whole list of the countries can be found at the OECD website: http://www.oecd.org/document/9/0,3343,en_2649_201185_41498313_1_1_1_1,00.html

[23] It is important to see that this investment vehicle is only applicable for Swedish residents. The whole system of the kapitalförskäkring is explained at the website http://www.thelocal.se/25756/20100326/

3.6.6 *The USA*

The United States of America cannot be considered to be an OFC in general. However, due to the powers of local governments and their different preferences, tax incentives for foreign investors differ from state to state. Preferred regimes are especially in the states of Colorado, Delaware, Nevada, Utah and Wyoming. Further information about tax advantages of the US governments can be found in the chapter six. Values of MAX{CPIS,IIP} / GDP for the USA is fluctuating from 20-50%.

3.6.7 *Other countries*

Most of the countries imply all the financial activities in the value of financial services. However, there are some exceptions. One of them is Aruba, mentioned as suspicious also in the studies by Zoromé (2007) and Rose, Spiegel (2006). Aruba reports negative net exports (it shows that they are importers of financial services) plus their both CPIS and IIP assets are at about 20% of GDP. It is a sign that the offshore activity is not included in both CPIS/IIP and financial services. In case of the other jurisdictions, known as the offshore financial centers, the main issue is that usually there are no data available for any of the variables except GDP.

3.7   Possible model extensions

Lane, Milesi-Ferretti (2010) introduced another way to deal with these countries using a model based on the CPIS and IIP *liabilities*. The advantage of using this model is the fact that thanks to the detailed structure of the CPIS it is possible to calculate the liabilities for a particular country from the claims of other countries, which publish the data. Naturally, this model faces limitations already from the fact that not all of the countries in the world participate in the survey and thus, the value of estimated liabilities is not complete. Moreover, as Leung, Unteroberdoerster (2008) mention, "China (and also Taiwan POC) does not participate in the CPIS, so there are no data on liabilities vis-à-vis China." This finding lowers the quality of the estimate for the whole Asian region, especially for Hong Kong SAR. However, the approach is definitely worth mentioning.

Another option is to use the sum of both assets and liabilities to derive the total financial services as a possible indicator of openness of the economy. This extension is further elaborated in the next chapter.

4 Model extension

This model comes out from the previous findings and takes into account indicator of the openness of economy – sum of both exports and imports of financial services. Basic idea behind the model is the same as in the previous case. However, in order to estimate the values of total financial services, adjustments in the instrumental variable were made.

4.1 Description of the new dataset

First of all, a new variable was made from the data on exports and imports of financial services. Variable "SERVICES" is a total sum of exports and imports financial services for a particular country in a particular year. Furthermore, to be able to estimate the values of total financial services for countries which haven't provided both of the export and import values, new series of the instrumental variable needed to be compiled.

Firstly, data on the CPIS assets and liabilities were put together and the new series was called "CPIS TOTAL". Then, the same thing was done with the IIP portfolio assets and liabilities for all the countries in the sample, obtaining a new variable, "IIP TOTAL". From these two datasets, maximum value was estimated. Variable "MAX_TOTAL" in this case looks as follows:

$$MAX\_TOTAL = Max\{CPIS\ TOTAL,\ IIP\ TOTAL\}$$

Furthermore, both of the new variables were adjusted to obtain the ratio of financial services and instrumental variable to GDP, "SERVICES_GDP" and "MAX_TOTAL_GDP" respectively.

4.2 Extended regression

Similarly to the previous model, a new regression was run in order to estimate the total financial services for the countries which didn't provide one, but provided the data on either total IIP portfolio assets and liabilities or CPIS assets and liabilities. Fixed effects model was used to obtain the best possible values.

The regression equation is following:

$$SERVICES\_GDP_{it} = \gamma + \delta MAX\_TOTAL\_GDP_{it} + u_{it}$$

The index i refers to the unit of observation (country) and t refers to the time period, γ and δ are the coefficient and u_{it} is the error term for i-th observation at the time t. Results of the regression are in the next table (complete output from the statistical software can be found in the appendix 1):

Dependent variable: Variable	SERVICES_GDP Coefficient	std. error	t-statistics	p-value
Const	0,00436203	0,000425272	10,26	3,84e-022***
MAX_TOTAL_GDP	0,000280096	3,11574e-05	8,990	9,00e-018***
coefficient of determination	0,398589			

Table 4, regression results, source: own calculations

Compared to the previous model, both the intercept and the maximum value are significant on the maximum 99% level of confidence. The coefficient of determination fell to 0.399, which is however still a good value for such type of estimate. Total number of observations providing both financial services and total values of CPIS or IIP is 609. Putting together original values with the estimates using maximum of CPIS and IIP, the total number of observations goes up to 1066.

Following the idea of the previous model, 90% percentile was counted as the indication limit of the OFC status. After extracting outlier found already in the previous model – Luxembourg, the value of 90% percentile counts for 1.0587% of GDP. Altogether over the observed period of years (2001-2008), 19 countries were identified at least once. The countries are Barbados, Bermuda, Cayman Islands, Cyprus, Guernsey, Hong Kong SAR of China, Ireland, Isle of Man, Jersey, Luxembourg, Malta, Mauritius, Panama, Romania, Singapore, Solomon Islands, Switzerland, United Kingdom and Vanuatu.

Compared to the previous findings, there are four new countries identified – Malta, Mauritius, Romania and the Solomon Islands. However, Romania and the Solomon Islands were identified by the model only once within the observed period – Romania in the year 2007 and Solomon Islands in the year 2001. Furthermore, some countries from the previous model got below the limit value of financial services to GDP – Austria, Bahamas, Latvia, Lebanon, New Caledonia, Republic of Korea, Sweden and the USA.

In the table below, there are the average values of financial services to GDP for all the identified countries together with the limit line of 1,0587% of GDP.
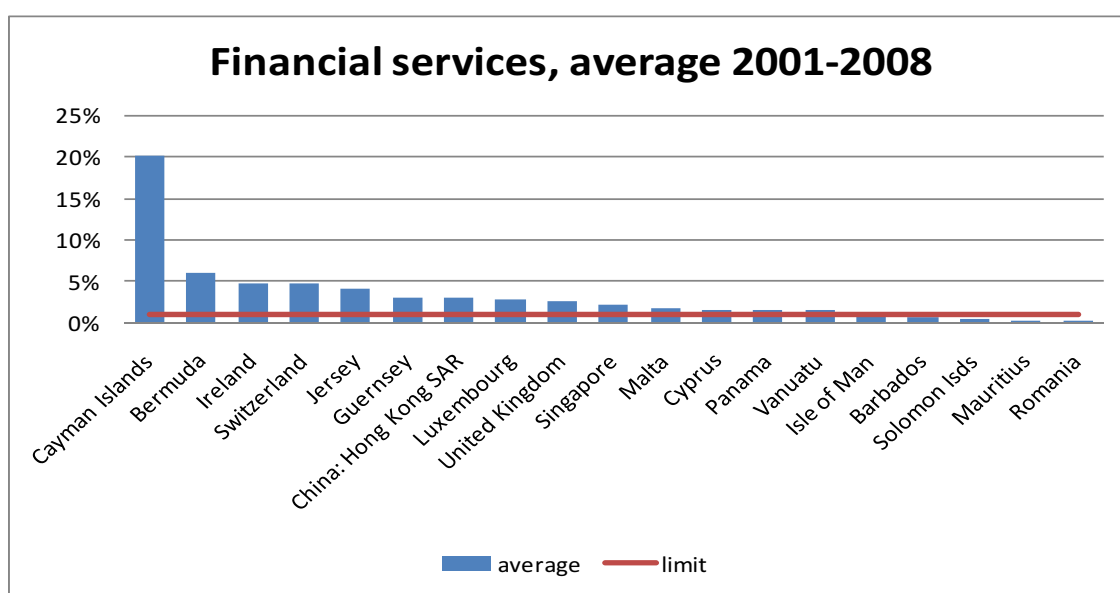
Chart 6, Total financial services, average of years 2001-2008, source: own calculations

Except the huge difference in case of the Cayman Islands, results are similar to the level of net exports of financial services. It is clearly seen that according to the average overall level of the openness of economy, Cayman Islands are far above all the other countries and jurisdictions. Its level of financial services to GDP grows from 14.5% in 2001 up to 28% in the year 2007 and then falls rapidly to 19.5% in the year 2008[24]. However, these values are not observed

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[24] More information about the year-by-year development of the indicated countries can be found in the appendix 1.

financial services (because Cayman Islands don't provide this information in the balance of payments), but the estimates using CPIS and IIP data.

Further estimates together with the comparison of total services and the net exports can be found in appendix 2 and also in the next chapter about the financial crisis.

5 Recent financial crisis

One of the aims of this paper was to show that the financial crisis affected the OFCs more than the rest of the world. Many of the representatives of the world's leading economic institutions are trying to find evidence, that the OFCs are not the real victims of recent financial crisis, but rather the originators. OFCs are also forced to implement measures which would result in the loss of their comparative advantage thanks to the preferable tax and secrecy regimes. These measures are based on the idea, that offshore centers are the real originators of recent financial crisis.

Moreover, jurisdictions with favorable tax regimes or strict bank secrecy policies are accused of helping money laundering. Major state representatives on the London meeting of G20 in April 2009 stated:

"We agree to take action against non-cooperative jurisdictions, including tax havens. We stand ready to deploy sanctions to protect our public finances and financial systems. The era of banking secrecy is over. We note that the OECD has today published a list of countries assessed by the Global Forum against the international standard for exchange of tax information (OECD, 2010)."

However, the Financial Action Task Force (FATF), international group associating government representatives and setting the global standards against money laundering, issued on February 18th, 2010 a list of countries not cooperating with the anti-money laundering (AML) standards. The list contains 8 countries with insufficient regulations and 20 more countries having deficiencies in AML strategies, but commit to address them. Of all these countries mentioned by the FATF, there isn't a single one of the offshore centers identified in this model.[25]

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[25] Two main articles about the AML: http://www.fatf-gafi.org/dataoecd/34/29/44636171.pdf

http://www.fatf-gafi.org/dataoecd/34/28/44636196.pdf

Purpose of this paper isn't however to show if the OFCs are in fact the originators or victims of a crisis and to judge them. Higher emphasis is put on showing, how much has recent financial crisis affected the offshore jurisdictions.

