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Abstract

This paper presents the Offshore-Intensity Ratio – a simple and straightforward way to identify which countries and jurisdictions could be seen as offshore financial centres (OFCs). By setting the aggregated amount of external capital booked in a jurisdiction in relation to the size of its domestic economy, we get a ratio that expresses the strength with which the particular jurisdiction has acted as a magnet for foreign capital. Sixteen jurisdictions are identified as probable OFCs, including the Cayman Islands, the British Virgin Islands, Bermuda and Luxembourg, but also Ireland and the Netherlands. A novel visualization shows the role of the largest offshore centres in contemporary global finance.

Keywords: Offshore Finance; Tax Havens; Foreign Capital; International Financial System

Introduction

During the last fifty years, offshore finance has evolved from a peripheral phenomenon to a central constituent of contemporary capitalism. Offshore finance allows private investors and corporations to escape taxation and regulation of the 'onshore' jurisdictions in which they live and operate. Hence, offshore financial centres are virtually always both *tax* and *regulatory* havens. In essence, these jurisdictions enable predominantly rich individuals (so called 'high net worth individuals' or HNWIs) and large multinational corporations (MNCs) to be 'elsewhere, ideally nowhere' by creating legal spaces that escape existing regulations and controls enacted by onshore countries (Palan and Nesvetailova 2014). Calculations by Zucman (2013) have shown that private assets amounting to about USD 6 trillion are registered in offshore financial centres (OFCs), three-quarters of which are unrecorded in official statistics. According to estimates by Henry (2012), assets (financial and non-financial) in the amount of USD 21-32 trillion could be located in tax havens. OFCs have also played an important role in the global financial crisis, because they are central elements of the 'shadow banking system' (FSB 2014). Some OFCs have acted as legal domiciles for the creation of complex structured financial products, such as collateralized debt obligations and other asset-backed securities.

These opaque financial products have contributed to the development of the financial crisis, or at least to the aggravation of the crisis (Lysandrou and Nesvetailova 2015).

The measures taken by the G20 in 2009 to increase the regulation of offshore finance have merely led to a relocation of assets between tax havens, but not to a general decline of assets booked in OFCs (Johannesen and Zucman 2014). Rixen (2013) characterizes the reforms implemented so far as largely symbolic and relatively ineffective measures that primarily serve the political function to demonstrate state activity in this highly sensitive policy field to national electorates. The fact that a far-reaching international regulation of OFCs has not happened yet and that these tax havens potentially contribute to financial crises of great magnitude suggests a high academic and societal relevance of research on offshore financial centres. OFCs are not purely geographic or economic phenomena, however. At the core, the topic of OFCs is about political sovereignty (Palan 1998, 2002; Palan et al. 2010). In fact, many OFCs are dependent territories that use their (inner) sovereignty to attract financial activities from abroad through low taxation and lax regulation. Hence, in most instances OFCs (and the HNWIs and MNCs that primarily use them) benefit at the expense of onshore countries and the majority of the population that do not utilize 'offshore' (Denault 2011; Shaxson 2011).

The international debate about offshore finance and its consequences has clearly been intensifying in recent years. Increasingly it becomes more widely understood that offshore finance is not a phenomenon that only pertains to small islands in exotic parts of the world. On the contrary, geographically speaking many large OFCs are not located 'off-shore' but onshore in North America (e.g. the US state of Delaware) or continental Europe. In November 2014, the International Consortium of Investigative Journalists (ICIJ) released a report that quickly gained widespread media attention and became known as the 'Luxembourg Leaks' (Wayne and Carr 2014). The ICIJ report revealed that the Grand Duchy of Luxembourg helped nearly 350 large MNCs to lower their global tax bills drastically, Amazon and IKEA for example. These MNCs have channelled hundreds of billions of dollars through this tiny jurisdiction and as a result saved billions of dollars in taxes elsewhere. Another example, which has drawn a lot of attention in recent years is a tax construction known as the 'Double Irish With a Dutch Sandwich' that reduces taxes for large MNCs (most prominently Apple) by shifting profits from an Irish subsidiary to the Netherlands then back to Ireland and subsequently elsewhere, e.g. to Caribbean tax havens (Duhigg and Kocieniewski 2012).

Measuring Offshore Financial Centres

Offshore finance has attracted increasing scholarly attention. However, which countries and jurisdictions can be reliably identified as OFCs? There is still no universally accepted definition of the term OFC. Most observers agree that a central characteristic of tax and regulatory havens is that they seek to attract foreign capital through special legislation, which allows

foreigners to evade and escape taxation and regulation of their 'home' countries. However, many analysts and organizations that have published lists of OFCs disagree which jurisdictions precisely should be included (see Palan et al. 2010). A working definition that is well suited for empirical research is from Zoromé (2007:7): '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.' On the one hand, such an approach might seem a bit simplistic, because it does not look into the jurisdictions to see if they specifically tried to attract foreign capital by lowering their standards in order to attract external capital. However, the simplicity of this approach is also its great advantage, because it leads to one single ratio that is easy to compare with other jurisdictions. Zoromé based his analysis only on data for portfolio investment, thus excluding the two segments of direct investment and foreign bank deposits. I build on Zoromé's approach, however I include these two important segments of cross-border global finance. Together, foreign banking deposits, foreign direct investment, and foreign portfolio investment constitute virtually the entire international (i.e. cross-border) financial system – excluded are only reserve assets held by central banks and derivatives, for which no comparative data are available and which are difficult to classify. Using all three segments enables a better overview about the true scale of offshore finance. Foreign portfolio investment is admittedly the largest of the three segments (USD 46.6 trillion in 2013), but foreign direct investment (USD 27.9 trillion in 2013) and foreign bank deposits (USD 21.6 trillion in 2013) are hardly insignificant (IMF 2015a, 2015b; BIS 2015a). Thus, in 2013 these three segments of cross-border global finance together amounted to USD 96.1 trillion – more than 25 per cent larger than global GDP (USD 75.6 trillion).

