



Shallow and Uneven Progress towards Global Financial Transparency: Evidence from the Financial Secrecy Index

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ARTICLE INFO

JEL classification:

F36
F65
G28
H26
H87

Keywords:

Financial secrecy
financial transparency
tax havens
offshore finance
convergence
financial geography

ABSTRACT

The global financial crisis and leaked documents such as the Panama Papers highlighted the important role of financial secrecy in the global economy. Although international initiatives pressing for more transparency have gained strength, there is little knowledge on how the map of financial secrecy has changed over the past decade and why. We use the internationally recognised Financial Secrecy Index and analyse its five editions between 2011 and 2020. We find that financial transparency related to international standards and cooperation improved much more than transparency in the arguably more substantive areas of ownership registration, transparency of legal entities, as well as tax and financial regulation. Second, we document convergence of financial transparency among jurisdictions. While some of the most secretive countries and jurisdictions became more transparent, many with higher transparency in 2011 became relatively more secretive by 2020. This convergence is driven mainly by the most secretive countries and jurisdictions becoming more internationally cooperative. Third, we map the heterogeneity of financial secrecy across the world and classify 71 countries and jurisdictions into five groups, which cut across conventional geographical divisions, highlighting the need to study secrecy in specific contexts. They do, however, show that while OECD countries are relatively more transparent, their former colonies, with continued links with and dependency on former colonial powers, exhibit little improvement. Put together, our findings show that while some progress towards global financial transparency has been achieved, it is shallow and very uneven, with convergence potentially replacing a race-to-the-bottom dynamic.

1. Introduction

Financial secrecy is increasingly recognised as one of the defining features of the global economy, related closely to the issues of corruption (Ledyaeva et al., 2015), tax evasion and avoidance, as well as lax regulation (Clark, Lai and Wójcik 2015). Secrecy helps organised crime and terrorists exploit anonymous shell companies (Sharman 2010) and wealthy individuals hide their assets (Zucman 2015; Helgadóttir 2020). Companies set up secretive ownership structures with multiple layers of shell corporations (Pistor 2019; Sigler et al. 2020) and avoid paying billions of dollars in taxes (Tørsløv et al., 2022; García-Bernardo and

Janský, 2021). The global financial crisis and new revelations from leaks of offshore documents such as the recent Panama, Paradise, and Pandora Papers have all highlighted the crucial role played by financial secrecy in the globalised world (Janský et al., 2022a).

Governments are increasingly responding to excessive financial secrecy with financial transparency policies. Perhaps the most successful of such policies recently is the automatic exchange of information aimed at decreasing tax evasion of individuals. Since 2014 countries that joined the initiative exchange information on each other residents' financial accounts automatically (Emmenegger, 2017) rather than upon request, as was the case earlier (Palan and Wigan, 2014; Woodward 2016).

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¹ acknowledge support from the Czech Science Foundation (CORPTAX, 21-05547M). This work was supported by the Cooperatio Program at Charles University, research area Economics.

² received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement 681337). We are grateful to Alex Cobham, Markus Meinzer, Ronen Palan, Martin Besfamille, Tereza Palanská, Michal Soltés, Emmanuel Saez, and Gabriel Zucman for useful comments and discussions on an earlier version of this research. We have also benefited from discussions with members of the Financial Secrecy Index team at the Tax Justice Network.

Assessments of both automatic (Hakelberg, 2020; Janský et al., 2022a) and upon-request information exchanges (Bilicka and Fuest, 2014, Johannesen and Zucman, 2014) exist, but evidence is scarcer for other important policies such as registers of beneficial ownership. Meanwhile, other forms of financial secrecy, such as those involving trusts and private foundations, are further away from the policy spotlight.

In this paper, we investigate how the global map of financial secrecy changed during the 2010s by focusing on two questions. What is the degree of change in financial secrecy over that decade, and how does it compare across different jurisdictions and dimensions of transparency? What factors may explain this change? While answering the former question involves descriptive exploratory analysis, it is crucial, since to the best of our knowledge no research has examined how the overall landscape of financial secrecy has changed since the global financial crisis, and as explained in the following section, opinions and partial evidence on the matter are divided. It is also a pre-requisite for tackling the latter question concerning the causal mechanisms. Answering these questions has major implications for understanding global finance and for economic policy, and hence is most pertinent to financial, economic, and political geography.