5.1   Development of financial services

This subchapter provides the comparison of values of financial services for the years 2007 and 2008, thus the first year of the financial crisis. Data on financial services and also CPIS for the year 2009 are not yet available, thus there is no possibility to check the recovery in financial services; however, the fall in the first year of crisis is described.

It is interesting to see that, while OFCs on average are facing major downturn in the year 2008, all the other countries for which we have data are growing on a constant level despite the crisis. Average values over the sample of countries which provided required data were counted. Reason for using average values compared to GDP instead of total was that not all the reporting countries provided the data for all the years in the period 2001 – 2008 and thus the average has a higher information value. In the next chart, there is a comparison of values of average net exports of financial services to GDP and total financial services to GDP for OFC countries and the rest of the world.[26]

Chart 7 shows that the development of average values of financial services (both net exports and total for the OFCs) faces a big slump in the year 2008. Until the year 2007 there is a constant growth of total financial services with a peak of 3.74% of GDP in 2007 and then the value falls to 2.5% of GDP in the year 2008.

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[26]Countries ranked as OFCs in this sample are Austria, Bahamas, Barbados, Bermuda, Cayman Islands, Cyprus, Guernsey, Hong Kong SAR of China, Ireland, Isle of Man, Jersey, Latvia, Lebanon, Luxembourg, Malta, Mauritius, New Caledonia, Panama, Republic of Korea, Romania, Singapore, Solomon Islands, Sweden, Switzerland, United Kingdom and Vanuatu.
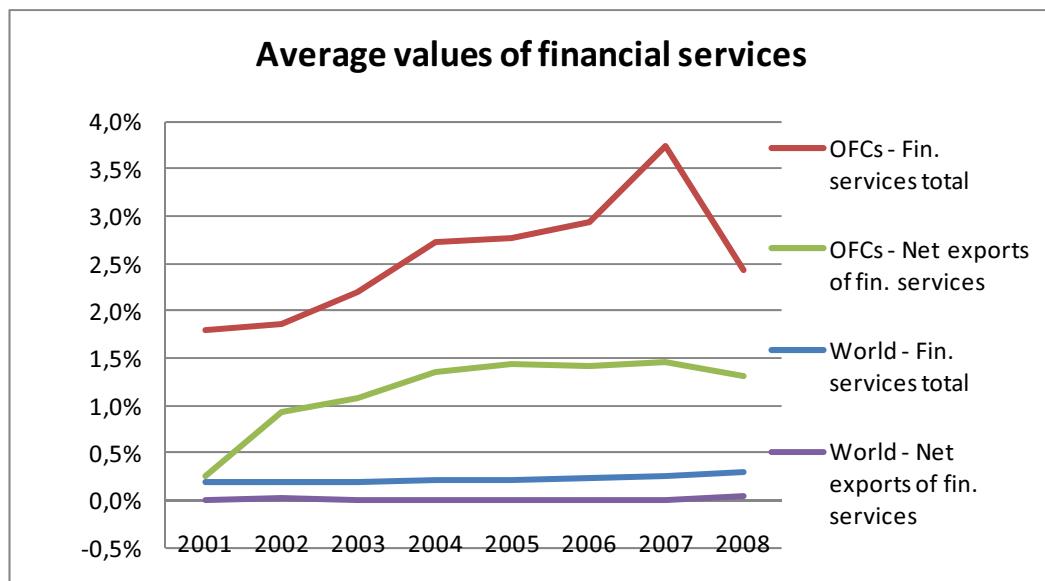
Chart 7: Average values of financial services, source: own calculations

Compared to the fall of the identified countries, both the average level of aggregate financial services to GDP and level of net exports of financial services to GDP for the rest of the countries in the sample are constantly rising even in the year 2008. This finding supports the idea that offshore centers were, according to the data on financial services affected more by the financial crisis than the other countries. Moreover, many of the jurisdictions fell below the identification of the financial services to GDP and thus, according to this model, lose the OFC status.

5.1.1 *Change in net exports of financial services*

More detailed perspective is offered in the following table, where the values of net exports of financial services for selected countries from the first model are. It is based on the rate of net exports of financial services to GDP for the years 2007 - 2008. A huge slump in the amount of net exports can be seen in the year 2008, however for some countries the fall started already earlier[27]. Data for the years 2007 – 2008 are a percentage annual change of values from the original model, estimating the flows of financial services by the original values of CPIS or IIP.

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[27] Detailed data on the year-by-year development of both net exports and total financial services to GDP can be found in the appendix 1

Country	Difference	Country	Difference	Country	Difference
Barbados	-75,61%	**Guernsey**	-28,23%	**Latvia**	-75,27%
Bermuda	-8,25%	**China: Hong Kong SAR**	-93,56%	**Luxembourg**	-27,01%
Cayman Islands	-41,93%	**Ireland**	-73,04%	**Switzerland**	-5,24%
Cyprus	-92,27%	**Jersey**	-31,08%	**United Kingdom**	-6,26%

Table 5, difference in net exports, 2007-2008, source: own calculations

5.1.2 *Change in total financial services*

Total amounts of financial services have changed even more significantly than the average values. OFCs have always taken a significant share of total amount of financial services. In the next table, there is a development of total financial services between the years 2001 and 2008. Similarly to the net exports, data for the year 2009 were not available. Between the years 2001 and 2007, the share of OFC on total world's financial services was nearly 45% and this value falls significantly to 36.8% in the year 2008.

TOTAL FINANCIAL SERVICES (USD mil.)[28]			
Year	**World total**	**OFC total**	**Share of the OFCs on total world services**
2001	112724,16	47359,83	42,0139%
2002	119561,60	49152,19	41,1103%
2003	140071,40	62630,78	44,7135%
2004	172992,96	78530,66	45,3953%
2005	203398,14	93113,97	45,7792%
2006	272081,63	121692,44	44,7264%

[28] Similarly to the previous charts, countries ranked as OFCs in this table are Austria, Bahamas, Barbados, Bermuda, Cayman Islands, Cyprus, Guernsey, Hong Kong SAR of China, Ireland, Isle of Man, Jersey, Latvia, Lebanon, Luxembourg, Malta, Mauritius, New Caledonia, Panama, Republic of Korea, Romania, Singapore, Solomon Islands, Sweden, Switzerland, United Kingdom and Vanuatu. Total world services are based on the countries providing the data.

2007	360585,09	164543,00	45,6322%
2008	353013,41	129897,82	36,7968%

Table 6, Total financial services in USD million, source: own calculations

5.2 Bank statistics 2007 – 2009

Previous chapter showed a substantial change in the amount of financial services in the OFCs. Nevertheless, it is not only the fall in the financial services in general. Data on the bank assets and liabilities provided by the IMF can tell more about the development of the OFCs. Data are not available for all the countries from the sample, but at least the three main European banking centers (Luxembourg, Switzerland and the United Kingdom) plus one of the main Asian financial centers – Hong Kong provided the information.

When taking a look at the data about the bank assets and liabilities, there is a notable decline in the values of both bank assets and liabilities in Europe's best known banking jurisdictions. Annual change of Switzerland's assets and liabilities in the years 2007/2008 is -35.9% and -28.7% respectively. Total annual change is -32.2% in 2007/2008, followed by slighter decrease of -2.4% in 2008/2009.

Development in the other two banking centers in Europe is similar to Switzerland, with a little slighter decrease. On the other hand, annual change of Hong Kong's total assets and liabilities in the observed period is only -2.6% and 2.9% respectively. Thus, according only to the limited statistics of banking asset and liabilities, European OFCs were more affected than the Asian OFCs.

Bank statistics (USD mil.)			
Switzerland			
Year	bank assets	bank liabilities	total
2007	900170	966832	1867002
2008	576670	688897	1265567
2009	538562	696314	1234876
Luxembourg			
2007	810054	697033	1507087
2008	797246	658777	1456023

2009	666349	596389	1262738
United Kingdom			
2007	5355950	6300340	11656290
2008	4701650	5162350	9864000
2009	4351970	4738450	9090420
Hong Kong SAR			
2007	565966	473949	1039915
2008	537253	475870	1013123
2009	493487	489906	983393

Table 7: bank assets and liabilities, USD million source: IMF

6   Main OFCs and their characteristics

> "Visual surprise is natural in the Caribbean; it comes with the landscape, and faced with its beauty, the sigh of History dissolves."
> (Derek Walcott)

In this chapter, the world's most important OFCs, according to its level of net exports of financial services to GDP estimated in the first model will be characterized. Further description is needed in order to understand the advantages and disadvantages, which the OFCs provide and to comprehend the interest of the investors. Most of the information is based on findings provided by CIA World Factbook (2010), IMF, Rohatgi (2002), OECD and the US Department of State (2000). Furthermore, a short outlook on the mostly used legal forms in the OFCs is provided.

6.1   Bermuda

Bermuda is a country with a highest level of exports of financial services to GDP, according to the model. With 54 sq kilometers it is the 11th smallest country in the world, smaller than Guernsey or Jersey islands. Officially it belongs to the United Kingdom, as the British Overseas Territory in the North Atlantic Ocean. With a very low population of about 65000 inhabitants and enormously high level of GDP, Bermuda belongs to the leading countries in GDP per capita. In fact, according to the CIA World Factbook, it is currently ranked as number four in the world (USD 69,900 per capita), after Liechtenstein, Qatar and Luxembourg (CIA, 2010).

As for the preferred tax regimes, there are no income taxes imposed in Bermuda. Also the withholding taxes are omitted. In general, no direct taxes are imposed on the investment funds or/and their investors. The companies pay only an annual fee. Rohatgi (2002) mentions that the "offshore activities are commonly conducted through an exempted company." Exempted company is incorporated by non-residents for the business purposes outside Bermuda, however with an office in Bermuda. According to the 1996 Companies Amendment Act, these companies are required to have a "quorum of resident directors [...] or a resident secretary and a resident director, or a resident secretary and a resident representative." Furthermore, they are exempt from taxation until March 2016 (see Rohatgi (2002) or KPMG (2010)). When it comes to the number of companies, Bermuda is a

leading center in offshore trading, with approximately 10,000 registered IBCs (US Department of State, 2000).