I proceed as follows; for each jurisdiction, I aggregate the three segments of cross-border finance to produce one value that combines all foreign capital that is booked in the particular jurisdiction. In the next step, I divide this value by the GDP of the jurisdiction. The result is a ratio that specifies the *intensity* with which any given jurisdiction acts as an OFC; this *Offshore-Intensity Ratio* describes the strength of a jurisdiction to function as a magnet for foreign capital. By setting the foreign capital that has been attracted to the particular jurisdiction in relation to its domestic economy we get a ratio that is readily understandable and that can easily be compared between different jurisdictions. Thus, the Offshore-Intensity Ratio is complementary to the Financial Secrecy Index developed by the Tax Justice Network (TJN 2013a). The Financial Secrecy Index – combining a secrecy score with a global scale weight for each jurisdiction – is a very valuable and thoroughly researched coefficient. However, the Financial Secrecy Index most likely understates the role of some OFCs significantly, because – similar to the approach by Zoromé – it only uses data pertaining to portfolio investment. The distinction between portfolio investment and direct investment is an arbitrary one though.

The IMF defines direct investment as investment by a resident of one country in a corporation that is resident in another country to have control or exert significant influence

over the management of that corporation (IMF 2015b). Direct investment comprises both 'greenfield' investment – the building of new facilities – as well as stakes in private or publicly listed corporations, for example through cross-border mergers & acquisitions. Direct investment is theorized to be longer term than portfolio investment. However, according to the IMF, it is direct investment when an investor owns more than 10% of the voting rights of a foreign corporation, below that threshold it is portfolio investment (IMF 2015b). The threshold of 10% is completely arbitrary, however. Imagine the situation that an investor holds 11% of the voting rights of a foreign corporation but remains passive and does not attempt to influence the management of the company. In this situation, the holdings would be classified as direct investment. If, on the other hand, an activist investor such as a hedge fund owns a stake of 9% in a foreign target firm and successfully influences the company to pay a special dividend, initiate a share buy-back program or sell itself to another corporation, the holdings would be treated as portfolio investment (see Fichtner 2013a, 2013b, 2015 for analyses of hedge funds). Hence, there is no objective rationale for the arbitrary division between direct and portfolio investment at the 10% threshold. Consequently, it makes sense to include direct investment in an analysis of offshore finance. The cases of the Netherlands and Luxembourg, the two eminent global direct investment conduits according to the IMF, will support this argument later on in this paper. Similarly, the segment of foreign banking deposits should not be excluded from our analysis, because jurisdictions such as the Cayman Islands, Ireland, and others host very large amounts of foreign banking assets. This paper builds on a previous publication, in which I have compiled a ratio for offshore-intensity using 2011 data only for foreign portfolio investment and foreign banking assets (Fichtner 2014).

The structure of this paper is as such: I begin with the smallest segment, foreign bank deposits, and present the most intensive jurisdictions and the amount of external capital they have attracted. The next section covers foreign direct investment, followed by a section on the largest of the three segments, foreign portfolio investment. Subsequently, I aggregate all three segments and present the 'Offshore-Intensity Ratio' for the top forty global jurisdictions. In the final section of the paper, I present a novel visualization showing the position of the largest OFCs within the entire contemporary system of cross-border global finance.

Foreign Bank Deposits

To analyse cross-border banking activities, the locational banking statistics by the Bank for International Settlement (BIS) are well suited. I use data on external deposits of reporting banks vis-à-vis individual countries, covering all sectors (BIS 2015a). Table 1 provides an overview of the forty most intensive countries and jurisdictions in the segment of external banking assets. Data is presented for total foreign bank deposits (FBD), the GDP of the jurisdiction, and finally for 'Banking-Intensity', the ratio of FBD divided by GDP.

