Cayman Finance

A Review of TJN's Financial Secrecy Index

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A Review of TJN's Financial Secrecy Index

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Executive Summary

The Tax Justice Network's Financial Secrecy Index ("the Index") purports to identify the jurisdictions that facilitate illicit financial flows. Unfortunately, the Index is heavily biased, poorly constructed, and uses inaccurate data and inappropriate criteria.

The Index comprises two main components: a global scale weight (GSW) and a secrecy score (SS). The GSW is a measure of the extent of a jurisdiction's exports of financial services. The SS is a composite index comprising 20 "Key Financial Secrecy Indicators" (KFSIs). Tax Justice Network (TJN) combines these components by multiplying the cube of the SS with the cube root of the GSW to produce the overall Index score.

Analysis shows that TJN used the wrong GSW for Cayman. Instead of using data on exports of financial services from the IMF's Balance of Payments Statistics (BOPS) database, as TJN's own methodology states that it should, TJN used an alternative measure. **As a result, TJN overestimated Cayman's GSW by 860%.** This alone had the effect of more than doubling Cayman's score on the Index. **Using the correct figure for Cayman's GSW, without altering anything else, Cayman falls from first on the Index to sixth.**

TJN's methodology for combining the GSW and SS is arbitrary and does not have a sound statistical rationale. **Using a more statistically sound and intuitive method for combining the GSW and SS, suggested by the European Commission Joint Research Centre, Cayman falls to 16th on the Index.**

However, this still dramatically overstates the extent to which Cayman facilitates illicit financial flows. A detailed statistical and substantive analysis of the KFSIs shows that:

- Nine KFSIs suffer from such extreme biases and/or distortions that they likely do not provide reliable or consistent information on a jurisdiction's tendency to facilitate illicit financial flows.
- The criteria for two other KFSIs (11 and 14) are biased against jurisdictions whose polities have chosen not to impose taxes on individual or corporate income, even though in the context of those KFSIs there is no reason to think that such tax choices contribute towards illicit financial flows.
- One KFSI (15) inappropriately combines two components that are strongly associated with illicit financial flows with two that are not known to be associated with such flows.

To address these biases and distortions:

- The nine highly biased and/or distorted KFSIs were removed;
- KFSIs 11 and 14 were adjusted with correct scores for jurisdictions that do no apply taxes to personal or corporate income; and
- KFSI 15 was adjusted by removing the two irrelevant components.

As a result of these adjustments, Cayman's rank on the Secrecy Score falls from 20th to 109th using individually rescaled KFSIs (the most appropriate method), or to 115th using TJN's original scaling.

Meanwhile, **Cayman's rank on the Index falls from 16th to 26th** using the more appropriate modified aggregation method (product of individually rescaled KFSIs and rescaled GSW), or to 34th using TJN's original aggregation method (product of the cube of the SS and cube root of the GSW).

In sum, simply by using the correct GSW, according to TJN's own rubric, and by adjusting the way the GSW and SS are combined, using a methodology proposed by the European Commission Joint Research Centre, Cayman falls from first to sixteenth on the Index. After correcting for defects in the KFSIs, Cayman falls to between 109th and 115th on the secrecy score and to between 26th and 34th on the Index.

Introduction

Since 2009, the Tax Justice Network (TJN), a UK NGO, has published a Financial Secrecy Index (FSI),[1] the aim of which is, "to identify as accurately as possible the jurisdictions that make it their business to provide offshore secrecy."[2] By so doing, TJN hopes to highlight the jurisdictions that facilitate "illicit cross-border financial flows."

In February 2020, the TJN published its latest Financial Secrecy Index (FSI), which ranked the Cayman Islands (known locally as Cayman) as the most important provider of financial secrecy. This came as a surprise to many in Cayman, since the jurisdiction is very well regulated, has stringent procedures to prevent and identify financial crimes, has in place a fully verified beneficial ownership registry for corporations, and meets international standards that address tax evasion, money laundering and terrorism financing.

This review seeks to understand better what led to Cayman being ranked first on the 2020 FSI, to address possible errors made in the ranking process, and to correct other defects with the construction of the index. It is organised as follows:

Section 1 briefly reviews the overall purpose and structure of the FSI.

Section 2 considers in detail how TJN constructs one of the two main components of the FSI, the Global Scale Weight (GSW), and addresses an apparent defect in the way TJN calculated the GSW for Cayman.

Section 3 evaluates the way TJN aggregates the Secrecy Score (SS) and the Global Scale Weight (GSW) to produce the FSI and offers a revised estimate of the FSI for all jurisdictions based on one of the methods discussed by the European Union Joint Research Centre (ECJRC) in its 2018 review of the FSI.

Section 4 addresses several concerns relating to the indices that make up the SS. Some of these are based on analysis undertaken by the ECJRC, others are based on analysis undertaken for this review.

Section 5 offers conclusions to the study.

Section 6 contains a lengthy Appendix offering more detailed analyses, including full rankings using revised metrics and methodologies as well as numerous additional charts.

1. The Financial Secrecy Index

The basic idea underpinning the FSI is that the scale of illicit financial flows associated with a jurisdiction is a function of (a) the extent to which a jurisdiction's laws and regulations facilitate illicit activity in principle and (b) the scale of the jurisdiction's external trade in financial services.

The FSI is a composite index comprising a "Secrecy Score" based on twenty "Key Financial Secrecy Indicators" (KFSI) and a "Global Scale Weight" (GSW).

Each KFSI ranges from 0 to 100 based on criteria developed by TJN. The jurisdiction's KFSIs are then summed and divided by 20 in order to calculate the Secrecy Score (giving a number that ranges from 0 to 100).

For each jurisdiction, TJN calculates a GSW, which is, "based on an assessment of the size of each jurisdiction's share of the global market for financial services provided to non-resident clients."[3]

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[1] https://fsi.taxjustice.net/Archive2009/index.php

[2] https://fsi.taxjustice.net/en/

[3] https://fsi.taxjustice.net/en/methodology/weightings

For each jurisdiction, TJN then calculates the FSI by multiplying the cube of the Secrecy Score by the cube root of the Global Scale Weight.

1.1 The Definition of Illicit Financial Flows

Before proceeding, it is worth briefly addressing what is meant by "illicit financial flows." TJN defines these as, "transfers of money from one country to another that are forbidden by law, rules or custom."[4] Global Financial Integrity (GFI) uses a similar, if slightly narrower, definition:

> "Illicit financial flows (IFFs) are *illegal* movements of money or capital from one country to another. GFI classifies this movement as an illicit flow when *illegal* movements of money or capital from one country to another."[5] (Emphasis added.)

The GFI also offers helpful clarification of the meaning of the term, with some examples:

> "GFI classifies this movement as an illicit flow when funds are illegally earned, transferred, and/or utilized across an international border. Some examples of illicit financial flows might include:
>
> > A drug cartel using trade-based money laundering techniques to mix legal money from the sale of used cars with illegal money from drug sales;
> >
> > An importer using trade misinvoicing to evade customs duties, value-added tax, or income taxes;
> >
> > A corrupt public official using an anonymous shell company to transfer dirty money to a bank account in the United States;
> >
> > A human trafficker carrying a briefcase of cash across the border and depositing it in a foreign bank; or
> >
> > A member of a terrorist organization wiring money from one region to an operative in another."

The OECD similarly states that "illicit financial flows (IFFs) are defined broadly as all cross-border financial transfers, which *contravene national or international laws*."[6] (Emphasis added.) The OECD also offers some useful examples of illicit financial flows:

- Funds with criminal origin, such as the proceeds of crime.
- Funds with a criminal destination, such as bribery, terrorist financing or conflict financing.
- Funds associated with tax evasion.
- Transfers to, by, or for, entities subject to financial sanctions under UN Security Council Resolutions such as 1267 (1999) and its successor resolutions (e.g. Al Qaida and other terrorist organisations).
- Transfers that seek to evade anti-money laundering/counter-terrorist financing measures or other

[4] https://www.taxjustice.net/2020/06/24/track-your-countrys-vulnerability-to-illicit-financial-flows-with-our-new-tool/#:~:text=Illicit%20financial%20flows%20are%20transfers,by%20law%2C%20rules%20or%20custom.&text=A%20key%20challenge%20to%20tackling,largest%20risk%20to%20their%20economies.

[5] https://gfintegrity.org/issue/illicit-financial-flows/

[6] OECD, Illicit Financial Flows, Annotation. http://www.oecd.org/gov/pcsd/ONLINE_Annotations_IFFs%20(5).pdf

- legal requirements (such as transparency or capital controls)"[7]

The essentially similar GFI and OECD definitions are based on the brightline distinction between legal and illegal activity. As such, they are more readily operable than the TJN definition, because it is more difficult to know precisely what might be forbidden by informal rules and customs. Thus, under either the GFI or OECD definitions, a cross-border transfer of funds undertaken for the purposes of evading taxes would be an illicit financial flow. By contrast, a cross-border transfer undertaken for legitimate purposes and where the entity or entities involved are fully compliant with the laws of both jurisdictions, would not be an illicit financial flow.

The discussion in this review presumes that "illicit financial flows" refers to fnancial flows that would fall under the GFI or OECD definitions.

2. Revising the Global Scale Weight for Cayman

This section describes the process by which TJN estimates the "Global Scale Weight" (GSW) for Cayman, offers an alternative GSW based on available data for exports of services, and computes a revised FSI using that GSW.

2.1 TJN's Estimate of GSW for Cayman

According to TJN, the calculation of the GSW for each jurisdiction depends on the availability of data for that jurisdiction: "The preferred source is the IMF's Balance of Payments Statistics (BOPS), which provides, for each jurisdiction, data on exports of financial services." TJN notes that at the time it constructed its index, such data was available for 2018 for 94 of the jurisdictions in its analysis.

For jurisdictions for which 2018 exports of financial services data are not available from the BOPS database, TJN uses one of four alternative methods to "extrapolate an estimate of the value of exports of financial services." In order of preference, these alternatives are:

i. For jurisdictions for which 2017 BOPS data on exports of financial services are available, which includes 11 of the jurisdictions in the 2020 FSI according to TJN, an extrapolation is made from those data using a multiplication factor derived from correlating 2018 and 2017 data for the 94 jurisdictions for which such data are available.

ii. For jurisdiction for which 2017 BOPS data on exports of financial services are not available, TJN extrapolates from data on inward assets from the 2018 BOPS International Investment Position (IIP) "filtered… to exclude foreign direct investment, reserve assets, and all assets belonging to general government and monetary authorities."

iii. If inward asset data from IIP is not available, TJN uses 2018 data on reported inward portfolio assets from the IMF's Coordinated Portfolio Investment Survey (CPIS)

iv. If reported inward portfolio asset data is not available, TJN uses 2018 data on inward portfolio assets derived from other jurisdictions' outward portfolio liabilities from the CPIS.

In each case, extrapolations are made by first undertaking regressions of financial services exports, for jurisdictions for which that data is available, against the relevant proxy metric, in order to produce an extrapolation coefficient.

In the case of Cayman, TJN states that BOPS data on exports of financial services for both 2018 and 2017 are "unknown."[8] Instead, TJN adopted method ii; that is, it used reported inward portfolio assets from

[7] Ibid.

[8] https://fsi.taxjustice.net/database/dbr_Jurisdiction.php?Juris=KY&Per=20

CPIS for 2018 ($2.344 trillion), which it multiplied by its extrapolation coefficient (0.0102399) to arrive at an estimate of financial services exports of US$24 billion. It then divides this number by the global total of financial services exports to give a GSW of 4.58%.

2.2 Concerns Regarding TJN's Estimate of Financial Services Exports for Cayman

As noted, TJN's stated justification for using proxy measures for exports of financial services for a particular jurisdiction is the lack of availability of BOPS data on exports of financial services for that jurisdiction, either for 2018 or for 2017. TJN's cut-off date for accessing data was 1 November 2019.[9] The Cayman Islands Government Economics and Statistics Office (ESO) published provisional data on exports of services (including financial services) as part of its *Balance of Payments & International Investment Position Report 2017* in February 2019.[10] This data is available on the IMF's BOPS website.[11]

The ESO submitted data from the 2017 report, including data on exports of financial services, to the IMF in September 2019 and the IMF made the information available on its website the same month.[12] As such, the BOPS data on exports of financial services for Cayman was available to TJN at the time it obtained its data, in November 2019.[13] Given the clear hierarchy of preferred data in TJN's rubric, it is strange that TJN chose not to use the export data for Cayman and claimed that these data are "unknown".

2.2.1 Alternative Estimates of Financial Services Exports for Cayman

TJN's decision to use a proxy based on 2018 CPIS data for inward portfolio assets rather than 2017 BOPS data on exports of financial services has significant consequences for its estimate of Cayman's GSW and hence for its overall FSI score. This is because TJN's proxy estimate for Cayman's exports of financial services, $24 billion, is nearly 10 times the size of total exports of all financial and related services, as documented in Table 2.1.

Table 2.1 Estimates of Financial and Finance-Related Services Exports (US$ Millions)

Statistic	BOPS data for 2017	Extrapolated to 2018
Financial Services	1342.80	1377.38
Insurance and pension services	357.60	366.81
Other business services	737.28	756.27
Total financial and finance-related services	**2437.68**	**2500.46**

Table 2.1 shows data for Cayman from the IMF BOPS database on exports of "financial services," as well as "insurance and pension services," which are clearly finance related, and on "other business services,"

[9] Tax Justice Network, *Financial Secrecy Index 2020 Methodology*, London: Tax Justice Network, 2020. (Hereinafter "Methodology") p. 230

[10] ESO, *Balance of Payments & International Investment Position Report 2017*, George Town, Grand Cayman: The Economics and Statistics Office, Cayman Islands Government, February 2019. Available at: https://www.eso.ky/UserFiles/page_docums/files/uploads/the_cayman_islands_balance_of_payments_a-2.pdf (Cayman's ESO compiles data in accordance with the IMF's BPM6.)

[11] https://data.imf.org/regular.aspx?key=62805742

[12] Cayman Economics and Statistical Office, personal communication, 6 January 2021.

[13] Since it is quite normal for government statistical offices to publish provisional estimates that are subsequently revised, the fact that Cayman ESO's estimates for 2017 were provisional would not have been an adequate reason for TJN not to have used those estimates. In any case, the IMF BOPS database makes no mention of the figures for 2017 being provisional.

which include accounting and legal services that in the Cayman context most probably are largely finance related. These three statistics are then combined into an aggregate "total financial and related services." It also shows extrapolations of the 2017 data for 2018 for each of these statistics using TJN's extrapolation coefficient (1.0257543). Had TJN used the BOPS data on exports for all finance and finance related services, its estimate would have been approximately $2.5 billion, which is an order of magnitude less than the figure used by TJN in the FSI.

2.2.2 Accounting for the Difference between TJN's Estimates and ESO/BOPS Estimates

What accounts for the large disparity between the ESO's estimates of exports of financial services and the imputed amounts found by TJN based on estimates of inward assets? The most likely explanation is that while the size of inward assets may be proportional to the size of the financial services industry in most jurisdictions, this is not true for Cayman, where the size of inward assets is disproportionate to the size of the financial services industry. This is because inwards assets include all the assets flowing into funds domiciled in the jurisdiction, regardless of whether the manager of the fund that holds the assets is based in the jurisdiction. Thus, in 2018, Cayman, which is domicile to approximately 70% of the world's hedge funds and private equity funds,[14] but *not* to the managers of most of those funds, recorded $2.3 trillion in inward portfolio assets but only $2.6 billion in exports of financial and finance-related services (based on the revised ESO figures).

In other words, while TJN's use of inward portfolio assets to derive a proxy measure for financial exports may work better for jurisdictions where funds are to a greater extent both domiciled and managed, such as Jersey[15] and the Bahamas,[16] it is fundamentally inappropriate for a jurisdiction such as Cayman, for which a very large proportion of domiciled funds are managed elsewhere.

TJN's justification for extrapolating from data on portfolio assets is that in its analysis these assets are highly correlated with exports of financial services. In its regression, TJN obtains an R square of 0.839, implying that the variation in inward portfolio assets explains approximately 84% of the variation in the exports of financial services. While the correlation for the full set of jurisdictions is 0.84, there may well be outliers for which the relationship does not hold. That appears to be the case for Cayman. TJN is surely aware of this problem, at least in principle, since the basis for its use of proxy data is a paper by Ahmed Zoromé of the IMF that found significant differences in the extrapolation coefficients for different groups of jurisdictions.[17]

2.3 An Alternative GSW for Cayman and its implications for the FSI

If the extrapolated BOPS estimates of exports of financial and finance-related service are used instead of TJN's proxy estimate, Cayman's GSW falls from 4.5% to 0.5%.[18] In other words, the GSW used by TJN is 860% larger than the GSW calculated from the BOPS data. Using this more accurate estimate of the GSW, it is possible to construct a revised FSI for Cayman, using the same methodology as TJN applied. The resulting revised FSIs and FSI shares for the top 15 jurisdictions are reported in table 2.2. As can be seen, Cayman's FSI falls to 752, while the FSI shares fall to 2.22%. Meanwhile, Cayman falls from first to sixth place in the rankings once these adjustments are made.

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[14] https://www.lexology.com/library/detail.aspx?g=b10fcd59-ded8-4aeb-aa99-671db47f661b

[15] https://fsi.taxjustice.net/database/dbr_Jurisdiction.php?Juris=JE&Per=20

[16] https://fsi.taxjustice.net/database/dbr_Jurisdiction.php?Juris=BS&Per=20

[17] Ahmed Zoromé, *Concept of Offshore Financial Centers: In Search of an Operational Definition*, Washington DC: International Monetary Fund, IMF Working Paper WP/07/87, 2007.

[18] The Appendix provides more extensive description of the adjustment methodology along with a treatment using revised data for 2017 and both provisional and revised data for 2018.