6.2   Switzerland

Switzerland is widely mentioned when it comes to the bank secrecy and other discretion issues. However, corporate tax of resident companies can also be a reason why some companies want to move their residence there. Switzerland consists of 26 sovereign cantons. Swiss GDP per capita is estimated to be more than USD 41,000 (CIA, 2010). In the model, it became the country with second highest level of financial services to GDP (export), with the value above 4%.

There is no unified centralized system of tax collection in Switzerland. The federal government imposes flat tax rate and there are further cantonal taxes imposed. The federal tax counts for 8.5% and differs from 12.6 to 27% in total. According to KPMG (2008), "Swiss branches of non-resident companies are subject to tax at ordinary rates on their income from Swiss sources only […] Switzerland has also concluded more than 70 tax treaties with all major industrial countries and many others." Furthermore, Rohatgi (2002) states that "Switzerland doesn't tax interest on commercial loans, including the loans form a foreign parent company to its Swiss subsidiaries. There is no withholding tax on interest payments, management fees and royalty payments. […] For non-residents, the withholding tax is a final tax, subject to a refund for any rate reduction under the tax treaties." Moreover, value added tax (VAT) rate follows the EU directions and it is levied on most of the goods and services. Standard rate is 7.6% and the lower rate on basic necessities is 2.4% (KPMG, 2008).

Switzerland is also favorable for the investors for its strict privacy laws. It started already with the 1934 Banking Act (KPMG, 2009), which was the first banking act in the World dealing with the privacy. Article 47 of the act says, that

1. Imprisonment of up to three years of fine will be awarded to persons who deliberately:

a.   Disclose a secret that is entrusted to him in his capacity as body, employee, appointee or liquidator of a bank, as body or employee of an audit company or that he has observed in this capacity;

b.   Attempts to induce such an infraction of the professional secrecy.

2.   Persons acting with negligence will be penalized with a fine up to 250,000 francs (KPMG, 2009).

6.3   Guernsey and Jersey (Channel Islands)

Channel Islands are the British Crown Dependencies in the Northwest coast of France, located close to Normandy. They are divided into the Bailiwick of Guernsey and the Bailiwick of Jersey. Even though they are dependent territories of the British Crown, they are not part of the United Kingdom. Channel Islands are considered to be successors of the Duke of Normandy[29] and both of them have their own independent state governments. However, the international representation and defense matters are under the control of the United Kingdom.

Guernsey is the smaller of the two islands, with 78 sq kilometers. According to the CIA World Factbook (2010), financial services account for about 23% of the island's employment and about 55% of total income. GDP per capita in Guernsey (USD 44,600) is the 13th highest in the world comparison. Jersey is the largest of the Channel Islands with overall 116 sq kilometers. GDP per capita is higher than in Guernsey and counts for about USD 57,000. It is one of the most favorable jurisdictions for the European companies, not only because of its position. The total number of companies incorporated in Jersey is estimated to be twice as much as in Guernsey and counts for more than 33,000.[30]

Rohatgi (2002) shows, that the Channel Islands have always offered certain offshore structures. It is particularly the exempt company, which is on one side considered to be a resident company, but on the others side the ownership can be

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[29]
http://www.royal.gov.uk/MonarchUK/QueenandCrowndependencies/ChannelIslands.aspx

[30] Data taken from http://www.islandlife.org/finance_jsy.htm and
http://www.thestandard.com.hk/banners/87-134.pdf

under certain circumstances held entirely by non-residents. Exempt companies are, already according to their name exempt from all the income and withholding taxes from businesses outside the island, only a flat annual tax rate is required. Furthermore, any business activities operated in Guernsey and Jersey are then subject to the local tax rate. This type of companies was in operation until the end of the year 2008. It is also important to mention, than there is no VAT collected in either of the two bailiwicks.

From January 2009, both Guernsey and Jersey introduced widely discussed system of 0/10 tax, which replaces the former mentioned exempt company status. The idea behind this tax is that companies providing financial services (banks, investment funds, trusts, etc.) have to pay 10% corporate tax rate. The other companies, providing non-financial services pay no tax on profits. More info can be found in the paper by Campbell (2008).

6.4   Luxembourg

According to the originally posted values of financial services, Luxembourg is the main OFC in the world with level of net exports of financial services to GDP far exceeding the level of 20%. CPIS approximation shows lower results, however, even according them it is considered to be in the top 5 of the OFCs. The grand duchy of Luxembourg was founded in the year 963 and got the independence in 1867. It is one of the smallest countries in Europe, located between France and Germany. According to the CIA World Factbook, with nearly 500.000 inhabitants and GDP per capita about USD 80.000 it is one of the richest countries in the world (CIA, 2010).

A company is tax resident if its registered office or its principal establishment is located in Luxembourg. Luxembourg follows the classical tax system. Corporate tax varies from 20% to 30% plus extra 4% unemployment fund surcharge (Rohatgi, 2002). Withholding tax on interest payments is not levied in Luxembourg and there are also preferential regimes for taxes on dividends.

Similarly to Switzerland, Luxembourg is known for its strict rules about the bank secrecy. OECD report (OECD, 2000) shows that banks in Luxembourg held

in the end of 1990's fifth highest amount of foreign assets and liabilities in the World.

6.5   Cayman Islands

Cayman Islands have a different relationship with the United Kingdom than above mentioned Channel Islands. Formally, they are recognized as one of the British Overseas Territories and thus belonging to the British Crown. CIA World Factbook estimates the GDP per capita to be about USD 44,000 with the population of 50,209.

Cayman Islands are the most important offshore jurisdiction in the Caribbean area when it comes to the banking and investment companies. All the world's most important banking institutions have their headquarters or at least their branches or representations on the Cayman Islands. Under the supervision of the Banking Supervision Division, there were 269 banks registered in March 2010. As of September 2009, total assets were reported at USD 1.8 trillion up 3.75% since the same period of the previous year where total assets stood at USD 1.7 trillion.[31]

According to the World Factbook, total number of companies registered on the Cayman Islands is about 93,000 (CIA, 2010). This number includes banks, offshore companies but also regular resident companies. Offshore companies are divided into two types. First of them is the exempt company, which allows the offshore business to be managed from the Islands but not to conduct any business within the Islands. Exempt companies are guaranteed non-taxability for a renewable period of 20 years (Rohatgi, 2002). Furthermore, as in most of the offshore centers, annual fees are collected, according to the authorized capital. Second type of company is then the nonresident company, which is similar to the exempt company, but faces some limitations (see (Rohatgi, 2002)). Moreover, Cayman Islands are also well known as a favorable place for ship registrations.

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[31] Cayman Islands Monetary Authority statistics:
http://www.cimoney.com.ky/stats_reg_ent/stats_reg_ent.aspx?id=200&ekmensel=e2f22c9a_14_72_200_6#Detailed_Statistics

6.6   Hong Kong SAR of China

Hong Kong is an established tax jurisdiction for offshore business. In the year 1997, it became the Hong Kong SAR[32] of China, with a "high level of autonomy except foreign and defense affairs for the next 50 years (CIA, 2010)". When it comes to the geography, Hong Kong is a bit larger than the previously mentioned islands, with the area of 1104 sq kilometers and more than 7 million inhabitants (CIA, 2010).

It is used as an active center for mutual funds and offshore banking. The location and historical connection predestinate Hong Kong to do business especially with China. Corporate residence in this country is based on the place of central management and control. Tax rate for the companies is set to 16.5%. There are no withholding taxes and also capital gains tax and capital losses are not deductable. Unlike in most of the offshore jurisdictions, the corporate residence is not a relevant factor for tax purposes. As Rohatgi (2002) mentions, Hong Kong follows the territorial basis of taxation. A company is taxable on its profits if

1)   Carries on a business or trade in Hong Kong
2)   Profits arise from such a trade or business
3)   Profits are derived from Hong Kong

All these three conditions must be met in order to be taxable under the Hong Kong legislation. Therefore, the profits of a business or trade in Hong Kong are not taxable if the income is sourced outside Hong Kong, even if received in there. Similarly, income from Hong Kong sources is not taxable if the business or trade is conducted outside Hong Kong (Rohatgi, 2002).

In general, Hong Kong is established offshore jurisdictions and also a finance and administrative centre, popular also for mutual funds and offshore

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[32] SAR stands for the special administrative region, because Hong Kong is officially an autonomous region, however with certain influence of China.

banks. Due to its geographic position it is also the most popular place for doing business with China.

6.7 Mostly used legal forms in the OFCs

Purpose of this chapter is to explain the most favorable legal forms used in the OFCs. It is important to know which the main types of OFC businesses are, in order to understand which investors tend to move their business offshore and why. As mentioned in the description of countries, limited liability vehicles in form of the International Business Companies, Limited Liability Companies and some others are widely used in the offshore destinations. This chapter looks more at the types of businesses, where the registration is required (banks, insurance companies, investment funds, ship registrations) and also at the individual tax planning possibilities.

6.7.1 *Tax planning for companies and individuals*

OFCs are also favored destinations for the company and individual tax planning. Offshore destinations offer structures that allow to disguise the ownership and to legally avoid property, inheritance or capital gain taxes. Claims of the creditors in case of default are also restricted when a company resides in the OFC.

FSF's Working Group on Offshore Financial Centers Report (2000) mentions another reason to use the OFCs for asset management, saying that "wealthy individuals and enterprises in countries with weak economies and fragile banking systems may want to keep assets overseas to protect them against the collapse of their domestic currencies and domestic banks, and outside the reach of existing or potential exchange controls. If these individuals also seek confidentiality, then an account in an OFC is often the vehicle of choice."

6.7.2 *Trusts and foundations*

There are certain legal forms used to protect the ownership, two of the most important are trust and foundations. Trust in general is a relation between two individuals concerning ownership management. Trusts cannot be considered as

companies, they can't be sold or bought. Rohatgi says that "trust is a common law concept. Under common law, a trust can be set up to settle the assets over to the trustee and who manage them under the provision of a trust deed.[33]" This means that the trustee is a legal owner of the trust assets. Furthermore, the settlor of the trust has a right to constitute a protector to watch over the trustee, "appoint him or to change the residence of the trust … He may also have veto powers over the trustees. (Rohatgi, 2002)"

Because of the fact that the assets were committed to the trustee, it's not allowed for the settlor to interfere directly in the decision making about the assets of the trust. One of the examples of this misconception is the Rahman v. Chase Bank & Trust Company (CI) Ltd. Case. The Jersey court had found out that Abdul Rahman's Trust was a sham because the settlor stayed in control of the assets and took all the iportant decisions."[34]

On the other hand, in case of foundations, the assets are held within the organization in favor of the foundation beneficiary and the founder himself chooses the statutory body. However, no benefits from the foundation are allowed. Unlike trusts, foundations can last practically forever, because they are not settled after the death of the owner, but can be further inherited.