Table 1 The 40 Most Intensive Jurisdictions in Foreign Bank Deposits 2013

Rank	Jurisdiction (Sovereign country)	FBD (USD bn)	GDP (USD bn)	Banking-Intensity
1	**Cayman Islands (UK)**	1,640	2.7	607.4
2	**West Indies UK**[1]	230	3.3	69.7
3	**Jersey (UK)**	358	6.2	57.7
4	**Marshall Islands (US)**	11	0.2	55.0
5	**Guernsey (UK)**	122	3.6	33.9
6	**Bahamas**	210	8.4	25.0
7	**Bermuda (UK)**	84	5.6	15.0
8	**Samoa**	11	0.8	13.8
9	**Luxembourg**	765	60.1	12.7
10	**Curaçao (NL)**	61	5.6	10.9
11	**Barbados**	42	4.3	9.8
12	**Isle of Man (UK)**	58	6.7	8.7
13	**Belize**	13	1.6	8.1
14	**Gibraltar (UK)**	12	1.9	6.3
15	**Liberia**	10	2.0	5.0
16	**Liechtenstein**	18	6.2	2.9
17	**Ireland**	570	232.2	2.5
18	**Malta**	23	9.6	2.4
19	**Panama**	75	42.6	1.8
20	**Hong Kong (China)**	427	274.0	1.6
21	**Mauritius**	18	11.9	1.5
22	**Cyprus**	32	21.9	1.5
23	**Singapore**	448	297.9	1.5
24	*United Kingdom*	3,422	2,678.5	1.3
25	*Switzerland*	742	685.4	1.1
26	*Macao (China)*	51	51.8	1.0
27	*Bahrain*	32	32.9	1.0
28	*Lebanon*	40	44.4	0.9
29	*Belgium*	349	524.8	0.7
30	*Netherlands*	541	853.5	0.6
31	*Libya*	46	74.2	0.6
32	*Turkmenistan*	25	41.9	0.6
33	Sweden	262	579.7	0.5
34	Denmark	148	335.9	0.4
35	Kuwait	72	175.8	0.4
36	Germany	1,503	3,730.3	0.4
37	France	1,113	2,806.4	0.4
38	Jordan	13	33.7	0.4
39	Finland	86	267.3	0.3
40	Saudi Arabia	224	748.4	0.3

Source: BIS (2015a); World Bank (2015); statistical offices of various small jurisdictions.
Note: Jurisdictions below USD10 billion have been disregarded due to their relative global insignificance.

[1] West Indies UK comprises Anguilla, Antigua and Barbuda, British Virgin Islands, Montserrat, and St Kitts-Nevis.

Now, the question is which jurisdictions should be seen as OFCs? At which value of banking-intensity can we say that – in the words of Zoromé – the financial sector catering to foreigners is *incommensurate* for the size and the financing of the domestic economy? Zoromé himself used the standard deviation to identify OFCs. However, he excluded 'outliers' such as Luxembourg from his analysis. Cases with extreme values significantly distort statistical measures such as the standard deviation. Moreover, there is no cogent reason that the standard deviation can tell us what proportion of foreign capital is commensurate for the size and the financing of an economy. In essence, we face the problem that there is no 'objective' value above which a jurisdiction could be unequivocally identified as an OFC. Thus, it is not the purpose of this paper to find such a precise threshold. Instead, this paper seeks to pose questions and stimulate a debate about this pivotal topic. In order to create a rough yardstick for such a threshold I divide total global foreign bank deposits (USD 21.6 trillion) by global GDP (USD 75.6 trillion). Hence, the result of 0.29 is the average global value of banking-Intensity in 2013. (Note that the median is about the same when we exclude jurisdictions with less than USD 10 billion in external assets due to their relative insignificance on the global level.) There are two dashed lines in Table 1. The first one is between Sweden and Turkmenistan; all jurisdictions above this line (set in italics) have more than twice the average global foreign bank deposits, i.e. banking-intensity values above 0.58. Hence, the foreign bank deposits of the Netherlands, Switzerland or the United Kingdom could potentially be considered as incommensurate and consequently it should be debated whether these countries could be seen as OFCs. The second dashed line (between the United Kingdom and Singapore) marks the threshold of five times the global average of external bank deposits, i.e. banking-intensity values above 1.45. We can classify these jurisdictions, including Ireland, Luxembourg, and the Bahamas with much greater confidence as OFCs.

The Cayman Islands is by far the most intensive jurisdiction in the segments of foreign bank deposits; in 2013, deposits from abroad amounted to more than 607 times the GDP of this tiny archipelago in the Caribbean. The Cayman Islands is also a very large international banking jurisdiction in absolute terms. Approximately USD 1.64 trillion foreign bank deposits have been booked there – more than in Germany or France. There is no space here to present the fine details for every single jurisdiction; but for the Cayman Islands the majority of external bank deposits originated from the US and Japan (the visualization presented below will provide more detail about the main counterpart jurisdictions of the largest OFCs). As can be seen in Table 1, the Cayman Islands is not an independent country but remains under the sovereignty of the United Kingdom. The Cayman Islands, Bermuda, Gibraltar and others are 'British Overseas Territories'; Jersey, Guernsey, and the Isle of Man are 'Crown Dependencies' – all these British dependencies have very high banking-intensity values. Hendry and Dickinson (2011, p.12) characterize the position of these jurisdictions in international law as follows: 'The overseas territories are plainly not independent sovereign states. Their external relations

remain the responsibility of the UK, the sovereign power. Accordingly, the UK is responsible for each of the territories under international law.' In legal terms, these territories could in fact still be referred to as 'colonies' of the UK (ibid.). In a bizarre twist, however, the territories are not constitutionally parts of the UK (or the EU), but under direct authority of the Crown. The Queen also appoints the governor of each territory. Even though the British Overseas Territories have their own judicial systems and enact most of their laws themselves, the final court of appeal is the ancient Privy Council of Her Majesty (TJN 2013b). That the UK has ultimate sovereignty over all these territories has been demonstrated conspicuously when in 2009 London suspended local government in Turks and Caicos Islands due to evidence for widespread corruption (Reuters 2009). This peculiar pseudo-independent status of the British Overseas Territories and Crown Dependencies, having semi-autonomy in areas such as fiscal policy, but remaining dependent on the UK in foreign affairs and defence, seems to be perfectly suited for the development of offshore finance, as OFCs need political, economic and fiscal stability, and of course a stable currency. The Marshall Islands – the fourth most intensive jurisdiction concerning foreign bank deposits – are located in the Pacific and became formally independent in 1986, but are since then 'in free association' with the US, which also uses the jurisdiction as a military base and provides financial aid.