Table 2.2 Adjusted FSI Rankings for 2020 Using Cayman's GSW based on Extrapolated BOPS Data

Rank	Jurisdiction	Secrecy Score	Adjusted GSW	Adjusted FSI	Adjusted FSI Share
1	United States	62.89	22.32%	1509	4.47%
2	Switzerland	74.05	4.30%	1423	4.22%
3	Hong Kong	66.38	4.63%	1051	3.11%
4	Singapore	64.98	5.40%	1037	3.07%
5	Luxembourg	55.45	12.91%	862	2.55%
6	Cayman Islands	76.08	0.53%	766	2.27%
7	Japan	62.85	2.30%	706	2.09%
8	Netherlands	67.40	1.16%	692	2.05%
9	British Virgin Islands	71.30	0.52%	628	1.86%
10	United Arab Emirates	77.93	0.22%	614	1.82%
11	Guernsey	70.65	0.43%	573	1.70%
12	United Kingdom	46.20	16.64%	542	1.61%
13	Taiwan	65.50	0.62%	515	1.53%
14	Germany	51.73	4.92%	507	1.50%
15	Panama	71.88	0.22%	487	1.44%

3. Adjusting the Way GSW and SS are Aggregated in the FSI

In 2018, the European Commission's Joint Research Centre (ECJRC) undertook a review of the Financial Secrecy Index.[19] The review, which was focused narrowly on certain statistical properties of the FSI, raised several concerns, including with respect to the way TJN combined the GSW with the Secrecy Score (SS) to produce the FSI score.

TJN argues that its methodology for aggregating the SS and GSW is intended to address the otherwise-disproportionate effect that the GSW has on the overall FSI. But in spite of this, as the ECJRC noted of previous FSIs, "from a statistical point of view, the GSW and SS provide quite unequal contributions to the FSI."[20] This remains true of the 2020 FSI; as the scatter plots in Figure 3.1 show, FSI rank is much more closely correlated with GWS than with SS. Indeed, the R square statistics for the line of best fit suggest that the rank of GSW explains over 70% of the variation in the rank of FSI, while the SS rank explains less than 1%.

The ECJRC acknowledges that the aggregation TJN adopts for the FSI, "to some extent … strikes a balance between the pursuit of statistical balance against the distortion of the GSW distribution."[21] But it

[19] Michaela Saisana and Willian Becker, *The JRC Statistical Audit of the Financial Secrecy Index 2018*, European Commission Joint Research Centre, 2018. Available from: https://knowledge4policy.ec.europa.eu/publication/JRC-statistical-audit-financial-secrecy-index-2018_en

[20] Ibid. at p. 179.

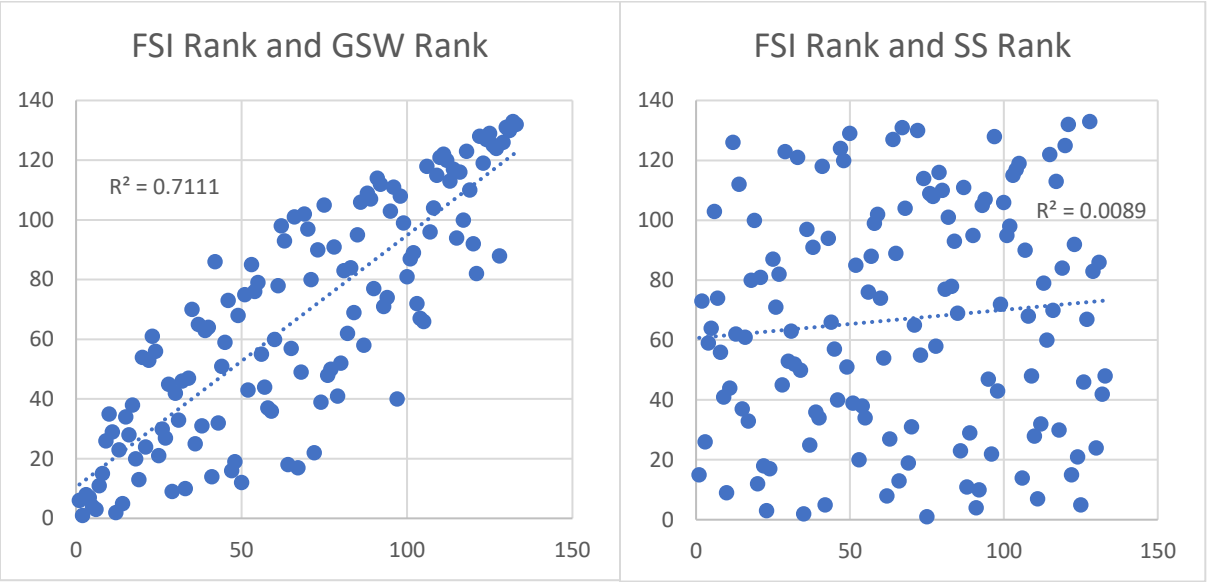
[21] Ibid. at 180.

notes that "By transforming GSW, there is a departure from the measurable reality," and "By transforming both SS and GSW, the resulting measure risks being difficult to interpret."[22]

What the ECJRC is saying, politely, is that the way TJN combines the GSW and SS to produce the FSI – multiplying the cube of the SS by the cube root of the GSW – is very peculiar and results in a composite index that may not measure what it is supposed to measure.

In response, the ECJRC suggests three possible alternative transformations of the data that might address its concerns. All three alternatives involve rescaling the SS and GSW, so that these two components of the FSI have the same scale. As the ECJRC notes, "In general, it is good practice to scale indicators to the same scale to ensure that they contribute more or less equally to the composite."[23] In the first alternative, FSI-Alt1, the rescaled GSW and SS are simply multiplied together. In the second, FSI-Alt2, the log of the GSW is taken and the result rescaled and multiplied by the rescaled SS. In the third, FSI-Alt3, the log of the GSW is taken and the result rescaled and added to the rescaled SS. The first two of these alternatives are evaluated in detail in the Appendix to this study and the third is discussed briefly.

Figure 3.1: Scatter plots of 2020 FSI Rank (x-axis) against GSW Rank (left) and SS Rank (right)



Source: Author's calculations based on TJN FSI 2020.

In seeking to evaluate which aggregation is most appropriate, it is helpful to return to the original intent of TJN's FSI. TJN states that it seeks to identify "the *most important* providers of international financial secrecy" (emphasis added).[24] While "most important" is ill defined, TJN states that it seeks to assess, "how much damage is each secrecy jurisdiction responsible for?"[25] So, it seems reasonable to infer that importance is related to the amount of damage caused by each jurisdiction. Unfortunately, TJN nowhere quantifies the damage done by each jurisdiction. Instead, it merely asserts that jurisdictions that rank higher on its index cause more damage.

[22] Ibid.

[23] Ibid. at 174.

[24] https://fsi.taxjustice.net/en/

[25] Methodology, p. 3.

In the absence of an objective metric against which to evaluate the FSI, an alternative way to choose the most appropriate aggregation of the two metrics is to follow statistical best practice while paying heed to the objectives of the index. In that regard, two points are worth noting:

1. The two components, GSW and SS, have very different scales both in absolute and in relative terms. GSW ranges from 0.0000044% (Cook Islands) to 22.3% (United States), which means the largest is 5.3 million times the size of the smallest. Meanwhile, SS ranges from 37.55 (Slovenia) to 79.83 (Maldives), which means the largest is only 2.1 times the size of the smallest. As noted by the ECJRC, the most appropriate statistical method to address such differences in scale is to rescale both components so that each falls within the same interval, as was done in all the ECJRC alternatives.[26]

2. The skewness of the GSW metric is, according to TJN, a feature not a bug. The whole point of the GSW metric is to identify the share of financial services exports represented by each jurisdiction—and this share is highly skewed towards a small number of jurisdictions that each have a large share of global financial exports.[27] So, transforming the GSW as the ECJRC did in two of its three alternatives (by taking the log of the GSW), in order to eliminate the skewness, is inappropriate.[28]

In light of these observations, it would seem that the most appropriate aggregation method of those evaluated is the first alternative proposed by the ECJRC. Under this alternative, known as FSI-Alt1, GSW and SS are rescaled using the max-min method, so that both metrics have the same scale, ranging from 0 to 10.[29] As the ECJRC notes, the advantages of such an approach are:

- "No transformation means a more faithful representation of reality: jurisdictions with a huge financial sector are held more strongly to account because even a small amount of secrecy is applied to a large volume of financial activity.
- It is arguably the easiest formula to interpret (because no nonlinear transformations are involved)
- It has only a modest upheaval score [i.e. it changes the outcome compared to previous FSIs by about 19%]"[30]

While the ECJRC notes that this has the disadvantage that "The GSW and SS are very unbalanced: the SS ranks have effectively no relation to the FSI ranks,"[31] in fact SS still does affect the aggregate score. This can be seen by applying this aggregation method to the 2020 FSI (with the adjustment to Cayman's GSW using the ESO's revised figure for exports of finance and finance-related services[32]). Table 3.1 shows the

[26] The use of a max-min rescaling is distribution neutral, which makes it appropriate for dealing with data that is drawn from a sample whose underlying distribution is unknown, as is the case here. (Had the data been Gaussian (i.e. Normally) distributed, it would have been appropriate to normalize the data.)

[27] TJN's assumption that the size of a jurisdiction's financial exports is determinative of the jurisdictions share of harms related to money laundering, tax evasion, etc. may or may not be correct. We return to this question later. But we take it as given at this juncture.

[28] As detailed in the Appendix, in FSI-Alt2 and FSI-Alt3, the ECJRC used a log transformation of the GSW.

[29] Thus, for jurisdiction i, FSI-Alt1 would be calculated: $FSI\text{-}Alt1_i = GSW_i.SS_i$; $GSW, SS \in [0,10]$

[30] Saisana and Becker, *supra* note 19, at 181.

[31] Ibid.

[32] This figure is slightly larger than the figure extrapolated from 2017 BOPS data, but is used because it is more accurate.

top 15 jurisdictions, which make up about 85% of the share of FSI-Alt1. (The full rankings and detailed statistical analysis are given in the appendix.)

While the FSI-Alt1 ranks are largely determined by the rescaled GSW, it is clear that SS still affects the rank. For example, the UK, which has the second highest GSW, is ranked fifth on FSI-Alt2 due to its low SS, while Switzerland, which has the seventh highest GSW ranks third on FSI-Alt2 due to its high SS.

If TJN had adopted the more appropriate FSI-Alt1 methodology for aggregating SS and GSW scores, and if it had used the more appropriate data on financial and finance-related exports in its measure of GSW for Cayman, Cayman would have placed 13th on the FSI 2020 rather than first, and its share of the index would have fallen to about 1%.

Table 3.1: FSI-Alt1 for FSI 2020

Rank	Jurisdiction	SS rescaled max-min	GSW rescaled max-min	FSI-Alt1	FSI-Alt1 Share	Cumulative FSI Share
1	United States	5.95	10.00	59.55	28.70%	28.70%
2	Luxembourg	4.04	5.79	23.35	11.26%	39.96%
3	United Kingdom	2.30	7.46	17.12	8.25%	48.21%
4	Switzerland	8.51	1.93	16.40	7.90%	56.11%
5	Singapore	6.17	2.42	14.94	7.20%	63.31%
6	Hong Kong	6.66	2.08	13.83	6.67%	69.98%
7	Germany	3.08	2.20	6.78	3.27%	73.24%
8	Japan	5.62	1.03	5.79	2.79%	76.03%
9	Ireland	3.31	1.62	5.37	2.59%	78.62%
10	Netherlands	7.12	0.52	3.68	1.78%	80.39%
11	Canada	4.14	0.75	3.09	1.49%	81.88%
12	France	2.60	1.05	2.74	1.32%	83.20%
13	Cayman Islands	9.03	0.24	2.13	1.03%	84.23%
14	British Virgin Islands	7.80	0.23	1.82	0.88%	85.11%
15	Malta	5.85	0.31	1.81	0.87%	85.98%

Source: Author's calculations based on TJN's FSI for 2020

4. Revising the Secrecy Score

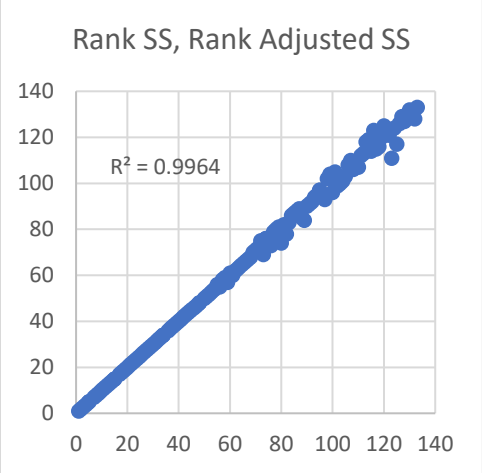
As noted in the introduction, TJN's intention with its FSI is, "to identify as accurately as possible the jurisdictions that make it their business to provide offshore secrecy," in order to highlight the jurisdictions that facilitate "illicit cross-border financial flows." But how accurate are the measures used by TJN? This section considers the underlying "key financial secrecy indicators" (KFSIs) used by TJN and provides revised estimates based on (1) removing some indicators that are statistically problematic, (2) rescaling each KFSI, and (3) adjusting and in some cases removing indicators that are substantively problematic and/or to reflect more accurately Cayman's situation.

4.1 Highly Skewed Indicators

One of the first things that one notices when looking at the KFSIs is that on several KFSIs, a large majority of jurisdictions score 75 or more. That raises two possible concerns: first, that those indicators are highly skewed and thus may distort the index; second, that the indicators are measuring factors that are highly subjective and thus not appropriate to an index that seeks to be objective.

To address these concerns, indicators were identified that had (a) a mean score of over 90 *and* (b) for which 95% of jurisdictions scored over 50.[33] This applied to two indicators: KSFI 6 (Public Company Ownership) and KSFI 10 (Legal Entity Identifier).[34] The good news is that these indicators do not seem to distort the index: As can be seen in Figure 4.1, removing them has no substantial impact on the overall ranks of the jurisdictions on the aggregate secrecy score (the ranks change by only 0.4%). However, the fact that removing the indicators does not substantially affect the SS ranks suggests that they are redundant and that removing them will increase the precision of the SS. (There are also substantive reasons to remove these indicators, as discussed below and in Appendix 6.5.)

Figure 4.1: Scatterplot of Original TJN SS and SS Adjusted by removing KFSIs 6 and 10.



4.2 Addressing Indicators That "Merit Reconsideration" According to the ECJRC

The ECJRC also identified three other indicators whose inclusion in the secrecy score "merits reconsideration." As the ECJRC puts it:

> "The KFSI-4 ("Other Wealth Ownership") is negatively correlated with three KFSIs and bears no statistical relevance to the remaining indicators. The KFSI-5 ("Limited Partnership Transparency") and KFSI-9 ("Corporate Tax Disclosure") bear no statistically significant association to any of the other indicators in the framework."[35]

The ECJRC comments that "This is simply a statistical flag which calls for a second look at the KFSI framework." But these and the indicators identified in section 4.1 are also problematic for other reasons:

KFSI-4 seeks to address a potentially legitimate concern, namely anonymous possession of assets. However, the criteria used are arbitrary and set a bar so high that no jurisdiction complies fully. Indeed, 40 jurisdictions score 100 ("total secrecy"), 84 jurisdictions score 50, and no jurisdiction scores less than 40. Moreover, the criteria seem designed to discriminate against jurisdictions such as the U.S. and U.K. that do not have single national property registries even though subjurisdictions do have such registries. And by requiring the registration of all properties, KFSI-4 discriminates against jurisdictions that require registration only upon transfer of ownership, even though arguably what is needed for the purposes of identifying (and discouraging) illicit financial *flows* is not a comprehensive registry but one that identifies

[33] This was calculated by establishing 95% confidence limits for all the KSFIs, i.e. (average score) – (2 x sample standard deviations).

[34] In fact, for both KFSIs, 95% of jurisdictions had a score of over 65.

[35] Saisana and Becker, *supra* note 19, pp. 190-191.

recent ownership changes. Similarly, the criteria for identifying ownership of assets held in freeports and bonded warehouses is too broad, as it would require registration of small value items such as cases of relatively inexpensive wine held in bond, thereby introducing a high-cost compliance obligation with no obvious benefit. Meanwhile, the requirement that the ownership of valuable assets be disclosed publicly likely increases the risk of theft, necessitating additional investments in protection, some of which would fall on the public purse, which would be a perverse outcome.

KFSIs 5 and 6 both require the publication online for free of the legal and beneficial owners of entities (limited partnerships in the case of KFSI-5, limited liability companies in the case of KFSI-6). (Partial credit is given if the information is available online at a small cost.) No credit is given to jurisdictions that have a beneficial ownership registry and make information from that registry available upon request to relevant authorities in other jurisdictions, as is recommended by the FATF.[36] Meanwhile, neither KFSI requires *verification* of beneficial ownership information. KFSIs 5 and 6 thus discriminate against jurisdictions such as Cayman that have *verified* beneficial ownership registration systems that make information available upon request to authorities in other jurisdictions.

It is practically impossible to form a company of any kind in Cayman without disclosing verified beneficial ownership information, which is a huge deterrent to criminals. Yet KFSIs 5 and 6 fail to distinguish between, on the one hand, jurisdictions such as Cayman that have chosen to implement verified beneficial ownership registries, while continuing to protect the privacy—but not secrecy—of the owners of companies, and, on the other hand, jurisdictions that have either no beneficial ownership registry or do not verify the information in their registry. As such, KFSIs 5 and 6 are very distorted.

KFSIs 5 and 6 also require limited partnerships and companies to make their annual accounts available online for free. (Partial credit is given if the information is available at a small cost.) TJN's arguments for this requirement do not seem to relate to illicit financial flows, so it is not clear why it is included as a criterion in an indicator supposedly measuring the potential for a jurisdiction to facilitate such flows. (This is discussed in greater detail in Section 6.5.5.)