6.7.3 *Offshore banks and insurance companies*

As mentioned above, all the most important banking institutions have their headquarters or at least their branches or representations in the OFCs. For example on Cayman Islands, one of the main banking centers in Caribbean, there were 269 banks registered in March 2010.

There are many reasons why are the banking and insurance companies interested in moving offshore. Of course there are tax advantages in form of no or

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[33] Which can be also in form of the „letter of wishes", used more in testaments.

[34] More about the Rahman case can be found at the Jersey legal information board: http://www.jerseylaw.je/Judgments/JerseyLawReports/display.aspx?Cases/JLR1984/JLR840127.htm

low corporate tax, capital gains tax, withholding tax on dividends or interest. However, main attraction for the banking and insurance companies is the regulation. OFCs usually don't require strict regulations, known from the main financial centers. Also the issue of supervision and reporting is more favorable. Furthermore, offshore banks are not as limited in terms of trading as their onshore counterparts (this is for example a case of the hedge funds).

In case of the insurance companies, large multinational corporations often establish their own insurance companies, which they later use to protect against risk within their group. FSF report on Offshore Financial centers (Financial Stability Forum, 2000) mentions that "an onshore insurance company establishes a subsidiary in an OFC to reinsure certain risks underwritten by the parent and reduce overall reserve and capital requirements [and also to] to reinsure catastrophic risks."

6.7.4 *Investment funds*

In case of the collective investment schemes, offshore jurisdictions are favored especially for the absence of income tax. In the table below, there are the top five countries in the EU according to their share of the European fund market in the year 2007.

COUNTRY	Share of the EU fund market registration
Germany	1,20%
France	1,30%
United Kingdom	2,10%
Ireland	14,60%
Luxembourg	76,20%

Table 8, fund market in the EU, February 2007, source: Akont

Fund registration in Luxembourg counts for more than ¾ of the whole EU market. According to the AKONT agency, funds in Luxembourg administrated assets of about EUR 1908.7 billion.[35]

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[35] http://www.akont.cz/cz/221.investicni-fondy-v-danovem-planovani

6.7.5 *Ship registrations*

Last, but not least form of offshore business is the ship registration. Unfortunately, it is not possible to cover this number from any economic statistics, but some of the countries are well known for the disproportional amount of ships registered under their flag. State, under which flag is the ship sailing, exercises the regulatory control over the ship. Some of the countries have a very favorable regime for the ship registrations. International infrastructure of the offshore centers is adjusted for non-residents and that is a reason why many of the offshore centers provide also the ship registrations. This is especially case of Panama, Liberia, Cayman Islands, Cyprus, Gibraltar, Malta, Bahamas, and some others[36].

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[36] Akont offshore information: http://www.akont.cz/cz/10.vlastnikum-namornich-jachet

7 Offshore destinations favored by the Czech companies[37]

7.1 Main overview

"3,5% of all the companies operating in the Czech Republic, reside in the Netherlands, Cyprus, Luxembourg and all the other countries believed to be OFCs."
(ihned.cz)

The main purpose of this chapter is to compare the differences in the country preferences worldwide and in the Czech Republic and to explain where this difference comes from. To be able to do this, historical data on the country to country trade will be used together with all the other factors, which can possibly influence the decision of Czech owners to shift the ownership of the company to these particular jurisdictions. Other factors like distance between certain countries or historical similarities will be taken into account as well. The main findings are be based on the data provided by the ČEKIA Czech capital information agency, which collects the data on all economic subjects registered in the Czech Republic and especially the information about property structure of each firm. In the following table, we can see the amounts of Czech companies with the owners from the offshore centers:

NUMBER OF CZECH COMPANIES WITH OWNERS FROM THE OFCS							
COUNTRY	year 2006	change	year 2007	change	year 2008	change	year 2009
Netherlands	3042	7,6%	3274	6,1%	3474	31,0%	4551
USA	1888	7,0%	2021	5,6%	2135	19,2%	2545
Cyprus	663	44,2%	956	20,3%	1150	22,7%	1411
Luxembourg	720	20,0%	864	8,2%	935	32,7%	1241
British Virgin Islands	359	13,1%	406	8,6%	441	-3,9%	424
Liechtenstein	257	0,8%	259	6,2%	275	-4,7%	262
Seychelles	130	28,5%	167	34,7%	225	16,4%	262
Panama	72	8,3%	78	38,5%	108	50,0%	162
Belize	32	34,4%	43	27,9%	55	40,0%	77
Gibraltar	53	9,4%	58	5,2%	61	14,8%	70
Monaco	39	-10,3%	35	14,3%	40	20,0%	48
Bahamas	33	9,1%	36	-8,3%	33	0,0%	33
Cayman Islands	21	9,5%	23	43,5%	33	0,0%	33

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[37] Source of the quote - http://finweb.ihned.cz/c1-40177620-danovy-exodus-z-ceska-uteklo-nejvice-firem-za-4-roky-i-kvuli-nejiste-politicke-situaci, own translation

Neth. Antilles	20	_10,0%_	22	_-36,4%_	14	_-7,1%_	13
Bermuda	5	_20,0%_	6	_0,0%_	6	_0,0%_	6
Jersey	0		2	_150,0%_	5	_0,0%_	5
TOTAL	7334		8250		8990		11143
Perc. change		_12,5%_		8,97%		23,95%	

Table 9, OFC owners of the Czech companies, source: ČEKIA databases and calculations

The "change" columns in the previous table represent always a change in percent between the observed years. In the last line of the table, there is a percentage change in the total amount of countries with owners from the offshore jurisdiction for the observed years.

The most popular countries, i.e. countries mostly participating on the ownership of Czech companies are The Netherlands, The United States of America, Cyprus, Luxembourg and the British Virgin Islands. Let's take a look closer now at the possible reasons of this situation.[38]

7.1.1 *The Netherlands*

In case of the Netherlands, main fact which needs to be taken into consideration is that many of these companies are actually owned by Dutch citizens. Dutch investors were one of the first who came to the Czech Republic after the Velvet revolution in the year 1989 and they also took part in the voucher privatization. It was not only the big global players, but especially small and middle sized enterprises. Dutch investors still significantly contribute to creating job vacancies in the Czech Republic and have positive impact of the prosperity of cooperating Czech companies. Main areas of their interest are energy, metal industry, agriculture, car industry and the environment.

In the table 9, the foreign direct investments of the Netherlands in the Czech Republic as of 31.12.2008 can be found. Regarding the number of the foreign direct investments, we can see that the amount of money invested in the

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[38] Luxembourg was already described in the previous chapters, so this part will focus only on the rest four countries.

Czech Republic is very high, by far the highest of all European countries. This finding supports the previous results about the number of owners from the Netherlands. However, historical facts are not the main reason for such high numbers of Dutch shareholders. The Netherlands is a country with a special system of taxes. There are many types of entrepreneurial subjects which can use special tax benefits and this makes the Netherlands interesting in the sense of international tax planning. For the Czech companies it is also interesting the double taxation convention with the Netherlands.

When we take a look at some direct examples, the main advantage is the tax relief on the capital gains from trading in stocks. Dutch companies are gaining payments from their subsidiaries to full extent without any extra taxation and moreover, these payments are not restricted in terms of any further use[39]. The only limitation is holding the share for the whole fiscal period.

7.1.2 *The USA*

As already mentioned above, the USA in general can hardly be considered as an OFC or tax haven. However, even in the USA some of the "islands of freedom" can be found. The most used form for the tax optimization is the non-resident LLC. This form of company provides no taxation on world-wide income if following rules are obtained:

1) The owner of the company must not be an US resident or a green card holder
2) Company doesn't employ any US residents/green card holders
3) Company doesn't do any business on a US inland market (doesn't have any income from the US residents)

Nevertheless, if only U.S. business activity is trading in stocks, securities, or commodities (including hedging transactions) through a U.S. resident broker or other agent, the company is not considered to be engaged in a trade or business in the United States. It is also required that the corporation always identifies a

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[39] own translation, source: http://www.akont.cz/cz/moznosti-vyuziti-nizozemskych-spolecnosti-v-mezinarodnim-danovem-planovani,

"registered office" in the U.S. and a "registered agent" who must be a resident of that State.[40]

In general, we can say that "provided the company conducts no direct or indirect business in the USA and neither the managers, nominees and/or beneficial owner(s) are US citizens or green card holders there should be no US tax consequences provided there is genuine external management and control."[41]

The main reason leading companies move their company address to one of the states of the USA is except the tax advantage undoubtedly also the reputation. Legal entities from the United States are surely more trustworthy than their counterparts from Bahamas, Cayman Islands or Seychelles. The advantages and rules mentioned above differ from state to state; the most well known states all in all are Delaware, Nevada, Wyoming, Utah and Colorado. The state-specific differences include for example the fact that tax advantages in the state of Delaware are valid for all the companies except banks and the insurance companies.

In the table 10 we can find data for foreign direct investments of the United States of America in the Czech Republic supporting the premise about high number of owners from the USA.

7.1.3 *Cyprus*

Cyprus is a very popular country for tax optimization from the European point of view, especially for the countries within European Union. Before entering EU, Cyprus was considered to be pure OFC; however after accession to the EU, some of their legal practices had to be changed. First of all, the tax rate had to grow from 4,5% and also they lost the status of the IBCs (International Business Companies).

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[40] This is a typical feature of offshore centers, demanding fees favorable for locals rather than taxes.