In total, 23 jurisdictions should seriously be considered as OFCs, because they have attracted banking deposits from abroad that are between 1.5 and 607 times the size of their domestic economies. These enormous foreign bank deposits seem to be clearly out of proportion for the size and the financing of these economies. The global extreme case is the Cayman Islands, a small island jurisdiction that has a banking-intensity almost ten times that of the second placed West Indies UK – a remnant of British colonial history strangely still used for statistical purposes by the Bank of England and the Bank for International Settlements. The West Indies UK comprise Anguilla, Antigua and Barbuda, British Virgin Islands, Montserrat, and St Kitts-Nevis, and thus both formally independent former colonies and dependent territories. Nine other jurisdictions (place 24 to 32) have attracted more than two times the global average of foreign bank deposits. Thus, there should be an open debate about whether the banking sectors of these jurisdictions that serve foreign clients should be considered as disproportionate. Here the most interesting cases are clearly the United Kingdom and Switzerland. The UK has attracted almost USD 3.5 trillion in external bank deposits – reflecting the position of the City of London as the only true *global* financial centre besides Wall Street. Switzerland, the traditional epitome of a banking centre catering to foreign clients is – perhaps surprisingly to some – slightly less banking-intensive than the UK. Of course, it could be that Switzerland significantly underreports external bank deposits. However, this caveat applies to almost all jurisdictions that appear in Table 1, and the value of Swiss foreign bank deposits is roughly in line with findings by Zucman (2013). The next segment is foreign direct investment, which is almost thirty per cent larger than global foreign bank deposits.

Foreign Direct Investment

According to the Coordinated Direct Investment Survey (CDIS) by the IMF, global foreign direct investment amounted to USD 27.9 trillion in 2013, compared to global GDP of USD 75.6 trillion. Thus the simple global average of direct investment-intensity would be roughly 0.37 (median is 0.3 for jurisdictions with more than USD 10 billion in direct investment). Similar to external bank deposits, we can see this value as a rough yardstick to gauge which jurisdictions could be classified as OFCs in this segment. Again, there are two dashed lines in Table 2, highlighting the thresholds of two times, respectively five times the global average. The top 16 jurisdictions have very high proportions of external capital to domestic GDP and should clearly be seen as OFCs. Several dependent territories of the UK are the most intensive jurisdictions in direct investment, occupying places one to three and ten to twelve. The British Virgin Islands is by far the most intensive centre for foreign direct investment, primarily functioning as a conduit (or 'secrecy jurisdiction') for Chinese direct investment in- and outflows (also via Hong Kong). In a similar way, Mauritius (place eight) acts as a conduit for Indian foreign direct investment. Luxembourg and the Netherlands are both very large and very intensive centres for direct investment (note that the indirect data shown in Table 2 are in fact understating the direct investment holdings of both countries significantly). They act as the eminent global corporate havens; MNCs have routed trillions of dollars through these conduit jurisdictions to save taxes elsewhere. Of course, there are also 'legitimate' holdings in these numbers included, e.g. when a Belgian firm builds Dutch facilities. However, the very high values of direct investment-intensity suggest that these holdings constitute only a tiny share of the giant amounts of direct investment booked in these two conduits.

The category of ambiguous jurisdictions (place 17 to 21) this time only comprises five jurisdictions, again including Switzerland and the UK. The high absolute amounts of direct investment of both countries could be the result of the strong activity of MNCs in cross-border mergers & acquisitions, which are part of direct investment. There are also many other interesting aspects in Table 2, which can only be touched upon briefly in this paper. For example, the Netherlands too have a dependent territory that acts as an OFC: Curaçao, a remnant of the former Netherlands Antilles that were dissolved in 2010. Similar to the British dependencies, Curaçao is part of the Kingdom of the Netherlands but has internal autonomy to set tax rates. These British and Dutch colonial vestiges act as very intensive offshore jurisdictions. Before we turn to the largest segment of cross-border global finance, portfolio investment, it is important to note that I have used indirect data, e.g. the amount of direct investment holdings for a jurisdiction that all participating counterpart economies have reported to the IMF (CDIS Table 6 'Direct Investment Positions Cross-classified by Counterpart Economies'). Most OFCs do not participate in the CDIS; thus, if we used the inward direct investment positions reported only by participating jurisdictions, we would miss them.