While TJN is free to assert that jurisdictions should have in place public beneficial ownership registries and to require all companies to publish their accounts online, these highly restrictive criteria make KFSIs 5 and 6 poor measures of the potential for jurisdictions to facilitate illicit financial flows.

KFSI-9 pertains to the disclosure of corporate information related to income, taxes and, in the case of jurisdictions with extractive industries, information related to contract payments. There are three components to the index:

Component 1 relates to country-by-country reporting (CbCR). TJN gives the same maximum score (50) to jurisdictions that are fully compliant with the OECD CbCR framework but do not file local country-by-country reports as it does to jurisdictions that are totally non-compliant. That seems highly disproportionate and, to the extent that CbCR helps identify illicit financial flows (which is unclear), it dramatically reduces the utility of the component as a means of identifying jurisdictions that facilitate illicit financial flows.

Component 2 relates to tax rulings. TJN awards a "zero secrecy" score to jurisdictions for which, "No unilateral cross-border tax rulings are available in the jurisdiction *and the jurisdiction applies income tax*." (Emphasis added.) It is not clear that this component actually addresses illicit activity. Indeed, TJN notes that such tax rulings, "help companies to avoid tax if not illegally, then at least questionably."[37] As such, component 2 probably does not belong in an index the intention of which is to identify the capacity

[36] In particular FATF Recommendation 24. See: https://cfatf-gafic.org/index.php/documents/fatf-40r/390-fatf-recommendation-24-transparency-and-beneficial-ownership-of-legal-persons

[37] Methodology, p. 125.

of jurisdictions to facilitate *illicit* financial flows. Even if it were a useful metric in principle, TJN's scoring is distorted; for example, jurisdictions such as Cayman that do not apply taxes to individual or corporate income obviously do not have tax rulings and cannot apply taxes in a discriminatory manner, yet such jurisdictions are automatically awarded the maximum secrecy score (50, in the case of jurisdictions without an extractive industry sector).

Component 3 relates to contract disclosure by companies in the extractive industry sector for jurisdictions where such a sector exists. A zero score on the component is obtained if "All or nearly all extractive industries contracts are available publicly online and contract disclosure is required by law." It is possible that such requirements would reduce corruption and associated illicit financial flows but TJN may have set the bar too high (see Appendix 6.5.9) and by including it as a component of a KFSI that includes other elements that are less obviously related to such illicit flows, TJN has weakened its utility.

Given the poor design of component 1, the lack of any obvious relationship between tax rulings and illicit financial flows (component 2), and the peculiar way in which component 3 has been included, it is not surprising that the ECJRC found that KFSI-9 was not correlated with other KFSIs. KFSI-9 is not a good measure of the propensity of a jurisdiction to facilitate illicit financial flows.

KFSI-10 asks whether a jurisdiction requires the use of the Legal Entity Identifier (LEI) for all corporations. The LEI was established in the wake of the 2008 global financial crisis as a means of enabling both regulators and counterparties to identify organizations engaging in financial transactions and thereby reduce counterparty and systemic risk.[38] As such, the inclusion of KFSI-10 as part of the secrecy score seems odd and would not seem to act as an indicator of the propensity of a jurisdiction to facilitate illicit financial flows.

For these reasons KFSIs 4, 5, 6, 9 and 10 are removed from the aggregate secrecy score.

4.2.1 The effect of removing KFSIs 4, 5, 6, 9, and 10

Table 4.1 shows the effect of removing KFSIs 4, 5, 6, 9, and 10, rescaling the aggregate SS and the GSW and taking the product of the rescaled SS and GSW to produce FSI-Rev1. As can be seen, this process has the effect of increasing the FSI shares of the top three jurisdictions, which now make up more than 50% of the index. But it doesn't have a significant effect on the rankings of most of the top 15 jurisdictions (Cayman rises from 13th to 12th).

Table 4.1 Revised FSI Rankings, KFSIs 4, 5, 6, 9, 10 removed (Alt1 aggregation of SS and GSW)

Rank	Jurisdiction	SS rescaled max-min	GSW rescaled max-min	FSI-Rev1	FSI-Rev1 Share	Cumulative FSI Share
1	**United States**	4.47	10.00	**44.74**	30.52%	30.52%
2	**Luxembourg**	2.81	5.79	**16.28**	11.11%	41.63%
3	**Switzerland**	7.22	1.93	**13.92**	9.50%	51.12%
4	**Singapore**	4.70	2.42	**11.38**	7.76%	58.89%
5	**Hong Kong**	5.26	2.08	**10.91**	7.44%	66.33%
6	**Germany**	2.72	2.20	**5.98**	4.08%	70.42%
7	**Japan**	3.98	1.03	**4.10**	2.80%	73.21%

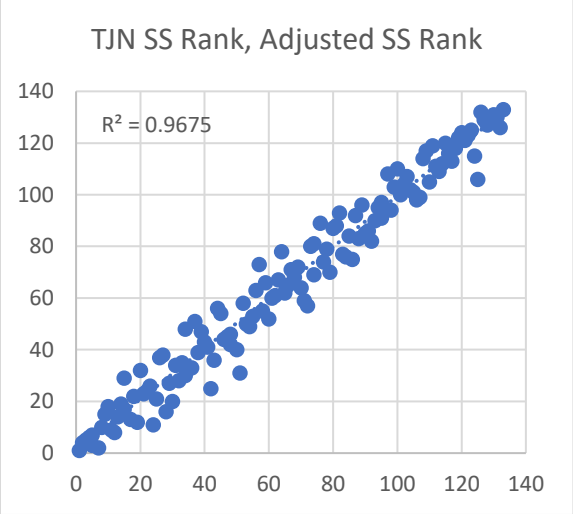
[38] https://www.gleif.org/en/about-lei/introducing-the-legal-entity-identifier-lei

8	**United Kingdom**	0.45	7.46	**3.37**	2.30%	75.51%
9	**Netherlands**	5.81	0.52	**3.01**	2.05%	77.57%
10	**Ireland**	1.53	1.62	**2.48**	1.69%	79.26%
11	**Canada**	2.49	0.75	**1.86**	1.27%	80.53%
12	**Cayman Islands**	7.60	0.24	**1.80**	1.23%	81.76%
13	**France**	1.64	1.05	**1.72**	1.17%	82.93%
14	**British Virgin Islands**	6.98	0.23	**1.63**	1.11%	84.04%
15	**Taiwan**	5.74	0.28	**1.58**	1.08%	85.12%

4.3 Rescaling the Indicators

As the ECJRC noted, the KFSIs are not distributed consistently, resulting in the aggregate likely being biased. To address this problem, each KFSI is rescaled. While so doing improves the consistency of the indicators, it does not significantly affect the rank of jurisdictions, as can be seen in the scatterplot in figure 4.2.

Figure 4.2: Scatterplots of Ranks for original TJN SS and Adjusted SS Rank



Rescaling the KFSIs does somewhat alter the ranks of the final FSI scores, however, as can be seen in Table 4.2. Of particular note, Cayman moves from number 12 on the adjusted original index to number 16 on this revised Index (FSI-Rev2).

Table 4.2 Revised FSI rankings using rescaled individual KFSIs

Rank	Jurisdiction	SS rescaled KFSIs	GSW rescaled max-min	FSI-Rev2	FSI-Rev2 Share	Cumulative FSI Share
1	**United States**	4.86	10.00	**48.57**	25.90%	25.90%
2	**Luxembourg**	3.97	5.79	**22.98**	12.26%	38.16%
3	**United Kingdom**	2.48	7.46	**18.52**	9.88%	48.03%
4	**Switzerland**	6.46	1.93	**12.45**	6.64%	54.67%
5	**Singapore**	5.09	2.42	**12.32**	6.57%	61.24%

6	**Hong Kong**	5.32	2.08	**11.05**	5.89%	67.13%
7	**Germany**	3.90	2.20	**8.60**	4.58%	71.71%
8	**Japan**	4.84	1.03	**4.98**	2.66%	74.37%
9	**Ireland**	3.05	1.62	**4.94**	2.63%	77.00%
10	**France**	3.21	1.05	**3.37**	1.80%	78.80%
11	**Canada**	3.75	0.75	**2.80**	1.49%	80.29%
12	**Netherlands**	5.41	0.52	**2.80**	1.49%	81.79%
13	**Belgium**	2.63	0.81	**2.13**	1.13%	82.92%
14	**Italy**	3.32	0.53	**1.77**	0.95%	83.87%
15	**India**	3.43	0.49	**1.66**	0.89%	84.75%

4.4 Adjusting KFSIs Following Statistical and Substantive Review

Following the statistical review described above, a substantive review of the KFSIs was undertaken. Details of that review and the actions recommended are given in Appendix 6.5. In addition to removing KFSIs 4, 5, 6, 9, and 10 as above, KFSIs 7, 8, 12 and 13 were identified as highly problematic and removed. The reasons are, briefly:

KFSI-7 relates to the public disclosure of company accounts. As noted above for KFSIs 5 and 6, such a requirement would not appear to be related to illicit financial flows.

KFSI-8 relates to *public* country by country reporting. No jurisdictions meet TJN's criteria for zero secrecy and the vast majority of jurisdictions (101 of the 133 jurisdictions) score 100 ("total secrecy"). TJN deducts points for jurisdictions that have introduced public reporting requirements for some sectors but does so in a rather ad hoc and possibly biased manner. As such, it seems unlikely that KFSI-8 provides accretive value as a measure of the extent to which a jurisdiction facilitates illicit financial flows.

KFSI-12 asks whether a jurisdiction has a consistent personal income tax. This indicator seems to be predicated on the assumption that jurisdictions with high and progressive income tax suffer from lower levels of tax avoidance and evasion. However, the evidence suggests that the opposite is the case.[39] As such, this indicator is based on a false premise.

KFSI-13 claims to address the question of whether a jurisdiction "avoids promoting tax evasion." However, what it actually measures is the extent to which a jurisdiction imposes taxes on worldwide capital income and provides unilateral tax credits. As such, like KFSI-12, it is biased towards jurisdictions that apply TJN's preferred method of taxation and does not seem to measure the extent to which a jurisdiction avoids promoting tax evasion.

In total, 9 KFSIs were removed due to the presence of irremediable biases and/or other problems. In addition, KFSIs 11, 14 and 15 were adjusted as follows:

KFSI-11 addresses a jurisdiction's administrative capacity to tax individuals and corporations. Jurisdictions without individual or corporate income taxes were automatically awarded a score of 100.

[39] Charles Clotfelter, "Tax evasion and tax rates: an analysis of individual returns." *Review of Economics and Statistics*, Vol. 65(3), 1983, pp. 363–373; Steven Crane and Farrokh Nourzad, "Analyzing income tax evasion using amnesty data with self-selection correction: the case of the Michigan tax amnesty program." in Joel Slemrod (Ed.), *Why People Pay Taxes*, Ann Arbor, Michigan: University of Michigan Press, 1992, pp. 167–189; Annette Alstadsaeter and Martin Jacob, "Tax Incentives and Noncompliance," *Public Finance Review*, Vol. 46(4), 2018, pp. 609-634.

Since such jurisdictions do not require a tax administration, they should logically score 0. KFSI-11 was adjusted accordingly.

KFSI-14 addresses the secrecy of tax courts. Jurisdictions without individual or corporation taxes were automatically awarded a score of 100. Since such jurisdictions do not have tax courts, they should logically score 0. KFSI-14 was adjusted accordingly.

KFSI-15 has four components, two of which are clearly related to illicit financial flows, namely the availability of high denomination bank notes and the legality of bearer shares, and two that do not appear to be related to such flows, namely the availability of protected cell companies and the permissibility of trusts with flee clauses. The indicator was recoded so that jurisdictions were awarded a score of 50 for having high denomination bank notes and 50 for permitting bearer shares. Meanwhile, 0 points were awarded for the other two components.

Table 4.3 provides a summary the actions taken.

Table 4.3: Changes to the KFSIs following review.

KFSI	Adjustment
1	No action
2	No action
3	No action
4	Removed
5	Removed
6	Removed
7	Removed
8	Removed
9	Removed
10	Removed
11	Adjusted scores of jurisdictions without income or corporation tax
12	Removed
13	Removed
14	Adjusted scores of jurisdictions without income or corporation tax
15	Adjusted all scores so indicator only based on first two criteria
16	No action
17	No action
18	No action
19	No action
20	No action

4.4.1 Adjusted Secrecy Scores

Table 4.4 lists the top 20 jurisdictions by secrecy score using the adjusted KFSIs. As is clear, Cayman is no longer in the top 20. In fact, Cayman now ranks 109th. The full ranks are given in the Appendix, along with additional details on the underlying KFSIs.

Table 4.4: Top 20 jurisdictions ranked by Secrecy Score following adjustments.

Rank Adjusted SS	Jurisdiction	Adjusted Final SS
1	Tanzania	78.91
2	Sri Lanka	78.50
3	Liberia	77.71
4	Vietnam	76.05
5	Gambia	74.77
6	Angola	73.36
7	Algeria	73.18
8	Maldives	72.41
9	Bolivia	72.23
10	Jordan	69.64
11	Puerto Rico	69.18
12	Bangladesh	67.23
13	Rwanda	66.82
14	Egypt	65.68
15	Brunei	65.09
16	Venezuela	65.05
17	Thailand	65.00
18	Paraguay	64.68
19	Kenya	64.24
20	US Virgin Islands	63.44

Rescaling the KFSIs individually does not significantly alter the rankings: the top 20 is largely unchanged and Cayman moves from 118th to 117th.

4.4.2 Adjusted FSIs

Table 4.5 shows the top 15 jurisdictions for a revised FSI using the original TJN methodology for aggregating SS and GSW (FSI-Rev3). Cayman does not appear, as it is now ranked 34th. The scatterplot in figure 4.3 shows the correlation between the FSI's original rankings and the new rankings, which implies that despite the fairly significant changes to the structure of the index, the rankings have changed by less than 20%. However, as can be seen by comparing with the original TJN FSI rank, several jurisdictions have risen considerably in the ranks, most notably France, Ireland, Belgium, and Austria.

Table 4.5 Revised FSI Ranking Using Original TJN Aggregation Method

Rank	Jurisdiction	Secrecy Score	Adjusted GSW	FSI TJN method	Final FSI Share	Adjusted TJN FSI rank
1	**United States**	46.62	22.31%	7535.83	27.99%	1
2	**Luxembourg**	49.23	12.91%	5135.47	19.07%	5
3	**Switzerland**	58.50	4.30%	2869.99	10.66%	2

4	**Germany**	46.32	4.91%	1627.62	6.04%	14
5	**Hong Kong**	42.95	4.63%	1223.71	4.54%	3
6	**Singapore**	40.64	5.40%	1207.91	4.49%	4
7	**United Kingdom**	24.68	16.65%	834.38	3.10%	12
8	**Japan**	44.50	2.30%	674.83	2.51%	7
9	**Netherlands**	53.68	1.16%	595.77	2.21%	8
10	**Taiwan**	56.36	0.62%	367.38	1.36%	13
11	**France**	35.05	2.35%	336.49	1.25%	33
12	**Ireland**	28.45	3.62%	277.64	1.03%	29
13	**Canada**	36.64	1.67%	273.26	1.01%	19
14	**Belgium**	33.95	1.80%	235.04	0.87%	50
15	**Malta**	46.36	0.69%	229.86	0.85%	18

Figure 4.3 Scatterplot of original FSI rank and FSI-Rev3 rank.

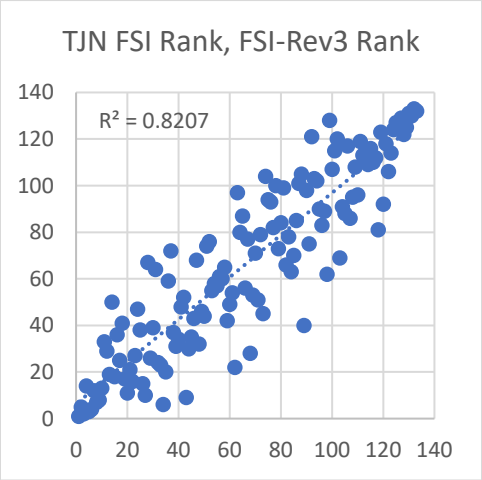


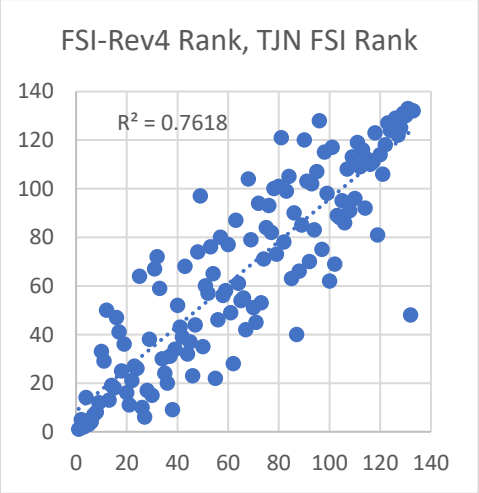
Table 4.6 shows the top 15 jurisdictions for a revised FSI ranking using the individually rescaled KFSIs and rescaled GSW (FSI-Rev4). Again, Cayman is not present, and is now ranked 26th (see Appendix Table 6.10). As figure 4.4 shows, the ranks of jurisdictions in FSI-Rev4 are still closely correlated with the original TJN FSI ranks; they vary by about 23%. But as with FSI-Rev3 there are some significant changes in the top 15. Compared with FSI-Rev3, the most notable changes are that Taiwan, Malta and Austria are no longer present, while Canada, India and Italy are now present.