[41] Source: SCF Group NEVADA NON RESIDENT LLC description
http://www.scfgroup.com/Offshore_Jurisdictions/Tax_Havens_Jurisdictions_OJ/Nevada_Non_Resident_LLC_TMJ/

Nevertheless, the tax rate is nowadays still on very low level (10%), by far the lowest of all EU countries. Furthermore, there are three main investment incentives for the countries which belong to the World Trade Organization (WTO), as presented by the Cyprus Republic:

1) Beneficial tax system
2) Supportive programs for
a. Development of high-tech specialization
b. Development and reconstruction of the industry
c. Increase of productivity and working skills
3) Attraction of capital demanding investments to a free zone in Larnaca

The corporate tax was already mentioned above; furthermore the VAT is also very low, starting at 5%, with maximum 15% on services. International trusts and holding companies enjoy also a very favorable treatment. Moreover, the costs of establishing a holding structure on Cyprus are cheaper than for example in the Netherlands or in Denmark.

There are also some important non tax benefits for the Czech investors thinking about moving their company address to the Cyprus. Below mentioned advantages are presented by the AKONT offshore investment advisor:

- Stability of law environment with the fundamentals in the Great Britain's legal system as a remainder of the times of the colonization.
- Working judicature and good law enforcement
- Modern and well-developed business infrastructure and professional banking services on a world-class level
- High level of discretion and information protection based on the legislation
- Many international agreements on the protection of investments
- Strategic geographic position between the three continents.[42]

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[42] Source: http://www.akont.cz/cz/225.danove-vabeni-jmenem-kypr, own translation

Data on the FDI of Cyprus in the Czech Republic in 2007 (table 9) aren't showing the highest results, but taking into consideration the size of the country, we must say that it confirms the premises too.

7.1.4 *British Virgin Islands*

British Virgin Islands are one of the countries for which is complicated to find any type of data. This jurisdiction doesn't provide any data on flows of financial services, CPIS assets or the IIP portfolio asset stocks. Moreover, it is not even possible to get correct and up-to-date data on GDP. Following data on the foreign direct investments in the Czech Republic are not very high compared to the other three countries; however they are second highest from the Central American region, after the Cayman Islands.

Year 2007	Country	Equity capital USD thousand	Reinvested earnings USD thousand	Other capital USD thousand	Total USD thousand
NL	*Netherlands*	996 025,8	1 842 176,9	-621 952,4	2 216 250,3
CY	*Cyprus*	217 564,4	158 533,2	-72 558,5	303 539,1
US	*United States*	-45 666,2	375 621,0	82 344,9	412 299,7
LU	Luxembourg	1 034 346,3	196 420,5	876 936,0	2 107 702,8
VG	*Virgin Islands, British*	21 228,7	-1 763,3	42 535,9	62 001,3

Table 10, FDI in the Czech Republic in 2007, USD thousands, source: CNB

7.2   Development in the year 2008

In the table 11 below, there are the values for the 2008 FDI in the Czech Republic in thousands of US Dollars together with the percentage change between the years 2007 and 2008.

Year 2008	Country	Equity capital USD thousand	Reinvested earnings USD thousand	Other capital USD thousand	Total USD thousand	Change in total 2007/2008
NL	*Netherlands*	-593 021,5	1 301 166,2	322 621,8	1 030 766,5	-53,49%

CY	*Cyprus*	-162 874,1	172 110,8	74 956,5	84 193,2	-72,26%
US	*United States*	-249 618,6	309 517,1	-536 293,2	-476 394,8	-215,55%
LU	*Luxembourg*	-9 744,1	-333 251,0	295 533,1	-47 461,9	-102,25%
VG	*Virgin Islands, British*	76 843,9	-12 117,2	27 119,6	61 841,6	-0,26%

<p style="text-align:center">Table 11, FDI in the Czech Republic in 2008, USD thousands, source: CNB</p>

Table 11 shows significant annual fall of the FDI in the Czech Republic in all the main offshore centers except British Virgin Islands. The most noticeable fall in total numbers is in case of Luxembourg, where the FDI fall from more than USD 2 billion to USD -47.5 million. However, the other countries experience an extraordinary decrease too. It is also worthy to remark that one of the main components of the FDI – equity capital, fell in the negative numbers for all the countries except above mentioned British Virgin Islands.

However, the values of FDI haven't affected preferences of the Czech companies about the OFCs, the Netherlands, USA, Cyprus and Luxembourg are still the most popular ones. Moreover, table 9 shows that the total number of companies with an owner from foreign country was growing even in the year 2008 despite the high fall of investments in the Czech Republic. Total number of companies looking for an offshore destination grew by nearly 9% between the years 2007 – 2008 up to 8990. For example, number of companies from Cyprus grew by 20.3% to 1150.

The numbers show that despite – or possibly due to the global financial crisis, more of the Czech companies are looking for a shelter in the offshore centers. This trend continues even in the year 2009.

8 Conclusion

Over the last couple of decades, offshore centers have become the most important world economic centers, managing about 50 percent of total cross-border assets (see chapter 1). However, OFCs are not only the small island economies in Caribbean or Pacific. Many researchers and international institutions are trying to find ways to identify which countries are the OFCs. This thesis came forward with the idea of combining estimated data on country's financial services to GDP for several years. It showed that even the main international financial centers (United Kingdom, Hong Kong) meet the criteria of the broad definitions of OFC. Moreover, it is not only the definitions; these countries are also identified as the OFCs according to their disproportionate level of exports of financial services to national GDP.

The proposed model followed the study by Zoromé, which was described in the second chapter. The model confirmed most of the offshore centers from the previous study. Moreover, there were also some countries identified as new OFCs. New countries are Austria, Lebanon, New Caledonia, Republic of Korea, Sweden and the USA. Rough description of new identified countries together with possible reasons why they are considered as OFCs was further provided.

The model was further extended in the chapter four by adding total sum of financial services instead of the net exports. Results from the extended model confirmed the previous findings about the main offshore jurisdictions.

However, the panel data model was not made only for the reason of more precise identification which country becomes OFC. More important is the fact that this estimation allowed to map the development over the observed time period, which proposed more precise outlook on the OFCs.

Findings from the model together with the other economic indicators provided a detailed look at the development in the first year of the global financial crisis. It showed a significant downturn in the amount of financial services and the other economic statistics, way higher compared to the rest of the world. However,

because of the lack of the data for the year 2009 and following, the estimates focused on the differences in the years 2007 – 2008.

Furthermore, main OFCs according to their rank from the empiric model were described and a short outlook on the mostly used legal forms in the OFCs was provided. The main identified OFCs according to the model are Bermuda, Switzerland, the Channel Islands, Luxembourg, Cayman Islands and Hong Kong SAR.

Last chapter took a look at the offshore destinations favored by the Czech companies. It showed a slight difference from the world's preferences, especially because of the fact that the main OFC used by the Czech companies (the Netherlands) is not among the leading world's OFCs, according to the level of financial services to GDP. Reasons for this disparity were later explained. Moreover, on the data on foreign direct investment in the Czech Republic was showed, how big was the fall in the year 2008. Surprisingly, despite the fall in investments, number of nonresident owners of Czech companies had grown.

Because of the lack of the recent data on flows of financial services, it was not possible to describe the development in the year 2009 and check if the values for the OFCs got back to their previous levels. However, the model gave a good example how to assess the influence of the world financial crisis on the offshore centers, compared to the development of the rest of the world and it could be used as a baseline for further studies in this field when the more recent economic data are available.

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10 List of tables and charts with their sources

11 Appendix 1, Results of the regressions

11.1 Model 1 – Net exports of financial services/GDP

Model 1: NET EXPORTS OF FINANCIAL SERVICES ESTIMATE
Fixed-effects, using 609 observations
Included 195 cross-sectional units
Time-series length: minimum 1, maximum 7
Dependent variable: NET_GDP

	coefficient	std. error	t-ratio	p-value	
const	0,00126534	0,000249092	5,080	5,73e-07	***
MAX_GDP	0,000465340	3,69996e-05	12,58	6,17e-031	***

Mean dependent var	0,001769	S.D. dependent var	0,007068
Sum squared resid	0,015202	S.E. of regression	0,006067
R-squared	0,499490	Adjusted R-squared	0,263172
F(195, 413)	2,113635	P-value(F)	1,36e-10
Log-likelihood	2363,004	Akaike criterion	-4334,007
Schwarz criterion	-3469,291	Hannan-Quinn	-3997,615
rho	-0,208627	Durbin-Watson	1,927098

11.2 Model 2 – Total financial services/GDP

Model 2: TOTAL FINANCIAL SERIVCES ESTIMATE
Fixed-effects, using 609 observations
Included 195 cross-sectional units
Time-series length: minimum 1, maximum 7
Dependent variable: SERVICES_GDP

	coefficient	std. error	t-ratio	p-value	
const	0,00436203	0,000425272	10,26	3,84e-022	***
MAX_TOTAL_GDP	0,000280096	3,11574e-05	8,990	9,00e-018	***

Mean dependent var	0,005065	S.D. dependent var	0,010964
Sum squared resid	0,043952	S.E. of regression	0,010316
R-squared	0,398589	Adjusted R-squared	0,114630
F(195, 413)	1,403685	P-value(F)	0,002381
Log-likelihood	2039,726	Akaike criterion	-3687,452
Schwarz criterion	-2822,736	Hannan-Quinn	-3351,060
rho	-0,043405	Durbin-Watson	1,601935