Table 2 The 40 Most Intensive Jurisdictions in Foreign Direct Investment 2013

Rank	Jurisdiction (Sovereign country)	FDI (USD bn)	GDP (USD bn)	Direct Investment-Intensity
1	**British Virgin Islands (UK)**	975	1.1	886.4
2	**Cayman Islands (UK)**	371	2.7	137.4
3	**Bermuda (UK)**	486	5.6	86.8
4	**Samoa**	30	0.8	37.5
5	**Luxembourg**	2,094	60.1	34.8
6	**Curaçao (NL)**	84	5.6	15.0
7	**Cyprus**	302	21.9	13.8
8	**Mauritius**	134	11.9	11.3
9	**Bahamas**	70	8.4	8.3
10	**Guernsey (UK)**	23	3.6	6.4
11	**Jersey (UK)**	39	6.2	6.3
12	**Gibraltar (UK)**	11	1.9	5.8
13	**Barbados**	22	4.3	5.1
14	**Hong Kong (China)**	1,252	274	4.6
15	**Netherlands**	2,707	853.5	3.2
16	**Ireland**	440	232.1	1.9
17	*Switzerland*	1,073	685.4	1.6
18	*Isle of Man (UK)*	11	6.7	1.6
19	*Belgium*	718	524.8	1.4
20	*Singapore*	396	297.9	1.3
21	*United Kingdom*	2,392	2678.5	0.9
22	Austria	271	428.3	0.6
23	Sweden	358	579.7	0.6
24	Panama	25	42.6	0.6
25	Hungary	74	133.4	0.6
26	Finland	132	267.3	0.5
27	Denmark	154	335.9	0.5
28	Macao (China)	23	51.8	0.4
29	France	1,116	2,806.4	0.4
30	Malaysia	102	313.2	0.3
31	Germany	1,178	3,730.3	0.3
32	Norway	150	512.6	0.3
33	Spain	389	1,393.0	0.3
34	Canada	486	1,826.8	0.3
35	Uruguay	13	55.7	0.2
36	United States	3,897	16,768.1	0.2
37	Japan	1,110	4,919.6	0.2
38	Italy	400	2,149.5	0.2
39	Portugal	41	227.3	0.2
40	United Arab Emirates	66	402.3	0.2

Source: IMF (2015a); World Bank (2015); statistical offices of various small jurisdictions.
Note: Jurisdictions below USD10 billion have been disregarded due to their relative global insignificance.

Foreign Portfolio Investment

The approach to use indirect data is also useful for the largest of the three segments of cross-border global finance, foreign portfolio investment (which consists mostly of shares and bonds). The Coordinated Portfolio Investment Survey (CPIS) by the IMF is a good data source on cross-border holdings of portfolio investment. Specifically, this paper uses derived portfolio investment liabilities. Both Zoromé (2007) and the Financial Secrecy Index (TJN 2013a) use data on portfolio investment assets reported directly by the participating jurisdictions. However, many OFCs either underreport to the IMF or do not report at all (e.g. the British Virgin Islands). The extreme case of underreporting is the Cayman Islands that does not include the vast hedge fund sector in its reported portfolio investment assets and thus only reports assets of about USD 50 billion instead of over USD 2 *trillion*. The TJN has aptly called this the 'Cayman discrepancy' and developed an adjustment procedure. However, this adjustment still seems to understate the scale of the Cayman Islands in global offshore finance significantly. The global scale weight of the Cayman Islands calculated by the TJN is only about 40% of the scale weight of Luxembourg. According to the CPIS values presented in Table 3, however, the Cayman Islands has about 80% of the scale of Luxembourg. Similarly, the TJN scale weight for Switzerland is slightly larger than that of the Cayman Islands, whereas according to the CPIS data Cayman has more than twice the scale of Switzerland. The differences between the data presented here and those by the TJN and Zoromé most likely stem from the fact that they compare yearly flows (trade in financial services of the particular jurisdiction) with flows (GDP of the jurisdiction), whereas this paper compares accumulated stocks (amounts of foreign capital) with yearly flows (GDP). Of course, it might seem more precise to compare flows with flows, but this paper is more interested in giving a broad overview about the intensity with which different jurisdictions have acted as OFCs than in precision. The stocks of accumulated foreign assets (measured indirectly by derived liabilities) are a good proxy of the size of the financial sector that has catered to non-residents. Thus, the approaches by the TJN and Zoromé, and this one are not competitive but complementary.

In 2013, total global foreign portfolio investment amounted to USD 46.6 trillion, almost as much as external bank deposits and direct investment combined. Only nine jurisdictions are above the threshold of five times the global average of foreign portfolio investment to GDP (3.1 in 2013). Five of these nine jurisdictions are under British sovereignty; the Cayman Islands is by far the most intensive jurisdiction in the world, as foreign portfolio investment amounts to 800 times the size of domestic GDP. The reason for this extreme value of portfolio-intensity is the fact that the Cayman Islands is the global jurisdiction of choice for the hedge fund industry with about 50 per cent of all hedge funds having their legal domicile in this British dependency (see Fichtner 2014). Luxembourg is the second largest global centre for mutual funds and Ireland is a preferred jurisdiction for money market funds (Zucman 2013).

Table 3 The 40 Most Intensive Jurisdictions in Foreign Portfolio Investment 2013

Rank	Jurisdiction (Sovereign country)	FPI (USD bn)	GDP (USD bn)	Portfolio Investment-Intensity
1	**Cayman Islands (UK)**	2,162	2.7	800.7
2	**Marshall Islands (US)**	24	0.2	120.0
3	**British Virgin Islands (UK)**	125	1.1	113.6
4	**Bermuda (UK)**	463	5.6	82.7
5	**Jersey (UK)**	284	6.2	45.8
6	**Luxembourg**	2,654	60.1	44.2
7	**Guernsey (UK)**	109	3.6	30.3
8	**Curaçao (NL)**	145	5.6	25.9
9	**Ireland**	1,470	232.1	6.3
10	*Netherlands*	2,169	853.5	2.5
11	*Isle of Man (UK)*	12	6.7	1.8
12	*Bahamas*	15	8.4	1.8
13	*Mauritius*	18	11.9	1.5
14	*United Kingdom*	3,876	2,678.5	1.4
15	*Hong Kong (China)*	386	274.0	1.4
16	*Switzerland*	868	685.4	1.3
17	Sweden	707	579.7	1.2
18	Finland	302	267.3	1.1
19	France	3,145	2,806.4	1.1
20	Austria	442	428.3	1.0
21	Belgium	527	524.8	1.0
22	Denmark	302	335.9	0.9
23	Panama	37	42.6	0.9
24	Germany	3,089	3,730.3	0.8
25	Singapore	244	297.9	0.8
26	Portugal	183	227.3	0.8
27	Cyprus	16	21.9	0.7
28	Spain	1,000	1,393.0	0.7
29	Canada	1,264	1,826.8	0.7
30	Italy	1,449	2,149.5	0.7
31	Norway	337	512.6	0.7
32	Australia	976	1,560.4	0.6
33	Hungary	75	133.4	0.6
34	Malaysia	162	313.2	0.5
35	South Africa	155	366.1	0.4
36	Slovenia	18	48.0	0.4
37	South Korea	466	1,304.6	0.4
38	Japan	1,613	4,919.6	0.3
39	Slovak Republic	31	97.7	0.3
40	Israel	87	290.6	0.3