In our analysis, we use the best available cross-country information source on financial transparency: the Financial Secrecy Index. Until the publication of its first edition by Tax Justice Network in 2009, no comprehensive, cross-country indicators of financial secrecy existed. In this paper, we use five editions of the index published between 2011 and 2020. To accommodate methodological developments behind the index, we use the harmonised relative secrecy scores, which are calculated as the ratios of the Financial Secrecy Index secrecy scores to the sample mean in individual years. The relative secrecy scores are suitable for tracking the extent of financial secrecy over time for 71 countries and jurisdictions for which data for the whole period are available, and for various dimensions of financial secrecy.

Our analysis reveals three groups of findings. First, financial transparency related to international standards and cooperation improved much more than in what could be considered more substantive categories of transparency such as ownership registration, as well as legal, tax and financial regulation. Second, jurisdictions have become more similar in terms of financial secrecy, with many of the most secretive jurisdictions becoming more transparent, while many less secretive jurisdictions at the start of the 2010s became relatively more secretive over time. This convergence is driven mainly by the most secretive jurisdictions becoming more internationally cooperative. Third, change in financial transparency has been heterogeneous across jurisdictions and not tied to conventional geographical regions, highlighting the need to study such changes at the individual level of countries and jurisdictions. Overall, we demonstrate that progress towards global financial transparency during the 2010s has been shallow and uneven.

The remainder of the paper is structured as follows. Section 2 discusses related literature on financial secrecy and develops hypotheses addressing our research questions. Section 3 explains the statistical methodology and the panel data set on financial secrecy: the five editions of the Financial Secrecy Index. Section 4.1 starts the results section by presenting the overall patterns of financial secrecy between 2011 and 2020 and statistical analysis regressing change in financial secrecy by country and jurisdiction on relevant variables. This analysis is deepened in Section 4.2, presenting a typology of countries and jurisdictions based on their level and change of financial secrecy. The final section concludes.

2. Literature review and hypothesis development

In this section, we undertake two tasks. First, we use the existing literature to elaborate on what financial secrecy is, why it exists, and its dimensions. This will prepare the ground for the second part of the section, in which we review research that helps us develop hypotheses addressing the questions of change in financial secrecy, its geographical

variation, and potential factors explaining them.

2.1. Financial secrecy, its roots and dimensions

Paraphrasing the definition of the Tax Justice Network (2022), financial secrecy can be defined broadly as a phenomenon that occurs whenever financial information is withheld from anyone who has a legitimate right to know this information. In some cases, this involves keeping private financial information that should be public. As such, financial secrecy can be understood as the lack of financial transparency, which is why in this paper, we use the terms secrecy and lack of transparency interchangeably.

Financial secrecy offers anonymity for individuals and organisations, and hence potential impunity regarding the effects of their actions. It helps economic activity go untaxed or undertaxed but also unregulated (Schjelderup 2015). For example, secrecy can allow the beneficial ownership of legal entities to be kept secret from the home country's authorities. Consequently, if an asset in a home country is held by a firm incorporated in a jurisdiction with anonymous ownership rules, the owners of the assets also remain unknown. Such cross-border use of financial secrecy can have legitimate purposes, but it can also be exploited by organised crime and corrupt politicians or businesspeople and lead to substantial harm. Some of the harmful effects of financial secrecy have been revealed by the recent leaks of confidential documents from offshore legal firms, such as the Panama Papers (Obermayer and Obermaier 2016), discussed from the economic geography perspective by Cloke (2019). The Panama Papers have forced politicians to resign and have been shown to decrease corporate valuations (O'Donovan, Wagner, and Zeume 2019).

Put simply, financial secrecy creates conditions of opacity ('murky water'), in which all kinds of illicit and border-line economic activity can take place, including terrorist financing, money laundering (Hall 2010), bribery and corruption, and tax evasion (Ledyaeva et al. 2015). Financial secrecy is the enemy of sustainable finance and sustainable development more broadly, as it erodes public revenues, aggravates inequality by helping the rich get richer (Beaverstock, Hubbard, and Short 2004), and undermines confidence in government and public institutions.

At the micro-level, financial secrecy can be explained by financial and other benefits it offers to individuals and organisations, including companies. If collective, societal benefits of transparency are strong, however, a macro-level explanation is needed for why financial secrecy persists. According to Palan (2002), financial secrecy is the logical consequence of capital mobility and economic integration combined with political fragmentation. The former describes the growing amount of money moving across state and jurisdictional borders at an ever-faster pace. The latter describes the growing number of states and jurisdictions at the subnational level that can set their laws and regulations concerning issues such as tax and use those to compete for money. An important example of this combination in action is the emergence of dozens of new states and semi-independent jurisdictions in former British, French, Dutch, US, and other colonies. As they gained sovereignty and some power to shape rules on their territories, they could also use financial secrecy to attract money, and in doing so, were often helped by both the governments of their former colonial powers as well as financial and business services from the financial centres of these colonial powers, including London, Paris, Amsterdam, and New York.