12 Appendix 2, Net exports of financial services to GDP, 2001-2008

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Bermuda	2001	2100000000	3,7259%	1	4,8811%	2
Switzerland	2001	2,31073E+11	3,0228%	2	3,5871%	3
Cayman Islands	2001	930000000	2,6692%	3	14,4955%	1
Guernsey	2001	1300000000	2,5422%	4	2,2044%	7
Jersey	2001	2200000000	2,3191%	5	2,2629%	6
Hong Kong SAR	2001	1,80985E+11	1,9830%	6	2,9710%	4
Luxembourg	2001	25412000000	1,6292%	7	1,9192%	8
Isle of Man	2001	1400000000	1,0887%	8	1,0249%	13
United Kingdom	2001	1,59E+12	0,9771%	9	1,5295%	10
Ireland	2001	1,18584E+11	0,6401%	10	2,7213%	5
Singapore	2001	1,32102E+11	0,6259%	11	1,1688%	12
Panama	2001	20091000000	0,3350%	12	0,9253%	14
Barbados	2001	3758000000	0,2684%	13	0,5451%	17
Vanuatu	2001	708000000	0,2493%	14	0,5105%	21
Bahamas, The	2001	7095000000	0,2476%	15	0,5409%	18
Uruguay	2001	26540000000	0,2240%	16	0,3177%	49
Solomon Islands	2001	892000000	0,1845%	17	1,5745%	9
Belgium	2001	2,86055E+11	0,1786%	18	0,4800%	23
Bahrain	2001	14073000000	0,1771%	19	0,4670%	26
Denmark	2001	1,55839E+11	0,1522%	20	0,4718%	25
Malta	2001	7077000000	0,1464%	21	0,4495%	28
Finland	2001	1,32458E+11	0,1462%	22	0,4857%	22
China: Macao SAR	2001	9261112944	0,1433%	23	0,4465%	29
Cyprus	2001	14980000000	0,1386%	24	0,4463%	30
South Africa	2001	3,10573E+11	0,1311%	25	0,4413%	32
Kuwait	2001	72313000000	0,1305%	26	0,4387%	36
Israel	2001	1,32175E+11	0,1294%	27	0,4461%	31
Lebanon	2001	29922000000	0,1277%	28	0,4374%	38
Jordan	2001	16859000000	0,1275%	29	0,4409%	33
Botswana	2001	15349000000	0,1274%	30	0,4368%	40
Venezuela, RB	2001	2,18268E+11	0,1274%	31	0,4388%	35
Cambodia	2001	12724000000	0,1273%	32	0,4367%	41
Indonesia	2001	5,30713E+11	0,1267%	33	0,4370%	39
Mexico	2001	1,07E+12	0,1267%	34	0,4399%	34
Thailand	2001	3,23512E+11	0,1267%	35	0,4378%	37
Tunisia	2001	49098000000	0,1266%	36	0,4365%	42
Rwanda	2001	5064000000	0,1265%	37	0,4362%	43
Sierra Leone	2001	1856000000	0,1265%	38	0,4362%	44
Yemen, Rep.	2001	38417000000	0,1265%	39	0,4362%	45
Neth. Antilles	2001	2400000000	0,1250%	40	0,6150%	16

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Bermuda	2002	2,2E+09	4,0961%	1	4,5942%	2
Jersey	2002	2,2E+09	3,3628%	2	2,9872%	5
Guernsey	2002	1,3E+09	3,0844%	3	2,5748%	7
Switzerland	2002	2,36E+11	2,8367%	4	3,3411%	4
Cayman Islands	2002	1,18E+09	2,3032%	5	14,4350%	1
Luxembourg	2002	2,69E+10	1,7249%	6	2,0743%	9
Hong Kong SAR	2002	1,87E+11	1,7122%	7	2,7661%	6
Isle of Man	2002	1,4E+09	0,9939%	8	0,9622%	14
United Kingdom	2002	1,65E+12	0,9380%	9	1,5261%	10
Vanuatu	2002	6,89E+08	0,9252%	10	1,0844%	13
Ireland	2002	1,28E+11	0,8773%	11	3,3751%	3
Singapore	2002	1,4E+11	0,6338%	12	1,2462%	12
Cyprus	2002	1,55E+10	0,4866%	13	1,2652%	11
Panama	2002	2,09E+10	0,3747%	14	2,2222%	8
Barbados	2002	3,85E+09	0,2994%	15	0,5991%	15
Bahamas, The	2002	7,4E+09	0,2188%	16	0,5442%	16
Bahrain	2002	1,5E+10	0,1863%	17	0,4749%	21
Belgium	2002	2,95E+11	0,1821%	18	0,4856%	19
Uruguay	2002	2,51E+10	0,1786%	19	0,2535%	55
Latvia	2002	2,19E+10	0,1644%	20	0,3721%	47
Norway	2002	1,89E+11	0,1630%	21	0,4672%	25
Malta	2002	7,38E+09	0,1540%	22	0,4541%	27
Finland	2002	1,37E+11	0,1524%	23	0,4844%	20
Denmark	2002	1,59E+11	0,1519%	24	0,4739%	22
Kuwait	2002	7,57E+10	0,1314%	25	0,4393%	32
South Africa	2002	3,27E+11	0,1308%	26	0,4418%	29
Israel	2002	1,33E+11	0,1303%	27	0,4455%	28
Botswana	2002	1,7E+10	0,1286%	28	0,4375%	36
Jordan	2002	1,81E+10	0,1279%	29	0,4399%	30
Venezuela, RB	2002	2,02E+11	0,1278%	30	0,4391%	33
USA	2002	1,06E+13	0,1276%	31	0,2058%	62
Cambodia	2002	1,38E+10	0,1273%	32	0,4367%	38
Ecuador	2002	6,86E+10	0,1268%	33	0,4364%	40
Thailand	2002	3,46E+11	0,1268%	34	0,4378%	35
Indonesia	2002	5,64E+11	0,1267%	35	0,4370%	37
Dominican Rep.	2002	4,97E+10	0,1266%	36	0,4363%	41
Mexico	2002	1,09E+12	0,1266%	37	0,4396%	31
Tunisia	2002	5,08E+10	0,1266%	38	0,4365%	39
Morocco	2002	8,76E+10	0,1266%	39	0,4362%	42
Yemen, Rep.	2002	4,06E+10	0,1265%	40	0,4362%	43

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Bermuda	2003	2,25E+09	5,3792%	1	6,0237%	2
Jersey	2003	2,2E+09	4,5365%	2	4,6244%	3
Guernsey	2003	1,3E+09	3,9573%	3	3,3531%	6
Switzerland	2003	2,4E+11	3,2093%	4	3,7644%	5
Cayman Islands	2003	1,27E+09	2,4117%	5	17,2989%	1
Luxembourg	2003	2,79E+10	2,3511%	6	2,6377%	7
Hong Kong SAR	2003	1,97E+11	1,4638%	7	2,3548%	8
Ireland	2003	1,37E+11	1,2895%	8	4,2762%	4
United Kingdom	2003	1,73E+12	1,2688%	9	2,0385%	10
Vanuatu	2003	7,29E+08	1,0818%	10	1,3308%	12
Isle of Man	2003	1,6E+09	0,9701%	11	0,9827%	14
Singapore	2003	1,48E+11	0,9014%	12	1,5791%	11
Cyprus	2003	1,62E+10	0,6224%	13	1,1817%	13
Panama	2003	2,22E+10	0,5568%	14	2,0790%	9
Latvia	2003	2,39E+10	0,2885%	15	0,4965%	20
Bahamas, The	2003	7,49E+09	0,2361%	16	0,5634%	17
Barbados	2003	4,01E+09	0,2003%	17	0,4625%	26
Belgium	2003	3,03E+11	0,1965%	18	0,4990%	19
Bahrain	2003	1,65E+10	0,1898%	19	0,4780%	23
Norway	2003	1,95E+11	0,1704%	20	0,4761%	24
Malta	2003	7,52E+09	0,1700%	21	0,4639%	25
Denmark	2003	1,63E+11	0,1628%	22	0,4853%	22
Finland	2003	1,43E+11	0,1615%	23	0,4962%	21
Uruguay	2003	2,62E+10	0,1544%	24	0,2880%	55
USA	2003	1,11E+13	0,1410%	25	0,2127%	62
Greece	2003	2,49E+11	0,1331%	26	0,4562%	27
South Africa	2003	3,44E+11	0,1320%	27	0,4433%	30
Israel	2003	1,38E+11	0,1316%	28	0,4482%	28
Botswana	2003	1,85E+10	0,1305%	29	0,4389%	34
Venezuela, RB	2003	1,9E+11	0,1281%	30	0,4400%	32
Jordan	2003	1,93E+10	0,1281%	31	0,4403%	31
Ecuador	2003	7,23E+10	0,1270%	32	0,4365%	38
Thailand	2003	3,79E+11	0,1269%	33	0,4386%	35
Indonesia	2003	6,03E+11	0,1268%	34	0,4374%	36
Mexico	2003	1,14E+12	0,1267%	35	0,4399%	33
Morocco	2003	9,52E+10	0,1266%	36	0,4362%	39
Angola	2003	4,53E+10	0,1266%	37	0,4362%	40
Tunisia	2003	5,47E+10	0,1266%	38	0,4365%	37
Yemen, Rep.	2003	4,3E+10	0,1265%	39	0,4362%	41
Azerbaijan	2003	2,61E+10	0,1265%	40	0,4362%	42

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Bermuda	2004	2,33E+09	6,3109%	1	7,4550%	2
Jersey	2004	2,2E+09	5,8155%	2	5,8022%	3
Guernsey	2004	1,3E+09	4,9180%	3	4,0695%	5
Switzerland	2004	2,53E+11	3,3844%	4	4,0620%	6
Luxembourg	2004	3,01E+10	2,6252%	5	2,9737%	7
Cayman Islands	2004	1,27E+09	2,2512%	6	22,2832%	1
Ireland	2004	1,47E+11	1,7230%	7	5,5183%	4
United Kingdom	2004	1,84E+12	1,6270%	8	2,4224%	9
Hong Kong SAR	2004	2,2E+11	1,5445%	9	2,6057%	8
Vanuatu	2004	7,76E+08	1,3471%	10	1,6522%	13
Singapore	2004	1,67E+11	1,0663%	11	1,8621%	11
Isle of Man	2004	1,6E+09	1,0557%	12	1,0329%	15
Cyprus	2004	1,73E+10	0,6888%	13	1,8442%	12
Panama	2004	2,45E+10	0,4161%	14	1,5419%	14
Latvia	2004	2,67E+10	0,3293%	15	0,5391%	23
Barbados	2004	4,32E+09	0,3090%	16	0,5644%	21
Sweden	2004	2,79E+11	0,2321%	17	0,6781%	18
Belgium	2004	3,21E+11	0,2041%	18	0,5072%	25
Bahamas, The	2004	7,63E+09	0,1958%	19	0,5495%	22
Norway	2004	2,08E+11	0,1944%	20	0,4295%	46
Bahrain	2004	1,81E+10	0,1941%	21	0,4809%	29
USA	2004	1,19E+13	0,1876%	22	0,2801%	59
Gibraltar	2004	5E+08	0,1784%	23	0,6767%	19
Denmark	2004	1,71E+11	0,1721%	24	0,4948%	26
Uruguay	2004	2,89E+10	0,1473%	25	0,2221%	67
Namibia	2004	9,94E+09	0,1369%	26	0,4426%	34
Greece	2004	2,66E+11	0,1357%	27	0,4633%	30
South Africa	2004	3,72E+11	0,1325%	28	0,4445%	33
Israel	2004	1,49E+11	0,1323%	29	0,4499%	31
Botswana	2004	2,11E+10	0,1312%	30	0,4392%	38
Jordan	2004	2,15E+10	0,1284%	31	0,4416%	35
Venezuela, RB	2004	2,31E+11	0,1279%	32	0,4397%	37
China: Macao SAR	2004	1,58E+10	0,1274%	33	0,2753%	60
Ecuador	2004	8,01E+10	0,1271%	34	0,4365%	41
Mexico	2004	1,23E+12	0,1268%	35	0,4402%	36
Thailand	2004	4,13E+11	0,1267%	36	0,4385%	39
Morocco	2004	1,02E+11	0,1266%	37	0,4362%	42
Tunisia	2004	5,99E+10	0,1266%	38	0,4365%	40
Angola	2004	5,17E+10	0,1266%	39	0,4362%	43
Azerbaijan	2004	2,95E+10	0,1266%	40	0,4362%	44