Source: IMF (2015b); World Bank (2015); statistical offices of various small jurisdictions.
Note: Jurisdictions below USD10 billion have been disregarded due to their relative global insignificance.

Six jurisdictions (places 10 to 16) are ambiguous; they have portfolio-intensity values of over two times the global average (1.24 in 2013) but less than the more decisive threshold of five times. Hence, jurisdictions such as the Netherlands, the United Kingdom, Hong Kong, and Switzerland could potentially be considered as OFCs, but the situation is not that clear. Note that in the segment of portfolio investment the median of 0.5 is lower than the simple global average of 0.62 – even if we disregard jurisdictions that have less than USD 10 billion in foreign assets due to their relative unimportance in the international context.

The Offshore-Intensity Ratio

Now we are in a positon to aggregate the three segments of foreign bank deposits, foreign direct investment and foreign portfolio investment, in order to achieve a truly broad and comprehensive overview about the role of different jurisdictions in offshore finance. For each jurisdiction, I combine the three segments of cross-border finance to produce one value that aggregates all external capital that is booked in the particular jurisdiction. Then, this value is divided by the GDP of the jurisdiction. The result is a ratio that specifies the *intensity* with which any given jurisdiction has acted as an OFC. Thus, the *Offshore-Intensity Ratio* describes the strength of a jurisdiction to function as a magnet for foreign capital. By setting the foreign capital that has been attracted to the particular jurisdiction in relation to its domestic economy we get a ratio that is readily understandable and that can easily be compared between different jurisdictions. As mentioned above, in 2013 the three segments of cross-border global finance together amounted to USD 96.1 trillion. This is more than 25 per cent larger than global GDP (USD 75.6 trillion). Hence, the simple global average is roughly 1.27; the median is slightly lower at 1.0. It is extremely difficult to say which value of offshore-intensity is ‘normal’ for a jurisdiction. Values that are between the median of 1.0 and the global average of 1.27 could very likely be considered as commensurate for the size and the financing of the domestic economy. As shown in Table 4, countries such as Italy, the United States, Canada, Spain, and Norway fall in this category. Above two times the simple global average of aggregated foreign assets (2.54) it is doubtful that the foreign assets can still be considered as commensurate. Hence, countries such as Belgium, the United Kingdom, Singapore and Switzerland could already be seen as OFCs, but clearly more research and a much more intense debate about this is needed. Jurisdictions that have Offshore-Intensity Ratios above five times the simple global average (6.35) have a very high probability to be OFCs. Perhaps surprisingly to some, the Netherlands (with a value of exactly 6.35) could thus be considered an offshore financial centre. This is mainly due to the enormous amounts of foreign direct investment that have been routed through this country; the Offshore-Intensity Ratio for the Netherlands would have been even much higher if the officially reported direct investment assets had been used instead of the indirectly measured direct investment.

Table 4 The 40 Most Intensive Jurisdictions in Cross-border Global Finance 2013

Rank	Jurisdiction (Sovereign country)	Foreign Assets (USD bn)	GDP (USD bn)	Offshore-Intensity Ratio
1	**Cayman Islands (UK)**	4,173	2.7	1,545.6
2	**British Virgin Islands (UK)**	1,177	1.1	1,070.0
3	**Marshall Islands (US)**	40	0.2	200.0
4	**Bermuda (UK)**	1,033	5.6	184.5
5	**Jersey (UK)**	681	6.2	109.8
6	**Luxembourg**	5,513	60.1	91.7
7	**Guernsey (UK)**	254	3.6	70.6
8	**Curaçao (NL)**	290	5.6	51.8
9	**Bahamas**	295	8.4	35.1
10	**Barbados**	71	4.3	16.5
11	**Cyprus**	350	21.9	16.0
12	**Mauritius**	170	11.9	14.3
13	**Isle of Man (UK)**	81	6.7	12.1
14	**Ireland**	2,480	232.1	10.7
15	**Hong Kong (China)**	2,065	274.0	7.5
16	**Netherlands**	5,417	853.5	6.3
17	*Liechtenstein*	32	6.2	5.2
18	*Switzerland*	2,683	685.4	3.9
19	*Singapore*	1,088	297.9	3.7
20	*United Kingdom*	9,690	2,678.5	3.6
21	*Panama*	137	42.6	3.2
22	*Belgium*	1,594	524.8	3.0
23	Sweden	1,327	579.7	2.3
24	Finland	520	267.3	1.9
25	France	5,374	2,806.4	1.9
26	Austria	805	428.3	1.9
27	Denmark	604	335.9	1.8
28	Germany	5,770	3,730.3	1.6
29	Macao (China)	76	51.8	1.5
30	Bahrain	41	32.9	1.3
31	Portugal	287	227.3	1.3
32	Hungary	160	133.4	1.2
33	Norway	602	512.6	1.2
34	Spain	1,593	1,393.0	1.1
35	Lebanon	49	44.4	1.1
36	Canada	2,002	1,826.8	1.1
37	United States	16,745	16,768.1	1.0
38	Italy	2,105	2,149.5	1.0
39	Malaysia	292	313.2	0.9
40	Australia	1,334	1,560.4	0.9