According to Tiebout (1956), competition between states for capital helps countries optimise the combination of public goods provision and taxation to pay for them. Financial secrecy, however, seems much less justified as a tool in such a competition than low or nil tax rates, as it undermines the collection of government tax and other revenues, and hence the provision of public goods, irrespective of the tax rates in place. Like tax competition, financial secrecy can lead to a race to the bottom, as the example of banking secrecy shows. Originating in late 19th century Switzerland, and enshrined in laws in the 1920s and 1930s, banking

secrecy was soon emulated in other countries competing with Switzerland, such as the Bahamas, Liechtenstein, Uruguay, and Lebanon. Followers of Switzerland, however, had to up the ante to compete. While in Swiss banking secrecy, only two bank officials needed to know the identity of the account holder, in Luxembourg, it was only one person, and in Austria, nobody. By the 1980s, dozens of countries, including the USA, practised some form of banking secrecy (Palan 2002).

The problematic spread of financial secrecy can also be explained with ‘prisoners’ dilemma’. Although more transparency would be in the collective international interest, countries and jurisdictions fear that increasing transparency would drive out business. This dilemma has a major geographical dimension. Smaller countries and jurisdictions, with little money of their own, stand to gain more from attracting foreign money, even if it is just for the purpose of collecting low license fees for business registrations. Meanwhile, larger economies would never be able to manage their fiscal policies with low financial transparency at home. The ‘prisoner’s dilemma’ also indicates that the road to improve financial transparency must lead through multilateral international collaboration. Applying Palan’s arguments on tax havens to financial transparency (Palan 2002, p.173), any serious attempt to combat financial secrecy “would have to be conducted at a multilateral level, and would have great implications for the modern doctrine of sovereignty.” It “would require a degree of cooperation among the major industrialised countries and a limit on the sovereign rights of states” (Palan 2002, p.173). In fact, as argued later, it also requires the cooperation of newly industrialised emerging economies.

Understanding of financial secrecy can be enhanced by mobilising the concept of the Global Financial Network. Defined as a network of financial and business services, governments, financial centres and offshore jurisdictions at the heart of the world economy, the Global Financial Network is responsible for creating and managing the circulation of money (Haberly and Wójcik 2022). Financial secrecy is related to all the main building blocks of the Global Financial Network. Out of the functions that offshore jurisdictions perform, financial secrecy is probably the least socially justified and most closely related to illicit economic activities. The Global Financial Network helps understand financial secrecy in a broader political-economic context. As such, secrecy should not be seen as the creation of offshore jurisdictions alone but rather as the co-creation of businesses and wealthy individuals helped by financial and business services firms operating out of financial centres. Leading governments contribute, too, including the United States (Dyreg, Lindsey, and Thornock 2013) and China (Sharman, 2012).

The fact that the governments of major economies have a stake in financial secrecy, along with the stakes of financial and business services and offshore jurisdictions, explains why reducing financial secrecy is fraught with difficulty. Financial secrecy is not a natural state of the world, but neither is transparency. Both must be built, developed, and maintained. While secrecy can be defined as a lack of transparency, it still represents an actively constructed environment and mostly also a profitable business, with private and public interests built into it (Pistor 2019). This realisation helps us understand why improvement in financial transparency is likely to be slow, difficult, selective, and geographically uneven. An example of that is the slow progress of country-by-country reporting, contested by corporations as well as financial and business services companies, with the Big Four consulting firms in the lead (Wójcik 2015).

As the preceding discussion makes clear, financial secrecy is a multidimensional concept. While some research defines it narrowly with a focus on tax, we approach it broadly, by using the Financial Secrecy Index. This means distinguishing among four areas of financial secrecy: (i) ownership registration, focusing on how much information governments collect on the physical owners of assets, (ii) legal entity transparency, focusing on the public availability of information on legal entities’ activity and ownership structure, (iii) integrity of tax and

financial regulation, focusing on the existence of loopholes, exemptions, and inconsistencies that agents can exploit to hide their identity, and (iv) international standards and cooperation, focusing on the openness of jurisdictions to other governments. Further details of this classification are explained in the methods and data section. Before we do so, however, we need to turn the above conceptually- and theoretically-informed discussion of financial secrecy into expectations and hypotheses regarding its change.

2.2. Change in financial secrecy and its variation

The preceding section makes it clear that financial secrecy is deeply embedded in the global economy and politics and is difficult to change. It also suggests that any significant improvement in transparency would require multilateral international action. According to Christensen and Hearson (2019), the 2010s, the period under our investigation, provided conditions for positive change, which can be explained as a confluence of four groups of factors.