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Bermuda	2005	2,33E+09	7,9581%	1	8,9401%	2
Jersey	2005	3,6E+09	4,0971%	2	4,2840%	5
Switzerland	2005	2,66E+11	3,5287%	3	4,2977%	4
Luxembourg	2005	3,28E+10	2,7361%	4	3,0648%	7
Guernsey	2005	2,59E+09	2,5920%	5	2,3946%	9
Cayman Islands	2005	1,39E+09	2,5453%	6	23,2951%	1
Hong Kong SAR	2005	2,43E+11	2,0006%	7	3,1574%	6
Ireland	2005	1,58E+11	1,7254%	8	5,8875%	3
United Kingdom	2005	1,93E+12	1,7242%	9	2,6811%	8
Vanuatu	2005	8,27E+08	1,4418%	10	1,9725%	11
Singapore	2005	1,87E+11	1,2470%	11	2,0090%	10
Cyprus	2005	1,86E+10	0,9250%	12	1,9370%	12
Isle of Man	2005	2,11E+09	0,7669%	13	0,8518%	17
Barbados	2005	4,51E+09	0,6932%	14	0,9500%	15
Latvia	2005	3,04E+10	0,3294%	15	0,5289%	26
Bahamas, The	2005	8,38E+09	0,2416%	16	0,5596%	24
Sweden	2005	2,96E+11	0,2250%	17	0,7704%	18
French Polynesia	2005	4,58E+09	0,2221%	18	0,4398%	40
Gibraltar	2005	7,69E+08	0,2100%	19	0,6239%	21
Belgium	2005	3,37E+11	0,2031%	20	0,5068%	27
Bahrain	2005	2,04E+10	0,2027%	21	0,4889%	29
USA	2005	1,26E+13	0,1945%	22	0,2960%	58
Uruguay	2005	3,2E+10	0,1695%	23	0,2403%	61
Panama	2005	2,7E+10	0,1498%	24	1,3171%	14
Greece	2005	2,78E+11	0,1382%	25	0,4641%	32
Israel	2005	1,62E+11	0,1342%	26	0,4520%	34
South Africa	2005	4,06E+11	0,1340%	27	0,4464%	37
Botswana	2005	2,17E+10	0,1321%	28	0,4397%	42
Rep. of Korea	2005	1,10E+12	0,1291%	29	0,1720%	73
Venezuela, RB	2005	2,64E+11	0,1281%	30	0,4398%	41
Jordan	2005	2,35E+10	0,1280%	31	0,4468%	36
Sao Tome and Principe	2005	2,16E+08	0,1276%	32	0,1711%	74
Angola	2005	6E+10	0,1276%	33	0,4368%	44
Ecuador	2005	8,81E+10	0,1271%	34	0,4366%	45
Thailand	2005	4,45E+11	0,1269%	35	0,4390%	43
Mexico	2005	1,30E+12	0,1268%	36	0,4409%	39
Nigeria	2005	2,45E+11	0,1268%	37	0,4363%	47
Azerbaijan	2005	3,84E+10	0,1266%	38	0,4363%	48
Morocco	2005	1,08E+11	0,1266%	39	0,4362%	49
Tunisia	2005	6,5E+10	0,1266%	40	0,4366%	46

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Switzerland	2006	2,85E+11	5,0384%	1	5,9382%	3
Jersey	2006	3,6E+09	4,7501%	2	5,1172%	4
Bermuda	2006	4,5E+09	4,2509%	3	4,9333%	5
Guernsey	2006	2,59E+09	3,4276%	4	3,1427%	8
Luxembourg	2006	3,58E+10	3,2895%	5	3,7481%	7
Hong Kong SAR	2006	2,69E+11	2,6994%	6	4,2011%	6
Cayman Islands	2006	1,94E+09	2,0991%	7	22,0918%	1
United Kingdom	2006	2,05E+12	2,0506%	8	3,1033%	9
Ireland	2006	1,72E+11	1,6817%	9	7,3758%	2
Singapore	2006	2,1E+11	1,4953%	10	2,6001%	11
Vanuatu	2006	9,15E+08	1,4095%	11	1,8727%	13
Isle of Man	2006	2,11E+09	1,1789%	12	1,1337%	15
Cyprus	2006	2E+10	0,9120%	13	2,2197%	12
Barbados	2006	4,81E+09	0,6774%	14	0,9094%	16
Panama	2006	3,02E+10	0,4345%	15	1,3735%	14
Latvia	2006	3,52E+10	0,4301%	16	0,5942%	22
Lebanon	2006	4,04E+10	0,2703%	17	0,3657%	53
USA	2006	1,34E+13	0,2479%	18	0,4607%	36
Sweden	2006	3,19E+11	0,2433%	19	0,9065%	17
Bahamas, The	2006	9,02E+09	0,2280%	20	0,5546%	26
Bahrain	2006	2,24E+10	0,2176%	21	0,4994%	32
Belgium	2006	3,58E+11	0,2145%	22	0,5182%	30
Gibraltar	2006	7,69E+08	0,1948%	23	0,5385%	27
Rep. of Korea	2006	1,19E+12	0,1675%	24	0,2595%	59
China: Macao SAR	2006	2,1E+10	0,1526%	25	0,2866%	55
Greece	2006	3E+11	0,1402%	26	0,4683%	35
Israel	2006	1,76E+11	0,1363%	27	0,4532%	37
South Africa	2006	4,42E+11	0,1340%	28	0,4472%	38
Botswana	2006	2,35E+10	0,1327%	29	0,4401%	41
Venezuela, RB	2006	3E+11	0,1289%	30	0,4398%	42
Angola	2006	7,35E+10	0,1283%	31	0,4373%	44
Jordan	2006	2,63E+10	0,1281%	32	0,4435%	39
Ecuador	2006	9,53E+10	0,1274%	33	0,4367%	45
Thailand	2006	4,83E+11	0,1270%	34	0,4392%	43
Mexico	2006	1,41E+12	0,1269%	35	0,4416%	40
Honduras	2006	2,82E+10	0,1269%	36	0,4364%	47
Nigeria	2006	2,68E+11	0,1268%	37	0,4363%	48
Azerbaijan	2006	5,33E+10	0,1266%	38	0,4363%	49
Morocco	2006	1,2E+11	0,1266%	39	0,4362%	50
Yemen, Rep.	2006	4,92E+10	0,1266%	40	0,4362%	51

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Switzerland	2007	3,04E+11	5,7750%	1	6,9532%	3
Bermuda	2007	4,5E+09	5,0506%	2	6,0294%	4
Guernsey	2007	2,74E+09	4,2024%	3	3,6959%	11
Jersey	2007	5,1E+09	3,8203%	4	4,4223%	7
Luxembourg	2007	3,92E+10	3,5490%	5	4,0206%	9
Hong Kong SAR	2007	2,94E+11	3,2721%	6	5,1820%	6
United Kingdom	2007	2,17E+12	2,6372%	7	3,9194%	10
Cyprus	2007	2,16E+10	2,6126%	8	4,0859%	8
Cayman Islands	2007	1,94E+09	2,2866%	9	28,1323%	1
Singapore	2007	2,34E+11	2,0524%	10	3,5554%	12
Ireland	2007	1,88E+11	1,9771%	11	8,8123%	2
Vanuatu	2007	1,01E+09	1,4516%	12	1,9982%	13
Barbados	2007	5,11E+09	1,2480%	13	1,7801%	14
Isle of Man	2007	2,72E+09	0,9701%	14	1,0136%	17
Latvia	2007	3,99E+10	0,5258%	15	0,8011%	22
Panama	2007	3,49E+10	0,3380%	16	1,6011%	15
USA	2007	1,41E+13	0,2796%	17	0,5488%	32
Sweden	2007	3,36E+11	0,2697%	18	0,8352%	20
Rep. of Korea	2007	1,29E+12	0,2566%	19	0,3647%	63
Austria	2007	3,17E+11	0,2395%	20	0,6978%	25
Belgium	2007	3,79E+11	0,2294%	21	0,5282%	34
Gibraltar	2007	7,69E+08	0,2276%	22	0,6581%	28
Bahrain	2007	2,49E+10	0,2269%	23	0,5056%	36
China: Macao SAR	2007	2,71E+10	0,2096%	24	0,4026%	59
Lebanon	2007	4,47E+10	0,1918%	25	0,2790%	72
Bahamas, The	2007	9,35E+09	0,1756%	26	0,5479%	33
Estonia	2007	2,8E+10	0,1546%	27	0,7671%	23
Germany	2007	2,82E+12	0,1451%	28	0,6847%	26
Greece	2007	3,23E+11	0,1450%	29	0,4775%	37
Israel	2007	1,91E+11	0,1375%	30	0,4556%	38
Italy	2007	1,80E+12	0,1349%	31	0,2931%	68
South Africa	2007	4,8E+11	0,1339%	32	0,4484%	39
Botswana	2007	2,54E+10	0,1329%	33	0,4405%	42
Angola	2007	9,09E+10	0,1290%	34	0,4377%	47
Venezuela, RB	2007	3,33E+11	0,1289%	35	0,4395%	45
Thailand	2007	5,22E+11	0,1279%	36	0,4405%	43
Togo	2007	5,21E+09	0,1277%	37	0,4378%	46
Ecuador	2007	1E+11	0,1274%	38	0,4367%	50
Senegal	2007	2,08E+10	0,1273%	39	0,4372%	48
Jordan	2007	2,94E+10	0,1272%	40	0,4449%	40