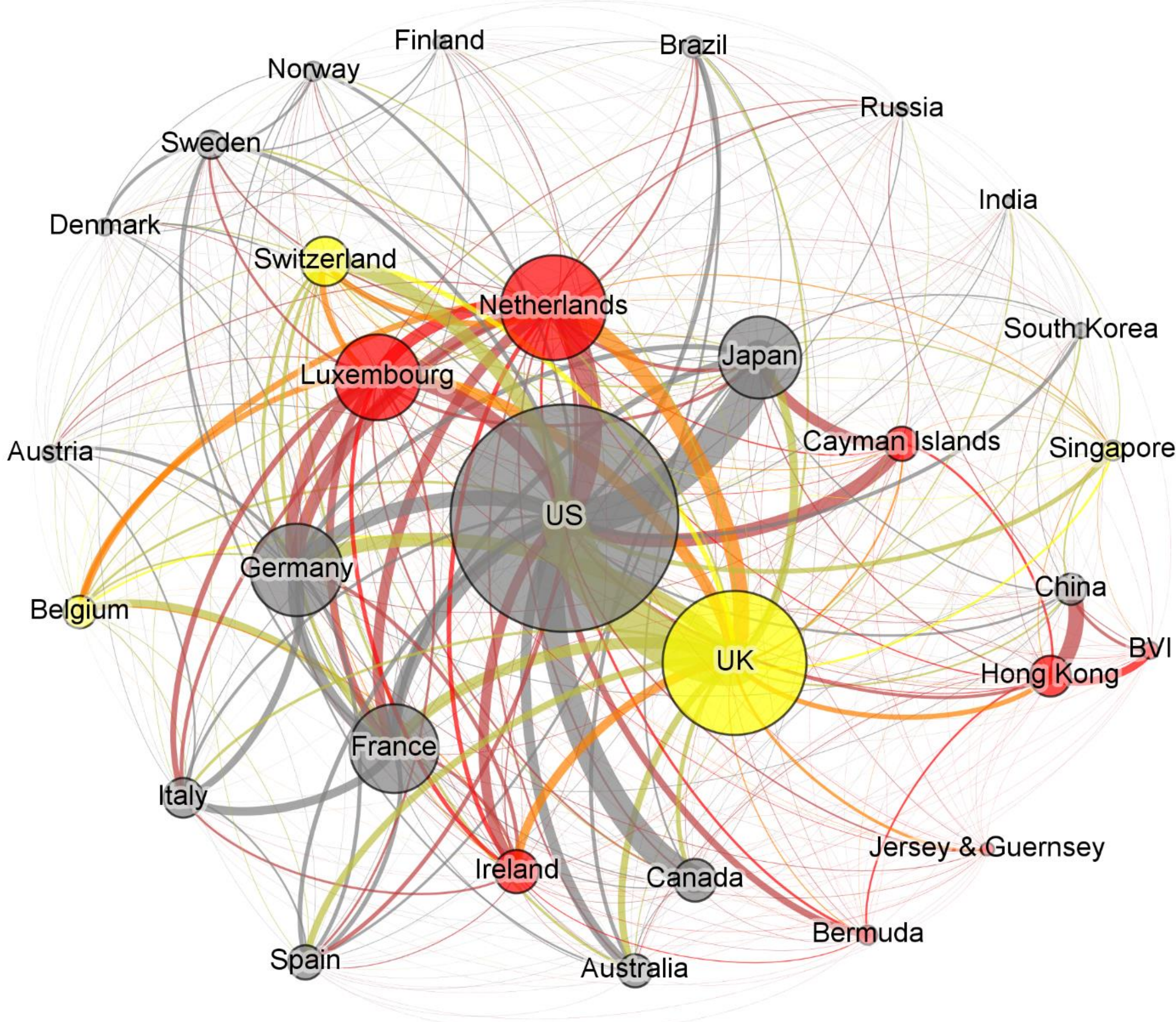
Source: Calculations by the author based on Tables 1 – 3.
Note: Jurisdictions below USD30 billion have been disregarded due to their relative global insignificance. Foreign assets of British Virgin Islands contain one third of the banking assets of West Indies UK.