First, the global financial crisis undermined confidence in free markets, thus paving the way for the return of a more interventionist state with higher standards of financial transparency (Palan 2006). Second, the crisis also accelerated the rise of emerging economies, with China and India in the lead. Consequently, the expanding OECD, in collaboration with the G20, was able to initiate new projects to combat tax evasion and avoidance as well as financial secrecy that facilitates them. Third, the prevalence of populism and the introduction of austerity policies in many countries intensified pressures to deal with tax avoidance and evasion (Morgan 2017). Fourth, digitalisation (with the winner-takes-all platform economy logic) increased opportunities for ever-growing IT firms (mainly of US origin) to shift profits. This in turn created a backlash in Europe (with its many OECD and G20 members) and a push towards addressing profit shifting internationally. At the same time, digitalisation makes transparency cheaper and offers technical tools to track capital flows. In sum, the 2010s created an environment for countries to pull and infringe sovereignty in new ways, create new configurations with the new rising powers, and harness technology, which could otherwise lead to runaway tax avoidance and evasion.

Optimism about conditions for improving financial transparency is supported by Ahrens et al. (2022), who create an investment network transparency score for OECD countries based on information exchange standards of the main countries of origin and the destinations of financial flows of a country. Their results show improvement in these transparency scores but also demonstrate that countries with higher investment network transparency raised taxes on dividends in the 2010s. Such optimism is supported by Casi, Spengel, and Stage (2020), who show that after the introduction of the first global multilateral standard for automatic exchange of information, the so-called Common Reporting Standard (which started in 2014), deposits in tax havens quickly fell by 11.5% compared to non-tax havens and remained at a lower level afterwards. The success of the Common Reporting Standard can be contrasted with the ineffectiveness of bilateral treaties for exchange of information upon request introduced after the global financial crisis (Johannessen and Zucman 2014).

Menkhoff and Miethe (2019), however, offer more cautious results. They show that the effect of the automatic exchange of information weakens over time, suggesting that tax evaders adjust to new regulation. As they conclude: “Existing evidence shows the success of respective agreements, but, at the same time, tax evaders seem to find new paths, such as diverting deposits into non-complying tax havens, looking for regulatory loopholes in non-havens, and – what we seem to uncover here – putting their funds into new disguises that circumvent regulatory requirements.” (Menkhoff and Miethe 2019, p. 66). Beer, Coelho, and Leduc (2019) offer insights on how such circumvention of new regulation may happen. “In the case of the CRS, participating jurisdictions may choose to allow financial institutions to apply a threshold such that

preexisting entity accounts below US\$250,000 are not subject to review. Hence, tax evaders using sham entities in a jurisdiction availing themselves of this option may remain undetected by fragmenting their holdings into multiple entity accounts before the entry into force of the enabling domestic legislation. Another technique to conceal beneficial ownership (which rests on a 25 per cent threshold, the international standard set by the Financial Action Task Force), would be to dilute interest in a given passive entity between related individuals (e.g., between spouses, children, grandchildren, etc.). For new individual accounts, due diligence procedures contemplate that financial institutions can rely on customers' self-certification (and the financial institution's confirmation of its reasonableness)" (Beer, Coelho, and Leduc 2019, p. 11).

At a more general level, one can argue that the conditions described by Christensen and Hearson (2019) as favourable to financial transparency are not as favourable as they make them seem at first glance. First, the rise of emerging markets may create more large customers for financial secrecy. As shown by Vlcek (2014) and Haberly and Wójcik (2015), the geography of offshore finance, underpinned by financial secrecy, is the product of network building led by different states in different regions. The post-communist states of the former Soviet Union and those in Eastern Europe became major origins of money flowing to offshore jurisdictions in the 1990s. Chinese money has followed since the 2000 s, with almost all large Chinese state-owned enterprises collaborating with countries and jurisdictions specialising in financial secrecy, with the British Virgin Islands and the Cayman Islands in the lead (Wójcik and Camilleri 2015). Put differently, the rise of emerging markets may represent extended political fragmentation in global governance, making multilateral reform of financial transparency difficult.

Second, populism is typically accompanied by nationalism, making countries less willing to embrace financial transparency policies for the common international good. Third, digitalisation presents opportunities but also threats to financial transparency. As Desai, Foley, and Hines (2006) show, the use of tax havens by US multinationals is particularly high for large, R&D-intensive firms with a large foreign presence. Most technologically advanced and globalised firms have a high share of intangibles in their assets and a large share of foreign income, which they want to protect from high home-country taxes. This is confirmed by Sigler et al. (2020), showing the largest prevalence of tax havens and offshore financial centres in knowledge-intensive sectors, such as pharma, biotech, and semiconductors. As these companies and industries grow, so does the demand for financial secrecy they generate. Whether this mobilises states to act is an open question, interrelated with the issue of rising emerging markets. The Chinese and US state, for example, may tolerate their companies using financial secrecy in their bid to expand and capture foreign markets, rather than combating this secrecy at all costs.