Country	Year	GDP in USD	Net financial services / GDP	rank	Total financial services / GDP	rank
Switzerland	2008	3,16E+11	5,4726%	1	6,7676%	2
Bermuda	2008	4,5E+09	4,6338%	2	6,1843%	3
Guernsey	2008	2,74E+09	3,0162%	3	2,7685%	8
Jersey	2008	5,1E+09	2,6328%	4	3,2033%	6
Luxembourg	2008	4E+10	2,5904%	5	2,9701%	7
United Kingdom	2008	2,22E+12	2,4721%	6	3,7052%	4
Singapore	2008	2,42E+11	1,9302%	7	3,5184%	5
Cayman Islands	2008	1,94E+09	1,3278%	8	19,5060%	1
Vanuatu	2008	1,09E+09	1,3152%	9	1,9238%	10
Isle of Man	2008	2,72E+09	0,6988%	10	0,8226%	12
Ireland	2008	1,86E+11	0,5331%	11	0,9287%	11
Panama	2008	3,94E+10	0,4219%	12	2,0390%	9
Barbados	2008	5,23E+09	0,3044%	13	0,5485%	20
Sweden	2008	3,43E+11	0,3010%	14	0,7716%	14
USA	2008	1,44E+13	0,2852%	15	0,5506%	19
New Caledonia	2008	3,16E+09	0,2629%	16	0,3670%	72
Austria	2008	3,31E+11	0,2554%	17	0,7008%	16
Gibraltar	2008	1,07E+09	0,2228%	18	0,5452%	22
Norway	2008	2,55E+11	0,2222%	19	0,5204%	26
Rep. of Korea	2008	1,35E+12	0,2187%	20	0,3432%	74
Belgium	2008	3,9E+11	0,2132%	21	0,5166%	27
Hong Kong SAR	2008	3,07E+11	0,2108%	22	0,5079%	29
Bahrain	2008	2,7E+10	0,2083%	23	0,4968%	34
Netherlands	2008	6,77E+11	0,2049%	24	0,5460%	21
Cyprus	2008	2,29E+10	0,2020%	25	0,4999%	32
Iceland	2008	1,28E+10	0,1964%	26	0,5878%	18
Malta	2008	9,89E+09	0,1932%	27	0,4807%	37
Bahamas, The	2008	9,38E+09	0,1867%	28	0,5123%	28
France	2008	2,13E+12	0,1818%	29	0,5042%	31
Denmark	2008	2,05E+11	0,1816%	30	0,5051%	30
Albania	2008	2,19E+10	0,1739%	31	0,4482%	43
Lebanon	2008	4,98E+10	0,1727%	32	0,2577%	78
Finland	2008	1,92E+11	0,1702%	33	0,4985%	33
Uruguay	2008	4,23E+10	0,1676%	34	0,2248%	80
Portugal	2008	2,36E+11	0,1612%	35	0,4866%	35
Germany	2008	2,92E+12	0,1608%	36	0,4852%	36
Japan	2008	4,34E+12	0,1520%	37	0,4615%	40
Italy	2008	1,81E+12	0,1511%	38	0,4762%	38
Greece	2008	3,36E+11	0,1435%	39	0,4707%	39
China: Macao SAR	2008	3,13E+10	0,1418%	40	0,4455%	46

13 Appendix 3, Net exports of financial services/GDP, OFCs, 2001 – 2008

Net exports of financial services / GDP

Legend:
- Austria
- Bahamas, The
- Barbados
- Bermuda
- Cayman Islands
- Cyprus
- Guernsey
- China: Hong Kong SAR
- Ireland
- Isle of Man
- Jersey
- Latvia
- Lebanon
- Luxembourg
- New Caledonia
- Panama
- Rep. of Korea
- Singapore
- Sweden
- Switzerland
- United Kingdom
- USA
- Vanuatu
- PERCENTIL
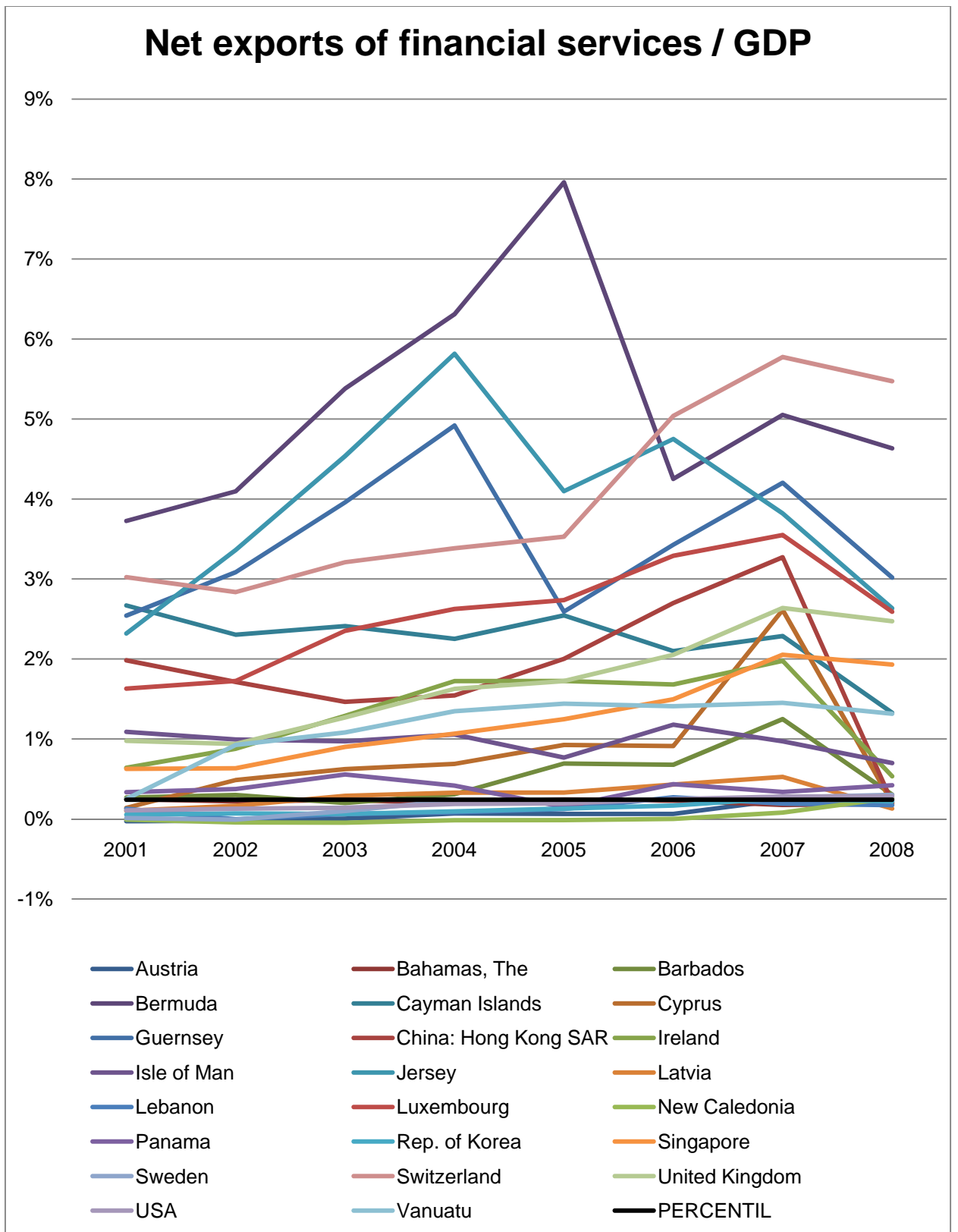
14 Appendix 4, Thesis proposal

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MASTER THESIS PROPOSAL

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Expected title of the thesis:

Offshore Financial Centers and the financial crisis

Characteristics of the topic:

Approximately half of the world's financial transactions take place in so-called offshore financial centers (OFC). On one hand, countries with tax advantages for the nonresidents – tax havens are ranked as the OFCs. On the other hand there are also countries with standard tax rates, however interesting for the foreign investors due to the presence of special services (bank secrecy). In general, these centers exist, because they offer economic benefits far exceeding the costs associated with them. Because of the huge amount of financial transactions in offshore centers it is clear, that the financial crisis has a significant influence on them.

In my thesis, I will try to show and describe the influence of the financial crisis on the existence of the OFCs. In the first part, main definitions of the OFCs will be discussed together with the advantages for the financial and other investors. Furthermore, main

reasons leading the countries to create the tax and other benefits for the nonresidents will be described.

Based on the model proposed by Ahmed Zoromé (2007) I will try to identify, which countries fulfill the criteria of the OFC and which on the other hand cannot be considered as OFCs. New model dealing with FOCs will be introduced. In the next part I will explain main reasons leading companies to move their capital offshore. Main part will be devoted to the influence of the financial crisis on the OFCs and the attitude of world's leading economies and international institutions towards them (namely in connection with the regulation). In the last part, I will describe the preferences of the Czech companies. This thesis will conclude with the description of the main identified OFCs.

Hypotheses:

Financial crisis contributes substantially on reduction of number of jurisdictions meeting the OFC characteristics.

High level of domestic corporate tax is one of the main reasons for the companies to move their assets offshore.

Mainly the small open developing economies with tourism as a main source for GDP offer the tax benefits for the foreign investors.

Methods used:

Comparison of the economic indicators of the individual countries with the offshore criteria by OECD, FSF/FSB.
Econometric model on panel data.

Structure of the thesis:

1) Main characteristics of the offshore financial centers

2) Main reasons leading the countries to provide the tax and other benefits to the foreign investors.

3) Connection between the domestic corporate tax rate and the number of companies using the offshore residence.

4) International institutions, world's leading economies and their attitude to the OFCs.
5) Impact of the financial crisis on the offshore jurisdictions and the advantages they offer
6) Preferences of the Czech companies

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