Table 4.6 Revised FSI Ranking Using Individually Rescaled KFSIs and rescaled GSW

Rank	Jurisdiction	SS (KFSIs Rescaled)	GSW (rescaled max-min)	FSI-Rev4	FSI-Rev4 Share	Cumulative FSI Share	TJN FSI rank
1	**United States**	3.97	10.00	**39.69**	25.01%	25.01%	1
2	**Luxembourg**	4.58	5.79	**26.47**	16.68%	41.69%	5
3	**United Kingdom**	1.92	7.46	**14.29**	9.00%	50.69%	12

4	**Switzerland**	5.32	1.93	**10.24**	6.45%	57.14%	2
5	**Germany**	4.20	2.20	**9.25**	5.83%	62.97%	14
6	**Singapore**	3.24	2.42	**7.85**	4.94%	67.91%	4
7	**Hong Kong**	3.62	2.08	**7.52**	4.74%	72.64%	3
8	**Ireland**	2.46	1.62	**3.99**	2.51%	75.15%	29
9	**Japan**	3.82	1.03	**3.93**	2.48%	77.63%	7
10	**France**	3.15	1.05	**3.31**	2.08%	79.71%	33
11	**Netherlands**	4.81	0.52	**2.49**	1.57%	81.28%	8
12	**Belgium**	2.99	0.81	**2.41**	1.52%	82.80%	50
13	**Canada**	2.81	0.75	**2.10**	1.32%	84.12%	19
14	**India**	3.22	0.49	**1.56**	0.99%	85.11%	47
15	**Italy**	2.91	0.53	**1.56**	0.98%	86.09%	41

Figure 4.4 Scatterplot of original TJN FSI rank and FSI-Rev4 Rank



4.4.3 Alternative Adjustments

While the adjustments made in section 4.3.1 seem reasonable based on the evidence, they are obviously not the only way to address the problems identified. In particular, the changes made to KFSIs 11 and 14 have the potential to introduce biases if the scoring system for those indices in general is poorly designed, or the indicators themselves do not provide accretive value to the measurement of illicit financial flows. To address these potential criticisms, alternative adjustments were assessed. Specifically, if the original scores for KFSIs 11 and 14 are kept, then Cayman's rank on the SS rises from 109th to 48th. Meanwhile, if instead KFSIs 11 and 14 are removed from the SS, Cayman moves to 69th on the SS. In both cases, Cayman moves to 18th on the FSI when using the Alt1 aggregation method, or 14th using TJN's original aggregation method.

5. Conclusions

TJN's FSI is clearly an ambitious effort to identify the jurisdictions that contribute to illicit financial flows. Unfortunately, the composition of the index is marred by numerous biases that undermine its utility. This review has attempted to correct those biases to the extent possible in a systematic way, identifying both the broad effects of the corrections and the specific effects on Cayman.

Section 2 described problems associated with the way that TJN calculated its score for Cayman's GSW and noted that if TJN had used data available from the IMF BOPS database, per TJN's own rubric, Cayman's rank on the 2020 FSI would have dropped to number 6.

Section 3 addressed concerns regarding the way in which TJN aggregates the Secrecy Score (SS) and the Global Scale Weight (GSW). It showed that if TJN had used an alternative aggregation method proposed by the European Commisson's Joint Research Centre, Cayman's rank would have dropped to 16.

Section 4 outlined problems with several of the indices that make up the SS. It showed that when the most biased and skewed indicators are removed and adjustments made to correct for biases of some of the remaining indicators, Cayman drops to between 109th and 115th on the SS and to between 26th and 34th on the FSI.

Table 5.1 shows how Cayman's rank on the Financial Secrecy Index and its underlying components changes as a result of the several adjustments described.

Table 5.1: How Cayman's Rank on The Index and Components Changes with Adjustments

	TJN	Correct Data for Financial Services Exports	More Appropriate Aggregation of GSW and SS	Removing Inappropriate Indicators and Adjusting Biased Indicators
Secrecy Score	15	15	15	109
Global Scale Weight	6	25	25	25
FSI	1	6	13	26

This review has not attempted to investigate the empirical validity of TJN's Financial Secrecy Index or compare it with other indices. It is quite possible that other indices would offer better measures of the extent to which jurisdictions facilitate illicit financial flows than the FSI does, even after making the adjustments undertaken in this review. Indeed, it is possible that something similar to the Secrecy Score (adjusted per this review) might be a more useful metric than the kind of composite index developed by TJN because jurisdictions that have in place strong measures designed to prevent illicit financial flows are less likely to attract such flows regardless of the scale of their legitimate financial activity.

6. Appendix

This appendix provides additional, more detailed analysis of issues addressed in the main text of the study, along with more detailed tables and figures. It is organized in a similar fashion to the main paper, so section 6.1 relates to section 1 in the main paper; section 6.2 to section 2, and so on.

6.1 Rankings Adjusted with Correct GSW for Cayman

Table 6.1 shows data from Cayman's Economics and Statistical Office (ESO) on exports of "financial services" for 2017 and 2018. It also shows data on "insurance and pension services," which are clearly finance related, and on "other business services," which include accounting and legal services that in the Cayman context likely are largely finance related. These three statistics are then combined into an aggregate "Total financial and related services." In each case. It also shows extrapolations of the 2017 data for 2018 for each of these statistics using TJN's extrapolation coefficient (1.0257543). The columns in the table are as follows:

- **2017 ESO P:** Provisional estimates for 2017 from ESO's 2017 report, published February 2019. This is the same as the data available from the IMF BOPS database as of September 2019.
- **2017 ESO R:** Revised estimates for 2017 from ESO's 2018 report, published February 2020[40]
- **2018 Extrapolated P:** Extrapolations for 2018 from 2017 ESO P (i.e. 2017 ESO P x 1.0257543)
- **2018 Extrapolated R:** Extrapolations for 2018 from 2017 ESO R (i.e. 2017 ESO R x 1.0257543)
- **2018 ESO P:** Provisional estimates for 2018 from ESO's 2018 report
- **2018 ESO R:** Revised estimates for 2018 from ESO's 2019 report, published December 2020.[41]

Table 6.1 Estimates of Financial and Finance-Related Services Exports (US$ Millions)

Year	2017		2018			
Statistic	ESO P	ESO R	Extrapolated P	Extrapolated R	ESO P	ESO R
Financial Services	1342.80	1322.64	1377.38	1356.70	1362.60	1379.04
Insurance and pension services	357.60	497.04	366.81	509.84	508.68	522.00
Other business services	737.28	723.36	756.27	741.99	762.84	739.32
Total financial and related services	**2437.68**	**2543.04**	**2500.46**	**2608.53**	**2634.12**	**2640.36**

While the more accurate figure for financial and finance-related services, $2.64 billion, is slightly larger than the extrapolated estimate that could have been used by TJN, $2.5 billion, it is not larger by an order of magnitude! As can be seen in table 6.2, the use of the more accurate number makes only a small difference to Cayman's FSI and FSI share—and no difference to Cayman's rank relative to the use of the extrapolated BOPS figures.

To construct table 6.2 and all other rankings in this analysis, two additional adjustments were made. First, since TJN's publicly reported data on GSWs were only provided to four decimal places (which is especially problematic for jurisdictions whose GSWs were less than 0.001), GSWs were reconstructed using TJN's reported FSIs and Secrecy Scores. Second, since the sum of GSWs for all jurisdictions is

[40] ESO, *Balance of Payments & International Investment Position Report 2018*, George Town, Grand Cayman: The Economics and Statistics Office, Cayman Islands Government, February 2020. Available at:

[41]

reduced by about 4%, so that they sum to about 96%, all GSWs were increased proportionally so that the total sums to 100%.

Table 6.2: FSI Rankings Adjusted Using Alternative Estimates of Cayman's Exports of Financial Services

			Cayman Adjusted using Extrapolated 2017 ESO P			Cayman Adjusted using 2018 ESO R		
Rank	Jurisdiction[1]	Secrecy Score	GSW	FSI	FSI Share	GSW	FSI	FSI Share
1	United States	62.89	22.30%	1508	4.45%	22.30%	1508	4.45%
2	Switzerland	74.05	4.30%	1423	4.20%	4.30%	1422	4.19%
3	Hong Kong	66.38	4.63%	1051	3.10%	4.63%	1050	3.10%
4	Singapore	64.98	5.40%	1037	3.06%	5.39%	1037	3.06%
5	Luxembourg	55.45	12.90%	861	2.54%	12.90%	861	2.54%
6	Cayman Islands	76.08	0.50%	752	2.22%	0.53%	766	2.26%
7	Japan	62.85	2.30%	706	2.08%	2.30%	706	2.08%
8	Netherlands	67.40	1.16%	693	2.04%	1.16%	693	2.04%
9	British Virgin Islands	71.30	0.52%	629	1.85%	0.52%	629	1.85%
10	United Arab Emirates	77.93	0.22%	615	1.81%	0.22%	615	1.81%
11	Guernsey	70.65	0.43%	573	1.69%	0.43%	572	1.69%
12	United Kingdom	46.20	16.64%	542	1.60%	16.63%	542	1.60%
13	Taiwan	65.50	0.62%	515	1.52%	0.62%	515	1.52%
14	Germany	51.73	4.92%	507	1.50%	4.91%	507	1.50%
15	Panama	71.88	0.23%	490	1.45%	0.23%	490	1.44%

6.2 Alternative Aggregation of GSW and SS

As noted in the text, the ECJRC evaluated several alternative aggregations of GSW and SS. This section documents in more detail the analysis reported on in the main text regarding these alternatives.

6.2.1 Alternative Aggregation 1: FSI-Alt1

The first alternative proposed by the ECJRC is to rescale GSW and SS, so that the metrics are on the same scale (ECJRC suggests a range of 0 to 10). Thus, for jurisdiction i, FSI-Alt1 would be calculated:

$$FSI\text{-}Alt1_i = GSW_i.SS_i;\ GSW, SS \in [0,10]$$

As the ECJRC notes, the advantages of such an approach are:

- "No transformation means a more faithful representation of reality: jurisdictions with a huge financial sector are held more strongly to account because even a small amount of secrecy is applied to a large volume of financial activity.
- It is arguably the easiest formula to interpret (because no nonlinear transformations are involved)

- It has only a modest upheaval score [i.e. it changes the outcome compared to previous FSIs by about 19%]"[42]

Meanwhile, the disadvantage is that "The GSW and SS are very unbalanced: the SS ranks have effectively no relation to the FSI ranks."[43]

Applying this aggregation method to the 2020 FSI, with the adjustment to Cayman's GSW as applied in Section 2, Cayman falls to number 13 in the ranking. Table 6.3 shows the top 50 jurisdictions ranked by the revised FSI, with the original FSI rank on the far right.

Table 6.3: FSI-Alt1 for FSI 2020

FSI-Alt1 Rank	Jurisdiction	SS rescaled max-min	GSW rescaled max-min	FSI-Alt1	FSI-Alt1 Share	FSI rank
1	**United States**	5.99	10.00	**59.93**	28.44%	1
2	**Luxembourg**	4.23	5.79	**24.50**	11.63%	5
3	**Switzerland**	8.63	1.93	**16.64**	7.89%	2
4	**Singapore**	6.49	2.42	**15.70**	7.45%	4
5	**United Kingdom**	2.05	7.46	**15.26**	7.24%	12
6	**Hong Kong**	6.82	2.08	**14.15**	6.72%	3
7	**Germany**	3.35	2.20	**7.39**	3.50%	14
8	**Japan**	5.98	1.03	**6.16**	2.92%	7
9	**Ireland**	2.51	1.62	**4.06**	1.93%	29
10	**Netherlands**	7.06	0.52	**3.66**	1.73%	8
11	**Canada**	4.33	0.75	**3.23**	1.53%	19
12	**France**	2.92	1.05	**3.07**	1.46%	33
13	**Cayman Islands**	9.11	0.24	**2.15**	1.02%	6
14	**British Virgin Islands**	7.98	0.23	**1.86**	0.88%	9
15	**Taiwan**	6.61	0.28	**1.82**	0.87%	13
16	**Malta**	5.72	0.31	**1.77**	0.84%	18
17	**Italy**	3.03	0.53	**1.62**	0.77%	41
18	**China**	5.27	0.30	**1.57**	0.75%	25
19	**Guernsey**	7.83	0.19	**1.50**	0.71%	11
20	**South Korea**	5.68	0.26	**1.45**	0.69%	21
21	**Belgium**	1.77	0.81	**1.43**	0.68%	50
22	**Jersey**	6.62	0.21	**1.41**	0.67%	16
23	**Cyprus**	5.57	0.22	**1.24**	0.59%	27

[42] Saisana and Becker, *supra* note 19, at 181.

[43] Ibid. at 182.

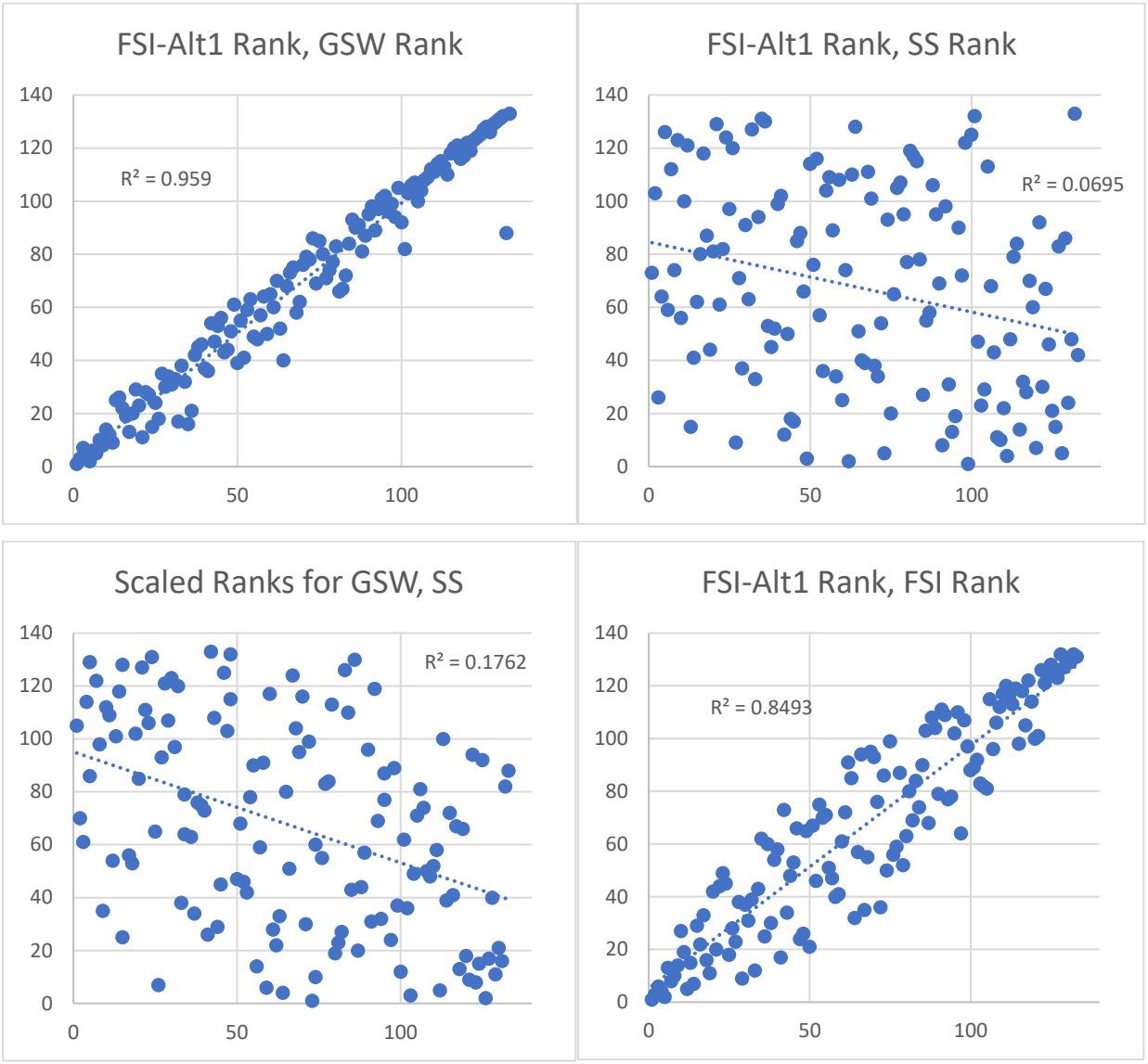
24	**India**	2.43	0.48	**1.18**	0.56%	47
25	**Austria**	4.48	0.25	**1.14**	0.54%	36
26	**Australia**	2.97	0.32	**0.94**	0.45%	48
27	**United Arab Emirates**	9.55	0.10	**0.93**	0.44%	10
28	**Lebanon**	6.25	0.15	**0.93**	0.44%	26
29	**Panama**	8.12	0.10	**0.82**	0.39%	15
30	**Israel**	5.00	0.14	**0.70**	0.33%	38
31	**Macao**	6.49	0.10	**0.66**	0.32%	31
32	**Sweden**	1.92	0.33	**0.64**	0.30%	64
33	**Thailand**	8.44	0.07	**0.59**	0.28%	17
34	**Russia**	4.65	0.12	**0.57**	0.27%	43
35	**Spain**	1.51	0.34	**0.51**	0.24%	67
36	**Norway**	1.60	0.28	**0.45**	0.21%	72
37	**Gibraltar**	7.55	0.06	**0.44**	0.21%	30
38	**Kuwait**	7.81	0.05	**0.42**	0.20%	28
39	**Malaysia**	7.56	0.05	**0.41**	0.19%	32
40	**South Africa**	4.42	0.09	**0.38**	0.18%	58
41	**Poland**	4.26	0.09	**0.38**	0.18%	59
42	**Qatar**	9.33	0.04	**0.37**	0.18%	20
43	**Nigeria**	7.71	0.05	**0.37**	0.18%	34
44	**Bahamas**	8.95	0.04	**0.36**	0.17%	22
45	**Kenya**	9.08	0.04	**0.32**	0.15%	24
46	**Turkey**	5.31	0.06	**0.31**	0.15%	52
47	**New Zealand**	5.12	0.06	**0.28**	0.13%	57
48	**Isle of Man**	6.42	0.04	**0.26**	0.12%	44
49	**Algeria**	9.95	0.02	**0.23**	0.11%	23
50	**Brazil**	3.34	0.07	**0.23**	0.11%	74