Hong Kong (on place 15) with an Offshore-Intensity Ratio of 7.5 could also be seen as an OFC, however here we have to take into account that this jurisdiction primarily acts as a conduit financial centre for China and not as a truly global OFC. Ireland has a high Offshore-Intensity Ratio of 10.7 and in each of the three segments studied in this paper, Ireland has been above the threshold of five times the global average of foreign capital. Thus, Ireland should clearly be seen as an OFC. Mauritius mainly acts as an OFC for India, and Cyprus fulfils this role for Russia. Both jurisdictions are quite small in global perspective, however. Luxembourg on place six is both a very large international financial centre (over USD 5.5 trillion foreign capital) and a very intensive OFC – the external assets booked in the Grand Duchy are over 90 times as large as the GDP of this small state. All of the top eight most intensive OFCs in the world are dependent territories (except Luxembourg). Guernsey and Curaçao are medium-sized OFCs with external assets between USD 250 and 300 billion. The British Crown Dependency of Jersey has attracted almost USD 700 billion in foreign capital and an Offshore-Intensity Ratio of over 100. Both Jersey and Guernsey mainly act as OFCs for the United Kingdom (i.e. the City of London) but also for the United States. The British Overseas Territory of Bermuda has over USD 1 trillion in external capital and primarily functions as a conduit jurisdiction for US foreign direct and portfolio investment. The Offshore-Intensity Ratio of over 180 signals a very intensive OFC. The Marshall Islands on place three have made it barely over the threshold of USD 30 billion under which I consider jurisdictions too small to matter in the global context. The jurisdiction became formally independent in 1986 but is de facto dependent on the United States, which provides aid payments and also maintains a military base on the archipelago, as mentioned above. Not surprisingly then, the Marshall Islands almost exclusively cater to US investors. Much more interesting is the British Virgin Islands (another British Overseas Territory), which in 2013 has been the second most intensive OFC in the world. Comparably to Bermuda, the British Virgin Islands has about USD 1 trillion of foreign capital, but the structure of the OFCs is completely different. The British Virgin Islands acts almost exclusively as a secrecy jurisdiction for foreign direct investment – the largest counterpart economy by far is China (both the mainland and Hong Kong) followed by Russia. The Offshore-Intensity Ratio of the British Virgin Islands of over 1,000 is much higher than that of Bermuda because the domestic economy is only about one-fifth the size of Bermuda and thus the denominator is much lower. Finally, we have the Cayman Islands as the most intensive OFC in the world by far with an Offshore-Intensity Ratio of over 1,500. This is both due to a relatively small GDP and a very high amount of foreign capital (over USD 4 trillion) that has been attracted to this tax and regulatory haven under British sovereignty (mainly via hedge funds). The two largest counterpart countries of the Cayman Islands are the United States and Japan. In the following section, I present a novel visualization of the position that the largest OFCs occupy in the contemporary system of cross-border global finance, clearly showing the main counterpart jurisdictions that have utilised offshore finance.

Visualizing the Position of the Largest OFCs in Global Finance

Figure 1 shows the bilateral financial relations between the largest 34 jurisdictions of cross-border global finance aggregating the 2012 data for foreign bank deposits, foreign direct investment and foreign portfolio investment. The bilateral financial relations visualised here amount to USD 81.6 trillion. Jurisdictions that most likely do not act as OFCs (or 'onshore' countries) are shown in grey; jurisdictions that could potentially be seen as OFCs (having Offshore-Intensity Ratios of over two times the global average in 2013) are shown in yellow; and jurisdictions with Offshore-Intensity Ratios of over five (that in all likelihood should be seen as OFCs) are coloured red. The size of the jurisdictions derives from the value of financial relations with the other 33 countries and territories; in other words, the magnitude of the spheres in the visualization is equivalent to the sum of all their bilateral relations in the field of cross-border global finance. The largest jurisdictions are placed at the centre of the visualization; the smaller ones are moved to the periphery.

Figure 1 The Position of the Largest OFCs in Cross-border Global Finance in 2012



Source: Author based on BIS (2015b), IMF (2015a, 2015b).

I add the two bilateral financial relations (e.g. US investment in the UK and vice versa) to get one value describing the *scale* of bilateral financial activity. This procedure reduces the detail of the graph but enhances clarity significantly. The purpose of Figure 1 is not to give the greatest possible amount of detail, but to provide a broad and comprehensive overview. This visualization clearly shows two important things: 1) The United States is still the dominant country in cross-border global finance – US centrality is supported by the US-UK axis being the largest bilateral financial relation on the planet with almost USD 4.7 trillion in 2012, and by the strong integration of Japan in Anglo-American structures of international finance (also via the Cayman Islands); 2) large offshore financial centres, such as the Netherlands, Luxembourg, Ireland, Hong Kong, the Cayman Islands, Bermuda, and the British Virgin Islands play a central role in contemporary cross-border global finance.

Conclusion

The Offshore-Intensity Ratio is a very simple and straightforward way to identify which countries and jurisdictions could be seen as offshore financial centres. By setting the aggregated amount of external assets that has been attracted in relation to the size of the domestic economy we get a ratio that expresses the strength with which the particular jurisdiction has acted as a magnet for foreign capital. It is not the purpose of this paper to establish exact thresholds for identifying offshore financial centres, for there are no 'objective' thresholds. Instead, there has to be an intense academic and public discussion about this pivotal topic. The data presented in Tables 1 – 4 as well as in the novel visualization of global finance show that a relatively small number of offshore financial centres are responsible for the majority of offshore financial activities. These jurisdictions include the Netherlands, Luxembourg, the Cayman Islands, Bermuda and others. Many mainstream economists still argue against a stricter regulation of offshore finance on the grounds that due to its high mobility, capital would supposedly just shift to another jurisdiction to evade regulatory measures. The findings of this paper, however, suggest that a stricter regulation of a few key offshore jurisdictions could have a very significant effect, because certain segments of global finance (e.g. direct investment in the Netherlands and Luxembourg) or specific financial actors (such as hedge funds in the case of the Cayman Islands or money market funds in Ireland) are strongly concentrated there.

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