Source: Author's calculations based on TJN's FSI for 2020

Consistent with the JCR's finding for earlier FSIs, the ranking of jurisdictions in the 2020 FSI-Alt1 is almost entirely determined by the GSW. As figure 6.1 shows, the R square for the line of best fit suggest that the correlation between FSI-Alt1 Rank and GSW Rank is about 0.96, which is substantially higher than the corelation between FSI Rank and GSW Rank in Figure 3.1 (0.71). Meanwhile, the correlation between the FSI-Alt1 Rank and the SS Rank is very low (the R square is 0.07). This can also be seen in the distribution of GSW and FS ordered by rank, shown in figure 6.2. However, looking at the top 20, it is clear that SS still affects the rank; for example, the UK, which has the second highest GSW, is ranked fifth on FSI-Alt2 due to its low SS, while Switzerland, which has the seventh highest GSW ranks third on FSI-Alt2 due to its high SS. Meanwhile, as the scatterplot of FSI-Alt1 against FSI I figure 6.1 shows, the

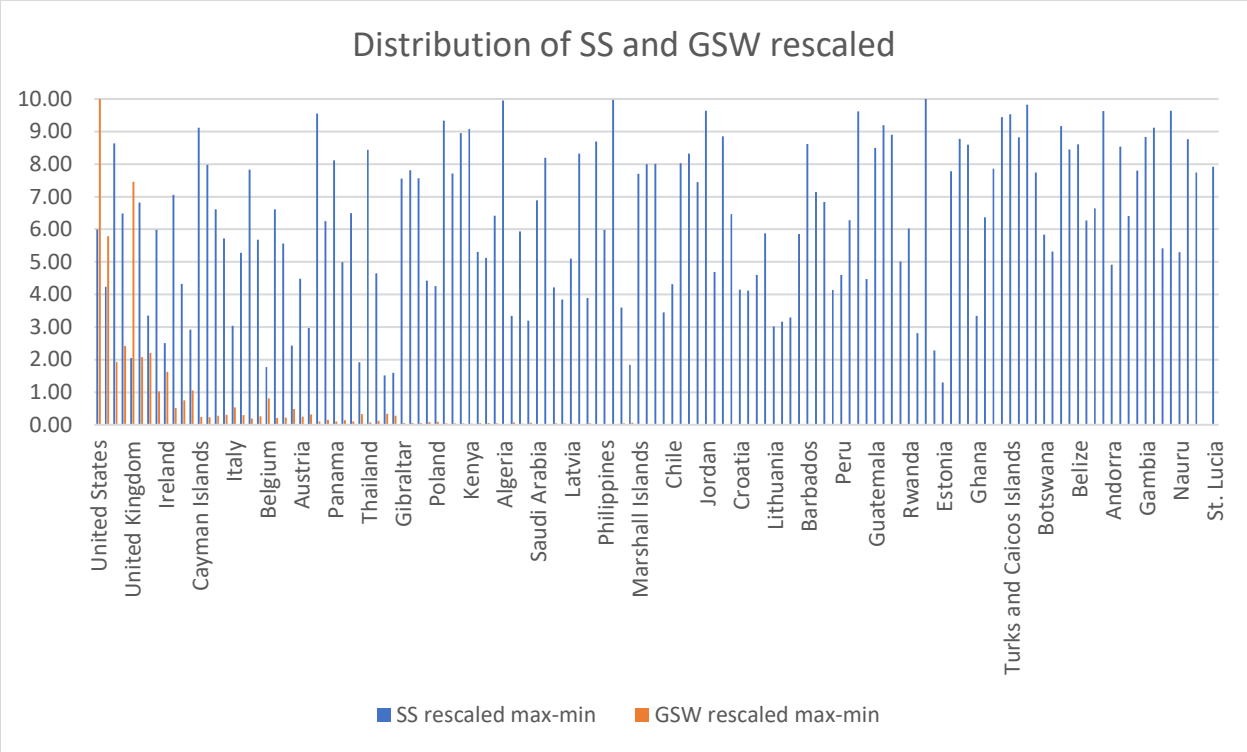
indices ranks are highly correlated, with an R square of 0.85, implying an "upheaval" (the extent to which they deviate from one another) of only about 15%.

Figure 6.1 Scatterplots for FSI-Alt1 Rank and Other Ranks



Source: Author's calculations

Figure 6.2 Distribution of SS and GSW Rescaled (FSi-Alt1) by Rank of Jurisdiction (highest on left)



6.2.2 Alternative Aggregation 2

The second alternative proposed by the ECJRC is to use a log transformation of the GSW and then rescale both that log transformation and the SS before taking the product of the two rescaled measures. Thus, for jurisdiction i, FSI-Alt2 would be calculated as follows:

$$\text{FSI-Alt2}i = \log(\text{GSW}i).\text{SS}i;\ \text{GSW}, \text{SS} \in [0,10]$$

The ECJRC's justification for the log transformation is that the GSW is highly skewed, with a few jurisdictions accounting for a large proportion of all financial exports, and this skewness looks similar to a logarithmic distribution, so the transformation should make it linear. Meanwhile, the scale transformation ensures that both measures conform to the same scale, as for FSI-Alt1.

Table 6.4 shows the top 20 jurisdictions for FSI-Alt2 applied to the TJN's FSI 2020 (with adjusted GSW for Cayman as per Section 2). Two things are immediately obvious: First, the ranks are changed dramatically. Figure 6.3 shows that this change in the rankings represents an upheaval of about 36% relative to the original FSI.[44] Figure 3.3 also shows that the ranks in FSI-Alt2 are less highly correlated with the GSW rank (R square = 0.14) and more highly correlated with the SS rank (R square = 0.34).[45]

[44] The correlation between the ranks in FSI and FSI-Alt2 is 0.62, meaning that 62% of the variation in the ranks of one is explained by variation in the ranks of the other. As such, 38% is not explained – and represents a deviation

[45] The correlation between the scaled ranks for GSW and SS remains the same because the log transformation does not affect the rank.

Second, the share of each member of the list is much more evenly spread. In fact, so even is the share spread that the top 20 jurisdictions now make up only 26% of the cumulative FSI-Alt2 share, compared to 43% for the FSI and 89% for FSI-Alt1. Meanwhile, even for jurisdictions that rank similarly on both the FSI and FSI-Alt2, the difference in secrecy index *shares* between the jurisdictions are radically smaller for the FSI-Alt2. For example, the FSI-Alt2 share for Switzerland (1st on FSI-Alt2) is only about 2.4 times the share for Latvia (69th on FSI-Alt2), whereas on the FSI, the share for Switzerland (2nd on FSI) is 7.6 times the share of Latvia (65th on FSI). Finally, as Figure 3.4 shows, the log transformation of the GSW has resulted in several jurisdictions with relatively high GSW scores ending up with very low ranks in the composite index; for example Germany ranks 75th, Ireland ranks 103rd, and the UK ranks 108th.

Figure 6.3 Scatterplots of FSI-Alt2 Rank against GSW Rank, SS Rank and FSI Rank

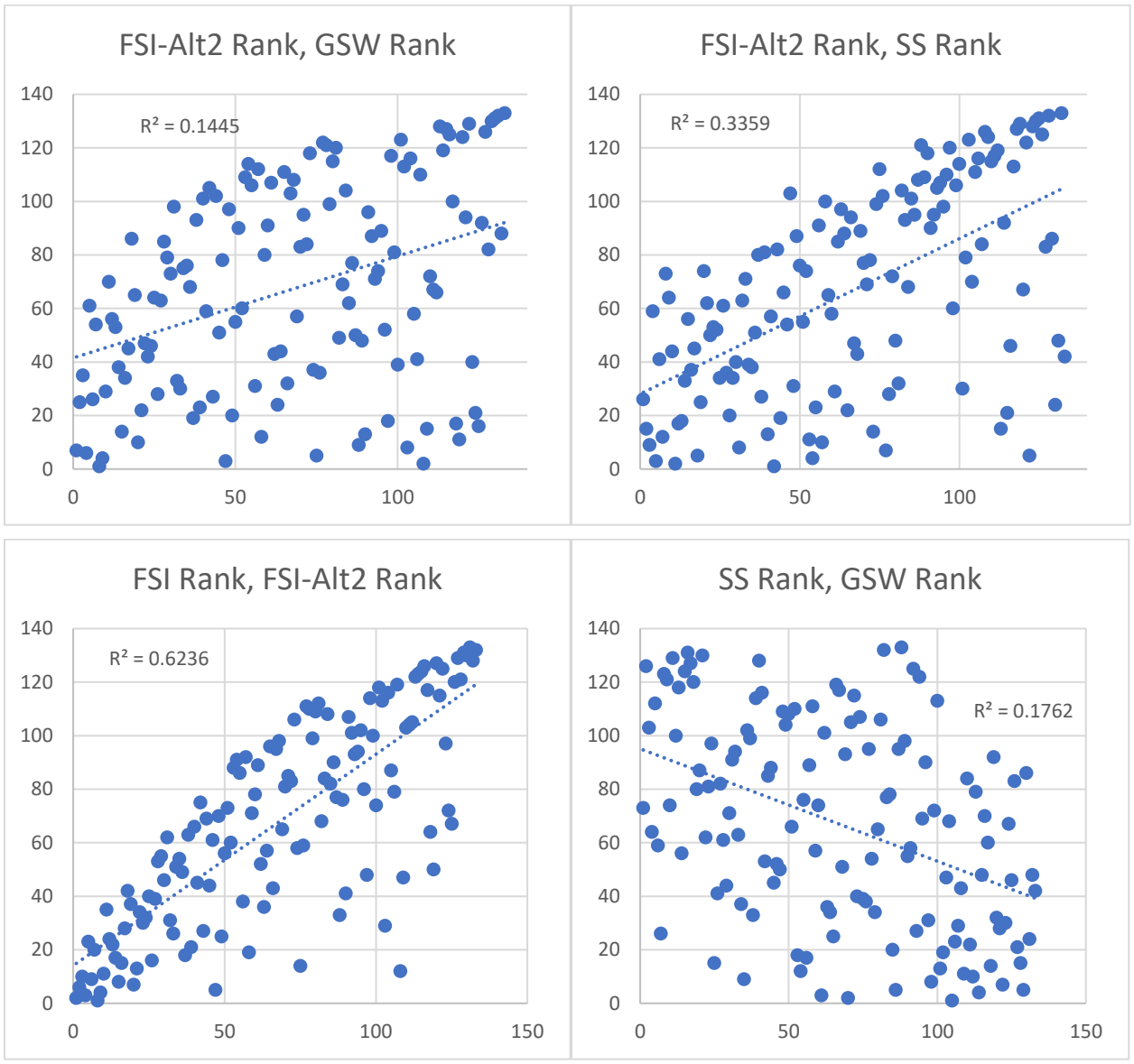
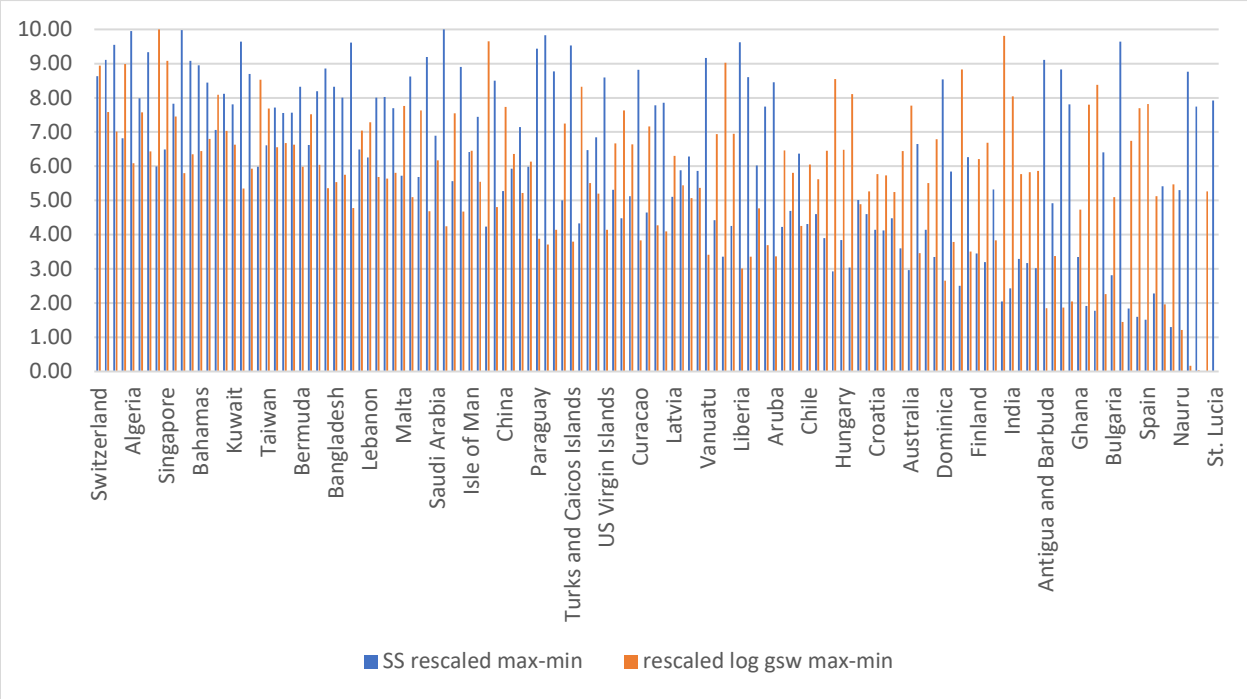


Figure 6.4 Distribution of Components of FSI-Alt2 by Rank of Jurisdiction (highest rank on left)



6.2.3 Alternative Aggregation 3

The ECJRC also included an alternative aggregation that performed the same log transformation of the GSW and the same scaling for both the log GSW and the SS—but then instead of taking the product of the two indices it took the sum. The resulting index is broadly similar to FSI-Alt2 but with even more evenly spread shares. Meanwhile, because it is the sum rather than the product of the two metrics, the GSW is no longer acting properly as a weight. As the ECJRC notes, this transformation, "is the furthest away from the idea of measuring a share of a global total of financial secrecy."[46] For that reason, it is not addressed further here.

6.3 Adjusting for Secrecy Score

Tables 6.5 and 6.6 show the effects of the series of adjustments made to the secrecy score to account for biases and other distortions. In each case they show the top fifteen jurisdictions following the removal of KFSIs 4, 5, 6, 9 and 10. Table 6.3.1 shows the revised ranking using TJN's original aggregation method for combining SS and GSW. Table 6.3.2 shows the revised ranking using the aggregation based on rescaled SS and GSW.

Table 6.5 KFSIs 4, 5, 6, 9, 10 Removed. Original TJN Aggregation of GSW and SS.

Rank	Jurisdiction	Secrecy Score	Adjusted GSW	Using FSI Aggregation	FSI-Rev1 Share	Cumulative FSI Share
1	**United States**	52.85	22.32%	10983	28.09%	28.09%

[46] ECJRC, supra note 19, at p. 185

2	**Switzerland**	66.23	4.30%	4164	10.65%	38.74%
3	**Luxembourg**	44.77	12.91%	3861	9.88%	48.62%
4	**Singapore**	53.97	5.40%	2831	7.24%	55.86%
5	**Hong Kong**	56.67	4.63%	2811	7.19%	63.04%
6	**United Kingdom**	33.27	16.64%	2042	5.22%	68.27%
7	**Germany**	44.30	4.92%	1425	3.64%	71.91%
8	**Japan**	50.47	2.30%	984	2.52%	74.43%
9	**Netherlands**	59.37	1.16%	806	2.06%	76.49%
10	**Ireland**	38.53	3.61%	689	1.76%	78.25%
11	**Cayman Islands**	68.10	0.53%	555	1.42%	79.67%
12	**British Virgin Islands**	65.07	0.52%	478	1.22%	80.89%
13	**France**	39.03	2.34%	465	1.19%	82.08%
14	**Canada**	43.20	1.67%	448	1.15%	83.23%
15	**Taiwan**	59.00	0.62%	421	1.08%	84.31%

Table 6.6: Revised FSI, KFSIs 4, 5, 6, 9, 10 Removed. Aggregations using FSI-Alt1 Method

Rank	Jurisdiction	SS rescaled max-min	GSW rescaled max-min	FSI-Rev1	FSI-Rev1 Share	Cumulative FSI Share
1	**United States**	4.47	10.00	**44.74**	30.52%	30.52%
2	**Luxembourg**	2.81	5.79	**16.28**	11.10%	41.63%
3	**Switzerland**	7.22	1.93	**13.91**	9.49%	51.12%
4	**Singapore**	4.70	2.42	**11.38**	7.77%	58.89%
5	**Hong Kong**	5.26	2.08	**10.92**	7.45%	66.33%
6	**Germany**	2.72	2.20	**5.99**	4.08%	70.42%
7	**Japan**	3.98	1.03	**4.10**	2.80%	73.22%
8	**United Kingdom**	0.45	7.46	**3.37**	2.30%	75.51%
9	**Netherlands**	5.81	0.52	**3.01**	2.05%	77.57%
10	**Ireland**	1.53	1.62	**2.48**	1.69%	79.26%
11	**Canada**	2.49	0.75	**1.86**	1.27%	80.53%
12	**Cayman Islands**	7.60	0.24	**1.80**	1.22%	81.76%
13	**France**	1.64	1.05	**1.72**	1.17%	82.93%
14	**British Virgin Islands**	6.98	0.23	**1.63**	1.11%	84.04%
15	**Taiwan**	5.74	0.28	**1.58**	1.08%	85.12%

6.4 Rescaling KSFIs

The ECJRC notes that the KSFIs each have somewhat different distributions. While removing the troublesome KFSIs identified in sections 4.1 and 4.2 reduces this problem somewhat, the remaining KFSIs still exhibit significant variations in their distributions, as can be seen in the summary statistics in table 6.5.

Table 6.7 Summary Statistics for KFSIs Remaining after Removal of KFSIs 4, 5, 6, 9, 10

KFSI	1	2	3	7	8	11	12	13	14	15	16	16	18	19	20
Mean	49	52	81	90	89	69	46	65	85	47	56	49	34	17	23
Median	50	50	100	100	100	63	38	90	100	50	50	47	14	0	21
SD	18	28	26	27	20	20	39	39	22	18	22	17	40	36	12

To address this problem, the KFSIs were each rescaled using the max-min method. Table 6.8 Shows the effect of rescaling each of the KFSIs using the max-min methodology and using the aggregate of those rescaled indicators (the aggregate is not rescaled since the underlying KFSIs have been rescaled) multiplied by the rescaled GSW.

Table 6.8: Revised FSI, KFSIs 4, 5, 6, 9, 10 Removed. Aggregations using FSI-Rev2 Method

Rank	Jurisdiction	Secrecy Score (KFSIs rescaled)	GSW rescaled max-min	FSI-Rev2	FSI Share	Cumulative FSI Share
1	**United States**	4.86	10.00	**48.57**	25.90%	25.90%
2	**Luxembourg**	3.97	5.79	**22.98**	12.26%	38.16%
3	**United Kingdom**	2.48	7.46	**18.52**	9.88%	48.03%
4	**Switzerland**	6.46	1.93	**12.45**	6.64%	54.67%
5	**Singapore**	5.09	2.42	**12.32**	6.57%	61.24%
6	**Hong Kong**	5.32	2.08	**11.05**	5.89%	67.13%
7	**Germany**	3.90	2.20	**8.60**	4.58%	71.71%
8	**Japan**	4.84	1.03	**4.98**	2.66%	74.37%
9	**Ireland**	3.05	1.62	**4.94**	2.63%	77.00%
10	**France**	3.21	1.05	**3.37**	1.80%	78.80%
11	**Canada**	3.75	0.75	**2.80**	1.49%	80.29%
12	**Netherlands**	5.41	0.52	**2.80**	1.49%	81.79%
13	**Belgium**	2.63	0.81	**2.13**	1.13%	82.92%
14	**Italy**	3.32	0.53	**1.77**	0.95%	83.87%
15	**India**	3.43	0.49	**1.66**	0.89%	84.75%
16	**Cayman Islands**	6.73	0.24	**1.59**	0.85%	85.60%

17	**Taiwan**	5.48	0.28	**1.51**	0.81%	86.41%
18	**Malta**	4.85	0.31	**1.50**	0.80%	87.21%
19	**British Virgin Islands**	6.35	0.23	**1.48**	0.79%	88.00%
20	**China**	4.42	0.30	**1.32**	0.70%	88.70%
21	**Jersey**	5.56	0.21	**1.19**	0.63%	89.33%
22	**South Korea**	4.52	0.26	**1.16**	0.62%	89.95%
23	**Guernsey**	5.78	0.19	**1.11**	0.59%	90.54%
24	**Australia**	3.10	0.32	**0.99**	0.53%	91.07%
25	**Cyprus**	4.39	0.22	**0.98**	0.52%	91.59%
26	**Austria**	3.77	0.25	**0.96**	0.51%	92.10%
27	**Spain**	2.58	0.34	**0.87**	0.47%	92.57%
28	**Sweden**	2.58	0.33	**0.86**	0.46%	93.02%
29	**Lebanon**	5.57	0.15	**0.83**	0.44%	93.47%
30	**Norway**	2.91	0.28	**0.82**	0.44%	93.90%
31	**United Arab Emirates**	7.20	0.10	**0.71**	0.38%	94.28%
32	**Israel**	4.66	0.14	**0.65**	0.35%	94.63%
33	**Panama**	6.01	0.10	**0.61**	0.32%	94.95%
34	**Macao**	5.32	0.10	**0.54**	0.29%	95.24%
35	**Russia**	4.28	0.12	**0.53**	0.28%	95.52%
36	**Thailand**	6.59	0.07	**0.46**	0.24%	95.77%
37	**Poland**	4.03	0.09	**0.36**	0.19%	95.96%
38	**Gibraltar**	6.13	0.06	**0.35**	0.19%	96.15%
39	**South Africa**	4.04	0.09	**0.35**	0.19%	96.33%
40	**Kuwait**	5.81	0.05	**0.32**	0.17%	96.50%
41	**Nigeria**	6.38	0.05	**0.31**	0.16%	96.67%
42	**Malaysia**	5.63	0.05	**0.30**	0.16%	96.83%
43	**Qatar**	7.40	0.04	**0.30**	0.16%	96.99%
44	**Bahamas**	6.95	0.04	**0.28**	0.15%	97.13%
45	**Turkey**	4.67	0.06	**0.27**	0.14%	97.28%
46	**New Zealand**	4.67	0.06	**0.26**	0.14%	97.42%
47	**Kenya**	7.23	0.04	**0.25**	0.14%	97.55%
48	**Brazil**	3.59	0.07	**0.25**	0.13%	97.68%
49	**Isle of Man**	5.42	0.04	**0.22**	0.12%	97.80%
50	**Indonesia**	3.40	0.06	**0.20**	0.11%	97.91%

6.5 Substantive Review of KFSIs

The following subsections provide a more substantive review of each of the KFSIs and recommended actions.

6.5.1 KFSI-1 Banking secrecy

Cayan scores 27: 7 for being "largely compliant" with the FATF on customer due diligence, and 20 for not automatically reporting large transfers to the competent authority. The inclusion of the requirement for automatic reporting of large transfers is troublesome because it would generate enormous amounts of irrelevant data that could make it *more* difficult for the authorities to identify actual instances of money laundering, tax evasion, terrorist financing and other criminal activity.[47] Moreover, in the absence of any mechanism for differentiating suspicious transactions, using only transaction size as a criterion can be evaded through the use of multiple smaller transactions. Cayman has adopted the protocols recommended by the FATF, namely a combination of suspicious transaction reporting and auditing by the competent authority (CIMA), which is arguably a more effective solution. Nonetheless, adjusting Cayman's score on this metric would create biases relative to the scores of other jurisdictions.

No action on KFSI-1

6.5.2 KFSI-2: Trust and Foundations Register

Cayman scores 100 because, according to TJN, "Neither domestic law trusts nor foreign law trusts domestically managed have to register" (50 points) and registration data is not available online (50 points). In fact, exempted trusts are required to register in Cayman, but since not all trusts are required to be registered, Cayman still scores 50 points on the first component.[48]

No action on KFSI-2

6.5.3 KFSI-3: Recorded Company Ownership

TJN's scoring system on this as on many other metrics is highly questionable. First, to the extent that it is the beneficial owner that is the subject of concern, why would TJN require both legal and beneficial ownership to be recorded – and add 10 points for failing to record the legal owner? Second, verification of beneficial ownership is far more important and effective as a deterrent to criminal behaviour than publication of the beneficial ownership register. Indeed, publication of non-verified beneficial ownership information may be highly misleading.[49] TJN has acknowledged this and advocated an automated system of beneficial ownership verification.[50] As such, TJN is simply targeting the wrong outcome. However, on the premise that the recording of even unverified beneficial ownership information does deter illicit financial flows, KFSI-3 plausibly does add value to the Index.

No action on KFSI-3

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[47] Lucia Dalla Pellegrina et al., "Detecting the Fifty Shades of Grey: Local Crime, Suspicious Transaction Reporting and Anti-Money Laundering Regulation." BAFFI CAREFIN Centre Research Paper No. 2018-93, March 2020. https://ssrn.com/abstract=3280307

[48] https://www.ciregistry.ky/trusts-register/types-of-trusts/

[49] Maíra Martini. *Verifying the beneficial owner of companies. Why and how*. Geneva: Transparency International. Mar 19, 2019. https://voices.transparency.org/verifying-the-beneficial-owner-of-companies-why-and-how-d6e24bd9f99f

[50] Andres Knobel, *Beneficial ownership verification: ensuring the truthfulness and accuracy of registered ownership information*. Tax Justice Network, 22 January 2019. https://www.taxjustice.net/wp-content/uploads/2019/01/Beneficial-ownership-verification_Tax-Justice-Network_Jan-2019.pdf

6.5.4 KFSI-4: Other Wealth Ownership

KFSI-4 seeks to address a legitimate concern, namely anonymous possession of assets. The indicator comprises two components: real estate and freeports, each with equal weight.

Looking first at the real estate component. In principle, an effective solution to the problem of anonymous possession of real estate would be the establishment of a verified beneficial ownership registry from which information could be shared with appropriate authorities on request. However, the TJN criteria requires both legal and beneficial ownership to be made available *to the general public*, while making no mention of that information being verified.

Requiring property ownership information to be made available to the general public would invade the privacy of many people who are at risk from others who have malign intent, including stalkers, burglars, and kidnappers. One consequence would be to increase the cost of providing protection to such individuals and their property, which would at least in part fall on the public purse. That seems like a perverse outcome of a rule intended at least in part to reduce tax losses.

In practice, there are numerous challenges establishing a beneficial ownership registry for real estate. First and foremost is the cost and difficulty of identifying beneficial owners of property that is already in possession. As such, it is more reasonable to require beneficial ownership to be established at the time of new transactions. Obviously, such a registry would not contain a complete record of all property in a jurisdiction, but it would largely serve the purposes for which TJN intends it: identifying illegitimate financial *flows*.

A quick check of just one jurisdiction that TJN scored 100 ("full secrecy"), the UK, is enough to question the reliability and utility of the real estate components of KFSI4. England and Wales has a highly accessible registry of the legal and equitable owners of real estate.[51] Scotland also has a similarly accessible land registry.[52] As does Northern Ireland.[53] But TJN's entry for the UK says "there is no central registry of real estate." While that may be technically true, because there is no "UK" land registry, it is false inasmuch as there are central registries for all land. It would not make sense to create a central registry covering the whole of the UK because Scotland has a different land titling system to England and Wales. Title deeds from the registry for England and Wales are verified and available online for a fee of £3 (titles to land owned by companies[54] and by foreign persons is available online for free). But TJN's entry says that information for legal and beneficial owners is "not always available"; technically that may be true, since some properties that have been owned since before 1990, when registration became compulsory, but that is hardly pertinent to the problems TJN seeks to address.

It seems at least plausible that similar problems exist in other jurisdictions where there are multiple sub-jurisdictions each with their own land registries and/or land registration has not always been compulsory.

As regards Cayman, to which TJN gave a score of 100 for KFSI-4, the Cayman Islands Government Department of Lands and Survey maintains a comprehensive registry of ownership of all land in Cayman and the register may be viewed for a fee of CI$5 (US$6.10).[55]

The other factor making up KFSI is the presence of freeports, whether those freeports (including freeports, bonded warehouses, etc.) are "promoted as places to store valuable assets (e.g. gold bullion, art,

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[51] https://www.gov.uk/search-property-information-land-registry

[52] https://www.ros.gov.uk/our-registers/land-register-of-scotland

[53] https://www.nidirect.gov.uk/articles/searching-the-land-registry

[54] https://use-land-property-data.service.gov.uk/datasets/ccod/tech-spec

[55] https://www.caymanlandinfo.ky/Services/Land-Registry/Land-Registration/Land-Registry-Fees

precious stones, jewelry, cash, antiquities, wines, cigars, cars)?" and whether there is a registry of beneficial ownership of items stored in the freeports, as well as automatic notification of the jurisdiction of the beneficial owner.[56] Superficially, these criteria seem reasonable. However, by using a very broad definition of "freeport," and by placing no lower bound on the value of property that is to be subject to the rule, TJN has cast its net too wide. On TJN's criteria, the beneficial owner of every $200 case of wine held in bond must be included in a registry and shared with the jurisdiction in which that person lives. Until such time as digital identifiers exist that enable simple sharing of beneficial ownership information, such a registry system would be a bureaucratic nightmare.

In light of both the statistical anomaly identified by the ECJRC, the questionable legitimacy of the criteria applied, and the apparent inaccuracy of the entries, it seems reasonable to remove KFSI-4 from the index.

Action: Remove KFSI-4 from the aggregate secrecy score

6.5.5 KFSI-5: Limited Partnership Transparency

KFSI-5 pertains to the availability of information on the ownership of limited liability partnerships (LLPs). For a jurisdiction where LLPs are a legally permissible form to score zero (no secrecy) on KSFI-5, all LLPs must publish online, for free, and in open data format: (1) "updated and complete legal and beneficial ownership information about all partners (and legal entities which are partners);" and (2) annual accounts. TJN gives partial credit for jurisdictions where LLPs must publish annual accounts online, and/or must publish updated and complete legal ownership information, and/or must publish updated and complete beneficial ownership information (with additional secrecy points if the data is not available for free and in open data format).

The mean score for KFSI-5 is 89 and the median is 100. Indeed, 102 of the 133 jurisdictions scored 100 (total secrecy) on KFSI-5. In addition, 6 jurisdictions scored 95, and one jurisdiction scored 90. In other words, 82% of jurisdictions scored 90 or more. Meanwhile, the 12 jurisdictions that scored 0 (the other most common score) did so because limited liability partnerships are not a permissible legal form in those jurisdictions.[57] That means, 90% of jurisdictions where LLPs are legal score 90 or more on KFSI-5. It is thus not surprising that KFSI-5 does not correlate with other indicators: it has little discriminatory power (i.e. it does not effectively discriminate between jurisdictions that contribute to illicit financial flows and those that do not) and seems to be very poorly formulated. The reason is simple: by requiring information on both legal and beneficial ownership of LLPs to be published online, it goes well beyond established international norms, including those set by both the FATF and the EU's Fifth Anti-Money Laundering Directive. While the TJN may think online publication of accounts and legal and beneficial owners of LLPs should be the international norm, that does not make it so.

KFSI-5 also raises substantive concerns. TJN asserts that for Cayman, "While some legal ownership information is always recorded, it is incomplete/not recorded for all partners."[58] This misconstrues the nature of Cayman's beneficial ownership registration system, which applies to all companies and LLCs except those that are exempted because they are subject to separate regulation.[59] But in a sense this would not matter because TJN requires that all beneficial ownership information to be available online either for free or at a small cost. Since beneficial ownership information is not available online for Cayman, the

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[56] Methodology, p. 278.

[57] The 12 jurisdictions are: Andorra, Botswana, Grenada, Ghana, Sri Lanka, Nauru, Pakistan, Rwanda, San Marino, Trinidad & Tobago, Tanzania, and St. Vincent & the Grenadines.

[58] https://fsi.taxjustice.net/database/dbr_Jurisdiction.php?Juris=KY&Per=20

[59] See e.g.: https://www.cogencyglobal.com/blog/new-cayman-islands-beneficial-ownership-requirements-action-needed-by-june-30-2018

jurisdiction is automatically awarded 50 points. Cayman is awarded another 50 points because company accounts are not available online.

It apparently does not matter to TJN that beneficial ownership information for all Cayman companies and LLCs is available to appropriate authorities, as recommended by the FATF.[60] TJN takes an all-or-nothing approach. As such, it misrepresents the situation regarding Cayman's collection and sharing of ownership information. What TJN fails to understand, apparently, is that Cayman's beneficial ownership registration system makes it practically impossible to form a company of any kind in Cayman without disclosing *verified* beneficial ownership information, which is a huge deterrent to criminals. Failing to distinguish between, on the one hand, jurisdictions such as Cayman that have chosen to implement verified beneficial ownership registries, while continuing to protect the privacy—but not secrecy—of the owners of companies and, on the other hand, jurisdictions that have either no beneficial ownership registry or do not verify the information in their registry highly distorts this component of the index.

TJN offers three arguments for requiring company accounts to be available online. First, TJN claims that that "accounts allow business and trading partners as well as clients to assess potential risks they face in trading with limited partnerships. This risk appraisal can only happen when accounts are available for public scrutiny."[61] Aside from the fact that this has nothing to do with the secrecy concerns that are the putative subject of the FSI, this concern is simply misplaced: to the extent that trading partners want this information, they can always ask the business in question to supply it, in confidence or otherwise. Second, TJN asserts that "Unhindered access to the limited partnership's accounts empowers regulators and authorities to assess the macro-consequences of the limited partnership undertakings without imposing excessive costs."[62] Again, this is irrelevant to the main concerns of the FSI. It is also hubristic: to the extent that regulators believe there are "macro-consequences" associated with the activities of limited partnerships, they can take appropriate measures without requiring the public disclosure of such information. TJN offers a third justification: "Third, no limited partnership can be considered accountable to the communities where it is licensed to operate and where its partners enjoy the privilege of limited liability unless it places its accounts on public record." That seems a highly subjective view of the rights and responsibilities of the owners of limited partnerships and their relationship to the polity in which they are domiciled. If it were true, why do so few jurisdictions require it? In other words, all three of TJN's arguments for requiring public disclosure of the accounts of limited partnerships are spurious.

Given the lack of correlation between KFSI-5 and other KFSIs identified by the ECJRC, as well as the issues raised here, especially the fact that 90 percent of jurisdictions that permit LLCs score 90 or more on KFSI-5, it seems reasonable to remove KFSI-5 from the index.

Action: remove KFSI-5 from the aggregate secrecy score.

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[60] It is worth noting the FATF's recommendation regarding "Transparency and beneficial ownership of legal persons. Countries should take measures to prevent the misuse of legal persons for money laundering or terrorist financing. Countries should ensure that there is adequate, accurate and timely information on the beneficial ownership and control of legal persons that can be obtained or accessed in a timely fashion by competent authorities. In particular, countries that have legal persons that are able to issue bearer shares or bearer share warrants, or which allow nominee shareholders or nominee directors, should take effective measures to ensure that they are not misused for money laundering or terrorist financing. Countries should consider measures to facilitate access to beneficial ownership and control information by financial institutions and DNFBPs undertaking the requirements set out in Recommendations 10 and 22." (emphasis added.)

[61] Methodology, p. 75.

[62] Ibid.

6.5.6 KFSI-6: Public Company Ownership

KFSI-6 "considers whether a jurisdiction requires all available types of companies with limited liability to publish updated beneficial ownership or legal ownership information on public records accessible for free via the internet."[63]

KFSI 6 is statistically anomalous. As noted in section 4, it is one of two KFSIs with a mean score of over 90 and for which over 90% of jurisdictions scored over 50. KFSI 6 is thus presumptively biased. Some more statistics reinforce that. 90% of jurisdictions (119 of 132) scored 100 points (total secrecy). Meanwhile, only six jurisdictions scored less than 85.

The reason only two jurisdictions have implemented public company ownership registers even vaguely along the lines of those demanded by TJN is that those demands go well beyond what is necessary to address tax evasion, money laundering, terrorist financing, and related concerns. Indeed, as noted above re. KFSI-5, it is far more important for jurisdictions to ensure that their beneficial ownership information is verified and available to relevant authorities.

Action: remove KFSI-6 from the aggregate secrecy score.

6.5.7 KFSI-7: Public Company Accounts

KFSI 7 asks whether limited liability company accounts must be filed with a governmental authority and whether they are made available for inspection by anyone for free, or against a small fee.[64] A secrecy score of 100 is given if such accounts are not available online. TJN's arguments here are essentially identical to those for requiring limited partnerships to publish accounts online and equally hubristic. It is also noteworthy that 114 of 133 jurisdictions score 100 on KFSI-7. Aside from Thailand, which scores 25, the only jurisdictions that do not score 100 are EU member states, suggesting that while this requirement may be the norm in the EU (and Thailand), it is very far from being a global norm. As such, KFSI-7 is a biased and inappropriate indicator.

Action: remove KFSI-7 from the aggregate secrecy score

6.5.8 KFSI-8: Country by Country Reporting

As TJN describes it, "This indicator measures whether the companies listed on the stock exchanges or incorporated in a given jurisdiction are required to publish publicly worldwide financial reporting data on a country by country reporting basis."[65] In practice, however, the index does nothing of the sort.

To obtain a score of zero on KFSI-8, TJN requires jurisdictions to impose "Full annual public country by country reporting required for corporations of all sectors (at least for those listed or for all above €750m turnover)."[66] The number of jurisdictions that scored zero on KFSI-8 is: zero.

If a jurisdiction has, "No public country by country reporting required for any corporations in any sector"[67] it scores 100 on KFSI-7. 101 of the 133 jurisdictions on the index score 100 points on KFSI-8.

For jurisdictions that do not have country by country reporting of the sort TJN demands but do have some sector-specific reporting requirements, TJN knocks off 25 points (per sector). So, the 28 members of the EU each score 50, because they are all required to comply with both the Capital Requirements Directive

[63] Methodology, p. 77.

[64] Methodology, p. 87.

[65] Methodology, p. 92.

[66] Methodology, p. 93.

[67] Ibid.

IV (Directive 2013/36/EU), which introduced country by country reporting for financial institutions, and the Accounting and Transparency Directive (Directive 2013/34/EU), which requires certain reporting requirements for payments made by companies in the extractive industries sector. Canada and Ukraine were granted a 25 point reprieve on KFSI-8 for having obligations to report on agreements in the extractive industries sector. And Hong Kong, and Taiwan each had 10 points deducted for what TJN describes as

Norway doesn't get any reprieve for its requirement that companies in the natural resource sector report payments because such reporting requirements only apply for jurisdictions, "where there is a physical withdrawal of natural resources."[68] This seems an odd reservation on the part of TJN. One would think that jurisdictions where natural resources are being extracted would be exactly the jurisdictions of concern regarding payments for the right to extract natural resources. But TJN is concerned that "companies in practice do not need to report key information on their activities in tax havens."

It is difficult to avoid the conclusion that KFSI-8 is not really measuring what TJN says it is measuring and seems to be applied in a rather ad hoc manner. Given that there are zero jurisdictions even contemplating the kinds of reporting that TJN thinks should apply, KFSI-8 seems a very poorly designed metric.

Action: remove KFSI-8 from the aggregate secrecy score.

6.5.9: KFSI-9: Country by Country Reporting

KFSI-9 relates to the disclosure of corporate tax information and has either two or three components.

Component 1: Local Filing of Country-by-Country Reports.

TJN describes its scoring for this component thus:

> "A zero secrecy score is given if all relevant foreign multinational enterprises with domestic operations are required to file a local country-by-county report whenever the jurisdiction cannot obtain the country by country report through the automatic exchange of information. A 50 points of secrecy score is given if the jurisdiction abides by the OECD legal framework or if country by country report is not even required to be filed in any circumstance, or if the domestic legal framework is unknown."[69]

In other words, TJN gives the same maximum score (50) to jurisdictions that are fully compliant with the OECD country-by-country reporting (CbCR) framework but do not file local country-by-country reports as it does to jurisdictions that are totally non-compliant. That seems highly disproportionate and dramatically reduces the utility of the component as a means of identifying jurisdictions that facilitate illicit financial flows.

Component 2: Unilateral Cross Border Tax Rulings

This component relates to tax rulings that meet the OECD criterion, i.e.: "any advice, information or undertaking provided by a tax authority to a specific taxpayer or group of taxpayers concerning their tax situation and on which they are entitled to rely."[70] TJN awards a zero secrecy score to jurisdictions for which, "No unilateral cross-border tax rulings are available in the jurisdiction and the jurisdiction applies income tax."[71]

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[68] Methodology, p. 97.

[69] Methodology, p. 113.

[70] Methodology, p. 114.

[71] Methodology, p. 111.

Obviously, countries without any individual or corporate income tax do not have tax rulings, yet such jurisdictions are automatically awarded the maximum secrecy score (50, in the case of jurisdictions without an extractive industry sector).

Component 3: Extractive industry contract disclosure

Jurisdictions with an extractive industry sector are subject to an additional component relating to the disclosure of extractive industry contracts. In such cases, a zero score on the component is obtain if all or nearly all extractive industries contracts are available publicly online and contract disclosure is required by law.[72]

KFSI-9 is perverse. Jurisdictions score 50 points *for implementing* the OECD's CbCR framework through international agreements rather than through local filing. Meanwhile, jurisdictions without an extractive industry score 50 points if they do *not* have an income tax, even though having no income tax is the most effective way to ensure that taxes are not applied in a discriminatory way. In other words, jurisdictions such as Cayman that have implemented the OECD CbCR framework through international agreements and have no income tax receive the maximum 100 points.

But KFSI-9 is doubly perverse. For jurisdictions without an extractive industry sector, the maximum score for each of component 1 and 2 is 50 points. For jurisdictions with an extractive industry sector, the maximum score for component 1 is 50 points and the maximum score for each of components 2 and 3 is 25 point. So, a jurisdiction with an extractive industry sector that scores zero on component 3 but scores the maximum on conditions 1 and 2 would receive a total score of 75, whereas a jurisdiction without an extractive industry sector that score the maximum on components 1 and 2 would receive a score of 100.

There seems no rhyme or reason to this scoring, which likely explains why the ECJRC found that it was not correlated with other KFSIs. For these reasons, it seems reasonable to remove KFSI-9 from the index.

Action: Remove KFSI-9 from the aggregate secrecy score

6.5.10: KFSI-10: Legal Entity Identifier

As TJN puts it "This indicator reviews the extent to which a jurisdiction requires domestic legal entities to use the Legal Entity Identifier (LEI)."[73] As with KFSI-6, this was statistically highly anomalous. In fact, no jurisdictions have fully implemented the LEI in a way that even approaches universality – although some (EU member states, Canada, US, Mexico and India) received partial reprieves for having implemented the LEI for certain financial entities. But the vast proportion of jurisdictions have not implemented any form of LEI, with the result that this indicator lacks discriminatory power. As noted in Section 4, it also does not seem to be measuring anything directly related to the propensity for a jurisdiction to facilitate illicit financial flows.

Action: Remove KFSI-10 from the aggregate secrecy score.

6.5.11: KFSI-11 Tax Administration Capacity

The title of this indicator is rather misleading. It is not about tax administration capacity in general; it is specifically focused on administrative capacity to collect taxes from individuals and companies. As TJN describes it, "This indicator considers the capacity of jurisdictions' tax administration to collect and process data for investigating and ultimately taxing those people and companies who usually have most means and opportunities to escape their tax obligations."[74]

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[72] Methodology, p. 112.

[73] Methodology, p. 133.

[74] Methodology, p. 140

Obviously, jurisdictions that do not impose taxes on individuals or companies, but rather rely on property taxes, consumption taxes and other indirect means to raise government revenue, do not require a tax administration focused on taxing individuals and companies. As such, they should score zero on this indicator. But TJN applies the maximum 100 score to such jurisdictions.

Action: Adjust the score on KFSI-11 to zero for jurisdictions with no corporation or personal income tax.

6.5.12: KFSI-12 Consistent Personal Income Tax

As TJN describes it: "This indicator analyses whether a jurisdiction applies a Personal Income Tax (PIT) regime which is compatible with the (progressive) income tax systems of most jurisdictions worldwide, or if its laws provide laxity around citizenship and/or residency, and if its personal income tax legislation is narrow in scope, resulting in financial secrecy sinks for tax dodgers and criminals."[75]

This indicator seems to be focused on the idea that high and progressive personal income taxes result in less tax avoidance and evasion. That is wrong. Jurisdictions with no personal income tax do not suffer from evasion or avoidance of personal income tax. If all jurisdictions were to eliminate personal income tax, personal tax evasion and avoidance would be eliminated. By contrast, higher levels of personal income tax tend to incentivize greater levels of tax evasion (and avoidance).[76] Blaming such avoidance and evasion on jurisdictions that do not impose income taxes seems backwards. The blame lays squarely with jurisdictions that impose high income taxes.

The indicator also seems to question the right of jurisdictions to determine their own immigration system.

Since there doesn't seem any obvious way to adjust the indicator so that it actually measures something relevant to the issue at hand, the only solution is to scrap it.

Action: remove KFSI-12 from the aggregate secrecy score.

6.5.13: KFSI-13 "Avoids Promoting Tax Evasion"

According to TJN, "This indicator assesses whether a jurisdiction includes worldwide capital income in its income tax base and if it grants unilateral tax credits for foreign tax paid on certain foreign capital income. The types of capital income included are interest and dividend payments."[77]

TJN explains that this measure is intended to address what it sees as the most effective way to address the problem of double taxation, namely unilateral tax credits for foreign tax paid. Yet, TJN concedes that "unilateral provisions to avoid double taxation are not as effective at preventing double taxation as double tax treaties."[78] Moreover, TJN observes that "While the concept of "double taxation" is theoretically plausible, evidence for real life occurrence is exceptionally rare, especially since many countries have adopted unilateral relief provisions to avoid double taxation. In addition, countries also negotiate bilateral treaties to avoid double taxation, so-called double taxation avoidance agreements (DTA)."[79] Indeed. And

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[75] Methodology, p. 149.

[76] Charles Clotfelter, "Tax evasion and tax rates: an analysis of individual returns." *Review of Economics and Statistics*, Vol. 65(3), 1983, pp. 363–373; Crane, S. E., & Nourzad, F., "Analyzing income tax evasion using amnesty data with self-selection correction: the case of the Michigan tax amnesty program." in J. Slemrod (Ed.), *Why People Pay Taxes*, Ann Arbor, Michigan: University of Michigan Press, 1992, pp. 167–189; Annette Alstadsaeter and Martin Jacob, "Tax Incentives and Noncompliance," *Public Finance Review*, Vol. 46(4), 2018, pp. 609-634;

[77] Methodology, p. 159.

[78] Methodology, p. 167 at footnote 417.

[79] Methodology, p. 161.

it should be observed that not having a corporate income tax is an even more effective way for a jurisdiction to avoid double taxation.

KFSI-13 is clearly biased towards TJN's preferred method of taxation and it is not clear that it offers a reliable measure of the extent to which a jurisdiction promotes tax evasion. As such, it is not a relevant metric to include in an index purporting to measure financial secrecy.

Action: remove KFSI-13 from the aggregate secrecy score.

6.5.14 KFSI 14: Tax Court Secrecy:

KFSI-14 asks (a) whether the public always have the right to attend full proceedings and cannot be ordered to leave the court room if a party invokes tax bank secrecy, professional secrecy or comparable confidentiality rules and (b) whether all written decisions resulting from civil/administrative or criminal tax proceedings published online for free or against a fee.[80]

Regardless of the merits of this measure, it obviously does not apply in jurisdictions such as Cayman that have no corporate or personal income tax. Such jurisdictions should logically receive a score of zero but TJN accords them a score of 100.

Action: change the score for zero tax jurisdictions to zero.

6.5.15 KFSI 15: Harmful Structures

TJN asks four questions: (1) Does the jurisdiction issue or accept circulation of large banknotes/cash bills of its own currency (of value greater than 200 EUR/GBP/USD)? (2) Are bearer shares available? (2) Are Protected Cell Companies/Series LLCs available? (4) Are trusts with flee clauses prohibited?

Affirmative responses to questions 1, 2, or 3 each receive 25 points. A negative response to question 4 also receives 25 points. Cayman does not have bank notes in denominations of $200 or more, nor does it permit bearer shares. But Cayman does permits cell companies and does not prohibit flee clauses in trusts, so it receives 50 points.

While large denomination bank notes and bearer shares plausibly do contribute towards illicit activity, it is not clear that protected cell companies (PCCs, also known as segregated portfolio companies) or trusts with flee clauses promote secrecy. TJN claims that "The level of asset protection and ambiguity of ownership and control that a PCC provides might allow illicit financial flows to escape the attention of law enforcement authorities. We therefore question whether the potential benefits these structures might allow to the reinsurance sector justify the broader risks and costs they impose on society at large." Claiming hypothetically that PCCs *might* allow illicit financial flows is a far cry from demonstrating that the pose a real threat. Perhaps, as TJN notes, some jurisdictions may permit their use for illicit purposes, but that is a much more specific concern that is not addressed by TJN. Cayman certainly does not permit PCCs to be used for illicit purposes. As such, this measure seems inappropriate.

TJN also seems to have a highly distorted interpretation of flee clauses. These are rarely invoked and, when they are, it is typically in the event of a major event or force majeure in the jurisdiction in which the trust is administered, such as a coup d'etat or nationalization of assets or other 'macro' type event, or perhaps the Trustee becoming insolvent. For example, in the mid-1970's some flee clauses in Bermuda were triggered when the then Governor was assassinated. One prominent trust lawyer in Cayman noted that in his many years of practice he has never seen a trust drafted to trigger the flee clause in the event of an investigation by a foreign tax authority. It is also noteworthy that few if any of the jurisdictions included in TJN's analysis prohibited flee clauses, so it would appear that this component also has no discriminatory power.

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The fact that KFSI-15 combines two elements that *are* associated with financial crime, with two elements that are probably *not* associated with financial crime is troublesome. Ideally, this indicator would be changed so that it only focuses on the first two questions.[81]

Action: Adjust all scores using new metric: 50 points for large bank notes, 50 points for bearer shares

6.5.16 KFSI-16 Public Statistics

This measure scores jurisdictions on the extent to which they make available macro statistics relating to trade and investment either nationally or through international organisations. Plausibly the publication of such data do contribute to the transparency of a jurisdiction. Whether the precise list of statistics is the most useful for evaluating a jurisdiction's transparency is another matter. Two items stand out as of dubious merit: the publication online and for free of aggregate data on CbCR and CRS. While there may be merit in jurisdictions obtaining such information and sharing it with appropriate authorities, the merit arises in the discrete statistics on individual entities rather than the public sharing of aggregate data. Nonetheless, attempting to adjust for these scores without access to the TJN's underlying database is too cumbersome a task for this analysis.

No Action on KFSI-16

6.5.17: KFSI-17 Anti-Money Laundering

KFSI-17 asks, "To what extent is the anti-money laundering regime of the jurisdiction failing to meet the recommendations of the Financial Action Task Force (FATF), the international body dedicated to counter money laundering."

TJN's method of aggregation fails to discriminate between more- and less-important components of a jurisdiction's AML regime. However, this criticism applies to all jurisdictions, so the indicator may be inefficient but is not obviously biased.

No Action on KFSI-17

6.5.18: KFSI-18 Automatic Information Exchange

KFSI-18 asks, "Does the jurisdiction fully participate in the multilateral exchange of financial account information, and engage in a pilot project to support a developing country?"

Both the metrics chosen by TJN for this indicator and the scoring system seem somewhat arbitrary. However, they are presumably applied uniformly, so the indicator itself, while subjective, is not inherently biased.

No Action on KFSI-18

6.5.19: KFSI-19: Bilateral Treaties:

KFSI-19 asks, "Does the jurisdiction have at least 108 bilateral treaties providing for information exchange upon request, conforming to the 'upon request' standard developed by the OECD and the Global Forum?"

[81] Jurisdictions with segregated portfolio companies include: Anguilla, Antigua & Barbuda, Bahamas, Bermuda, Belize, British Virgin Islands, Brunei, Cayman Islands, Comoros, Cook Islands, Curacao, Cyprus, Dominica, Dubai (UAE), Gibraltar, Grenada, Guernsey, Hong Kong, Isle of Man, Montserrat, Jersey, Labuan, Liechtenstein, Malta, Mauritius, Niue, St. Kitts & Nevis St. Lucia, St. Vincent & the Grenadines, Samoa, Seychelles, Singapore, Turks & Caicos, Vanuatu. (Andrew Morriss and Charlotte Ku, "Offshore Law & the Transmission of Legal Innovation," *IFC Review*, January 2021). In addition, Anguilla, Bahrain, Delaware (U.S.) Ireland, Luxembourg, and Malta have similar structures for collective investment vehicles (various reports).

No Action on KFSI-19

6.5.20: International Legal Cooperation:

KFSI-20 asks, "Does the jurisdiction participate in international transparency commitments and engage in international judicial cooperation on money laundering and other criminal matters?"

KFSI-20 seems reasonably well constructed, though it perhaps accords excessive weight to jurisdictions being signatories to various international conventions. Cayman's score (38) is mainly due to the jurisdiction not being signatory to either the UN Convention Against Corruption or the UN International Convention for the Suppression of the Financing of Terrorism, in spite of the fact that the jurisdiction is rated fully compliant with FATF recommendation 37 and largely compliant with FATF recommendations 38 and 40. In other words, Cayman is substantively providing legal assistance even if in 2018 it was not signatory to two of the international conventions. (The UK extended it ratification of the Convention Against Corruption to Cayman in December 2020.[82])

Moreover, in 2001, the UK passed an Order in Council implementing United Nations Security Council Resolution 1373 in all UK overseas territories (including Cayman).[83] That resolution provides for jurisdictions, "to use any of the best practices, codes and standards listed in the directory below, taking into account their own circumstances and needs." Among the best practices listed is FATF recommendation 40. Given that Cayman is largely compliant with FATF recommendation 40, it seems inappropriate award it 12.5 points for failing to be a party of the UN Convention for the Suppression of the Financing of Terrorism.

Unfortunately, these issues likely apply to numerous jurisdictions, so it would be difficult to justify adjusting Cayman's score without also adjusting the score of those other jurisdictions.

No Action on KFSI-20

6.6 SS and FSI following adjustments made according to the substantive review

Table 6.9 Shows the full Secrecy Scores following the adjustments made in the substantive review. Table 6.10 shows the top 50 ranked jurisdictions on the revised FSI following adjustments in the substantive review using the individually rescaled KFSIs.

Table 6.9: Secrecy Scores Following Substantive Review

Jurisdiction	KI 1	KI 2	KI 3	KI 11	KI 14	KI 15	KI 16	KI 17	KI 18	KI 19	KI 20	Adjusted Final SS
Algeria	93	50	100	87.5	50	50	70	72	100	100	32.5	73
Andorra	57	0	65	75	100	50	90	35	22	0	30	48
Angola	60	25	100	75	100	50	70	68	100	100	59	73
Anguilla	70	100	100	0	0	50	80	41	32	0	16	44
Antigua and Barbuda	74	100	75	100	100	50	70	44	7	0	26.5	59
Argentina	53	25	90	62.5	50	50	50	77	0	0	29.5	44

[82] https://beta.gov.ky/news/press-release-details/un-convention-against-corruption

[83] https://www.un.org/sc/ctc/resources/databases/recommended-international-practices-codes-and-standards/united-nations-security-council-resolution-1373-2001/

Aruba	47	25	100	75	100	50	80	77	26	0	35.5	56
Australia	20	50	100	40	25	0	30	38	0	0	0	28
Austria	50	62.5	100	52.5	100	100	30	31	0	0	14	49
Bahamas	57	100	75	0	0	50	60	42	28	0	20.5	39
Bahrain	47	37.5	0	0	0	0	30	37	29	0	17.5	18
Bangladesh	47	50	100	62.5	100	50	60	40	100	100	30	67
Barbados	27	87.5	100	62.5	100	0	80	53	9	0	36	50
Belgium	10	50	50	65	75	50	30	26	0	0	17.5	34
Belize	73	87.5	100	75	100	0	70	69	27	0	27	57
Bermuda	67	50	75	0	0	0	40	57	30	0	10.5	30
Bolivia	60	50	100	75	100	50	50	74	100	100	35.5	72
Botswana	40	50	0	62.5	100	0	60	59	100	88.9	29.5	54
Brazil	50	25	75	50	50	50	30	52	0	0	14	36
British Virgin Islands	40	50	75	0	0	0	100	33	28	0	0	30
Brunei	63	50	100	87.5	100	50	70	72	100	0	23.5	65
Bulgaria	30	50	65	52.5	100	0	50	35	13	0	3.5	36
Cameroon	47	75	100	87.5	75	0	70	73	100	0	29.5	60
Canada	14	50	100	25	75	50	30	41	4	0	14	37
Cayman Islands	27	100	75	0	0	0	60	44	27	0	38.5	34
Chile	50	37.5	90	50	75	0	30	48	0	0	16.5	36
China	27	50	100	62.5	100	50	30	52	2	0	23.5	45
Colombia	33	50	100	62.5	75	0	60	45	0	0	14	40
Cook Islands	44	87.5	100	100	100	50	100	37	6	0	14	58
Costa Rica	27	25	50	62.5	100	0	50	35	15	0	7	34
Croatia	27	0	100	52.5	100	50	60	62	0	0	17.5	43
Curacao	60	87.5	100	75	100	50	50	47	26	0	26.5	57
Cyprus	50	50	90	52.5	100	50	30	29	13	0	7	43
Czechia	54	25	100	52.5	100	100	50	44	0	0	17.5	49
Denmark	54	75	50	52.5	50	0	30	40	0	0	17.5	34
Dominica	70	50	100	75	100	50	80	74	67	0	17	62
Dominican Republic	34	0	40	100	50	0	70	35	100	0	20.5	41
Ecuador	56	0	0	50	25	0	70	78	65	0	46.5	36
Egypt	80	25	100	87.5	100	0	60	47	100	100	23	66
El Salvador	40	37.5	100	62.5	50	50	50	50	100	0	17	51
Estonia	24	75	40	52.5	75	50	50	38	0	0	14	38
Finland	47	0	100	40	100	100	30	39	0	0	14	43
France	54	25	50	52.5	75	50	30	35	0	0	14	35
Gambia	66	100	100	62.5	100	0	80	69	100	100	45	75
Germany	50	25	75	65	100	100	30	47	0	0	17.5	46
Ghana	27	50	40	62.5	75	0	80	39	50	0	20.5	40
Gibraltar	76	100	50	40	75	0	90	37	5	0	41.5	47

Greece	40	25	65	50	50	50	30	29	0	0	10.5	32
Grenada	77	50	100	100	100	50	80	71	26	0	7	60
Guatemala	47	50	100	87.5	100	50	60	33	100	0	17.5	59
Guernsey	57	100	75	100	75	0	70	18	6	0	7	46
Hong Kong	74	50	90	75	100	0	20	32	14	0	17.5	43
Hungary	74	25	100	52.5	100	0	50	42	0	0	17.5	42
Iceland	20	75	65	75	100	0	50	43	2	0	17.5	41
India	40	50	0	52.5	100	0	30	47	1	0	17.5	31
Indonesia	34	25	75	50	50	0	30	38	2	0	17.5	29
Ireland	24	37.5	40	40	50	50	30	31	0	0	10.5	28
Isle of Man	37	100	50	75	100	0	70	29	6	0	14	44
Israel	44	50	100	52.5	100	50	60	25	8	0	14	46
Italy	27	50	65	52.5	75	50	30	25	0	0	10.5	35
Japan	27	37.5	100	62.5	100	50	30	55	1	0	26.5	45
Jersey	43	100	40	87.5	100	0	70	26	6	0	10.5	44
Jordan	80	25	90	100	100	0	70	62	100	100	39	70
Kazakhstan	57	25	100	87.5	50	0	50	69	75	0	23.5	49
Kenya	63	50	75	75	50	0	70	86	100	92.6	45	64
Kuwait	67	25	100	0	0	0	50	73	26	0	20.5	33
Latvia	60	25	65	62.5	100	50	50	44	0	0	23.5	44
Lebanon	63	50	40	75	75	0	50	55	29	0	17.5	41
Liberia	53	100	100	62.5	100	50	90	86	75	89.8	48.5	78
Liechtenstein	73	75	100	75	75	100	90	49	2	0	23	60
Lithuania	7	25	75	40	50	50	50	39	0	0	17.5	32
Luxembourg	80	50	75	52.5	75	100	30	65	0	0	14	49
Macao	40	25	100	75	100	0	40	26	30	0	14	41
Malaysia	37	100	100	50	75	50	30	26	2	0	20.5	45
Maldives	80	25	90	75	100	0	80	91	100	100	55.5	72
Malta	47	100	65	52.5	87.5	50	50	41	0	0	17	46
Marshall Islands	30	37.5	100	75	100	50	100	55	31	0	23.5	55
Mauritius	54	100	100	50	100	0	50	54	12	0	20.5	49
Mexico	50	50	100	52.5	75	0	30	48	1	0	23.5	39
Monaco	50	50	50	100	75	50	100	52	10	0	39	52
Montenegro	54	25	90	62.5	100	50	60	45	100	0	14	55
Montserrat	80	50	100	100	100	50	80	47	30	0	55	63
Morocco	70	25	100	87.5	75	50	60	61	50	0	26.5	55
Nauru	40	37.5	40	75	100	0	100	57	26	0	23.5	45
Netherlands	50	100	100	40	100	100	30	44	0	0	26.5	54
New Zealand	27	50	90	50	75	0	50	56	2	0	14	38
Nigeria	33	50	100	87.5	100	0	60	71	50	0	26.5	53

North Macedonia	33	75	100	62.5	100	0	60	65	100	0	20.5	56
Norway	7	50	65	62.5	75	0	30	28	1	0	17.5	31
Pakistan	40	50	100	100	75	0	50	69	9	0	33	48
Panama	44	100	100	75	100	50	40	33	0	0	20.5	51
Paraguay	73	37.5	50	62.5	100	0	60	83	100	100	45.5	65
Peru	44	25	25	87.5	100	0	60	33	100	0	10.5	44
Philippines	50	50	25	62.5	100	0	30	58	50	73.2	29.5	48
Poland	53	25	100	52.5	100	50	50	58	0	0	17.5	46
Portugal	37	25	75	40	50	100	30	33	0	0	10.5	36
Puerto Rico	60	37.5	100	100	100	0	100	37	100	100	26.5	69
Qatar	73	87.5	100	100	100	0	80	67	31	0	26.5	60
Romania	46	37.5	75	50	100	0	50	49	13	0	7	39
Russia	24	25	90	62.5	100	0	30	37	3	0	17.5	35
Rwanda	53	50	90	62.5	75	0	80	79	100	100	45.5	67
Samoa	47	100	100	75	100	0	70	54	29	0	17.5	54
San Marino	60	50	65	75	100	50	100	76	4	0	39	56
Saudi Arabia	20	37.5	100	62.5	75	0	60	30	3	0	20.5	37
Seychelles	47	87.5	100	75	75	0	60	56	3	0	36.5	49
Singapore	30	50	100	62.5	75	50	30	27	5	0	17.5	41
Slovakia	70	25	65	52.5	75	50	50	65	0	0	23.5	43
Slovenia	27	25	65	52.5	50	50	50	39	0	0	17.5	34
South Africa	26	37.5	100	25	25	50	30	50	2	0	10.5	32
South Korea	50	37.5	100	65	50	50	30	58	2	0	14	42
Spain	37	25	75	40	25	100	30	16	0	0	3.5	32
Sri Lanka	54	100	100	100	100	50	60	54	100	100	45.5	79
St. Kitts and Nevis	77	87.5	100	0.0	0	50	70	56	28	0	22.5	45
St. Lucia	70	50	100	75	100	0	70	86	8	0	36.5	54
St. Vincent and the Grenadines	67	50	100	0	0	50	70	59	26	0	16	40
Sweden	27	50	40	52.5	100	0	30	29	0	0	7	31
Switzerland	73	100	100	75	100	100	30	38	4	0	23.5	59
Taiwan	34	50	100	75	25	50	50	32	74	100	30	56
Tanzania	100	50	100	62.5	100	50	70	87	100	100	48.5	79
Thailand	54	25	100	62.5	100	50	50	47	100	100	26.5	65
Trinidad and Tobago	40	50	65	62.5	100	0	80	30	100	99.1	29	60
Tunisia	37	25	100	87.5	75	0	70	41	100	0	16.5	50
Turkey	64	75	100	62.5	50	50	30	45	49	0	7	48

Turks and Caicos Islands	73	50	65	0	0	0	80	66	28	0	44.5	37
Ukraine	27	25	100	87.5	100	50	50	38	100	0	20.5	54
United Arab Emirates	47	100	75	0	100	50	80	57	26	0	23.5	51
United Kingdom	37	50	50	25	50	0	30	19	0	0	10.5	25
United States	30	100	100	15	50	0	20	37	100	34.3	26.5	47
Uruguay	43	25	25	62.5	100	0	50	35	0	0	7	32
US Virgin Islands	50	50	100	100	100	0	100	37	100	34.3	26.5	63
Vanuatu	34	100	100	0	0	50	80	37	33	0	17	41
Venezuela	56	37.5	90	62.5	100	0	80	60	100	100	29.5	65
Vietnam	73	25	100	87.5	100	50	80	76	100	100	45	76

Table 6.10 Final FSI using Rev4 Method (Rescaled adjusted GSW x Revised Rescaled KFSIs)

FSI-Alt1 Rank	Jurisdiction	Secrecy Score	GSW rescaled max-min	FSI-Rev4	FSI-Rev4 Share	Cumulative FSI Share
1	**United States**	3.97	10.00	**39.69**	25.01%	25.01%
2	**Luxembourg**	4.58	5.79	**26.47**	16.68%	41.69%
3	**United Kingdom**	1.92	7.46	**14.29**	9.00%	50.69%
4	**Switzerland**	5.32	1.93	**10.24**	6.45%	57.14%
5	**Germany**	4.20	2.20	**9.25**	5.83%	62.97%
6	**Singapore**	3.24	2.42	**7.85**	4.94%	67.91%
7	**Hong Kong**	3.62	2.08	**7.52**	4.74%	72.64%
8	**Ireland**	2.46	1.62	**3.99**	2.51%	75.15%
9	**Japan**	3.82	1.03	**3.93**	2.48%	77.63%
10	**France**	3.15	1.05	**3.31**	2.08%	79.71%
11	**Netherlands**	4.81	0.52	**2.49**	1.57%	81.28%
12	**Belgium**	2.99	0.81	**2.41**	1.52%	82.80%
13	**Canada**	2.81	0.75	**2.10**	1.32%	84.12%
14	**India**	3.22	0.49	**1.56**	0.99%	85.11%
15	**Italy**	2.91	0.53	**1.56**	0.98%	86.09%
16	**Taiwan**	5.13	0.28	**1.41**	0.89%	86.98%
17	**Malta**	4.33	0.31	**1.34**	0.84%	87.83%
18	**China**	3.86	0.30	**1.15**	0.72%	88.55%
19	**Austria**	4.17	0.25	**1.06**	0.67%	89.22%
20	**Jersey**	4.26	0.21	**0.91**	0.57%	89.79%

21	**Sweden**	2.66	0.33	**0.88**	0.56%	90.35%
22	**South Korea**	3.43	0.26	**0.88**	0.55%	90.90%
23	**Spain**	2.41	0.34	**0.82**	0.51%	91.41%
24	**Guernsey**	4.12	0.19	**0.79**	0.50%	91.91%
25	**Cyprus**	3.53	0.22	**0.79**	0.50%	92.41%
26	**Cayman Islands**	3.01	0.24	**0.71**	0.45%	92.86%
27	**Norway**	2.47	0.28	**0.69**	0.44%	93.29%
28	**Lebanon**	4.08	0.15	**0.61**	0.38%	93.68%
29	**British Virgin Islands**	2.36	0.23	**0.55**	0.35%	94.02%
30	**Australia**	1.71	0.32	**0.54**	0.34%	94.37%
31	**Israel**	3.86	0.14	**0.54**	0.34%	94.71%
32	**United Arab Emirates**	4.89	0.10	**0.48**	0.30%	95.01%
33	**Panama**	4.47	0.10	**0.45**	0.28%	95.29%
34	**Thailand**	6.12	0.07	**0.43**	0.27%	95.56%
35	**Poland**	4.00	0.09	**0.35**	0.22%	95.79%
36	**Russia**	2.79	0.12	**0.34**	0.22%	96.00%
37	**Macao**	3.28	0.10	**0.34**	0.21%	96.21%
38	**Gibraltar**	4.80	0.06	**0.28**	0.17%	96.39%
39	**Turkey**	4.11	0.06	**0.24**	0.15%	96.54%
40	**Nigeria**	4.84	0.05	**0.23**	0.15%	96.68%
41	**Kenya**	6.60	0.04	**0.23**	0.15%	96.83%
42	**Qatar**	5.77	0.04	**0.23**	0.15%	96.97%
43	**Brazil**	3.05	0.07	**0.21**	0.13%	97.11%
44	**South Africa**	2.36	0.09	**0.20**	0.13%	97.24%
45	**Malaysia**	3.70	0.05	**0.20**	0.13%	97.36%
46	**Denmark**	3.02	0.06	**0.19**	0.12%	97.49%
47	**Czechia**	4.33	0.04	**0.18**	0.11%	97.60%
48	**New Zealand**	3.13	0.06	**0.17**	0.11%	97.71%
49	**Isle of Man**	4.17	0.04	**0.17**	0.11%	97.81%
50	**Algeria**	7.22	0.02	**0.17**	0.11%	97.92%

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