On the other side of the country size spectrum, the strategy of choice among smaller countries and jurisdictions may consist of 'mock compliance', whereby they tick the boxes by complying with externally imposed requirements but avoid engaging in meaningful, substantive reform (Woodward 2016). Mock compliance is consistent with Rixen (2008), who uses the asymmetric prisoner's dilemma to explain the inability of the OECD's efforts to tame tax havens by the path dependency of the OECD initiatives. He argues that the discrete nature of systemic change at critical junctures together with the high opportunity cost of choosing a new institutional path cause mock compliance to be the dominant strategy for tax havens. This is also in line with Dehejia and Genschel (1999), who use rational choice institutionalism to argue that the relatively small size of many secrecy jurisdictions incentivises them to dodge cooperation. Mock compliance is also supported by empirical evidence. For example, when in 2009 the OECD demanded that countries sign at least twelve tax information exchange agreements to avoid being blacklisted, many small island 'tax havens' started signing such exchange agreements among themselves (Shaxson and Christensen

2011). As a result, some jurisdictions may be expected to have increased their degree of secrecy (at least relatively to other jurisdictions, as discussed in the methodology section below) or have remained stagnant.

With new know-your-customer and other regulations, as well as the pressure of the government and public opinion (often ignited by offshore leaks), costs of financial secrecy could have increased significantly, but so might have the benefits, with the amount of money seeking secrecy around the world increasing with continued digitalisation and financial globalisation. Countries and jurisdictions with high secrecy might want to avoid blacklists (Rusina 2020) or be forced to create basic registers of ownership, but they might avoid real transparency progress, such as making everyone compliant with the registers. These factors could lead to convergence in transparency, whereby the worst offenders among countries and jurisdictions find it relatively easy and beneficial to catch up with the average, while others have few incentives to outperform the average.

Countries and jurisdictions may exhibit different behaviour and development in terms of financial secrecy not only due to size, but also due to their position and functions in the global network of offshore finance. García-Bernardo et al. (2017), for example, distinguish between sinks, which attract and retain foreign capital, and conduits, which channel it from origin to sinks without taxation. Sinks (in the order of centrality in the global corporate network) are the British Virgin Islands, Taiwan, Jersey, Bermuda, Cayman Islands, Samoa, Lichtenstein, Curacao, Marshall Islands, Malta, Mauritius, Luxembourg, Nauru, Cyprus, Seychelles, Bahamas, Belize, Gibraltar, Anguilla, Liberia, St. Vincent and Grenadines, Guyana, Hong Kong, and Monaco. Leading conduits are the Netherlands, UK, Switzerland, Singapore, and Ireland. It is plausible to expect that financial secrecy is more vital to the business of sinks, while conduits can fall back on their intermediation capacity to earn revenues from more transparent financial flows. As Martinus et al. (2019; 2021), following Haberly and Wójcik (2015), demonstrate, tax havens and offshore jurisdictions are quite heterogeneous, with different histories and regional and sectoral foci, and there are no reasons why this diversity and heterogeneity should not affect their evolution in terms of financial secrecy.

On the basis of this literature review, we can outline four hypotheses concerning the development of financial secrecy in the 2010s. First, we expect some improvement in financial transparency due to increased international standards and cooperation, which intensified following both the global financial crisis and the release of offshore leaks. This is partly because countries and jurisdictions with high secrecy are easier to monitor once they subscribe to international standards and cooperation instead of implementing changes on an exclusively domestic basis. Among other factors, this might be the outcome of formal international agreements (such as the Common Reporting Standard for automatic information exchange) as well as formal (e.g. EU tax haven black lists) and informal (e.g. proclamations made by individual countries or by the G7 or G20) pressure on countries and jurisdictions with high secrecy to increase financial transparency and move towards a level playing field (see e.g. Christensen and Hearson, 2019; Casi, Spengel, and Stage, 2020).

Second, we expect that most improvements in financial transparency would have focused on international standards and cooperation rather than major improvements in the transparency of ownership, information on legal entities or the quality of tax and financial regulation. This is because the lack of cooperation and not signing up to international standards is easy to notice, while substantive changes in domestic laws, regulations, and practices require more insight and research. As explained above, countries and jurisdictions may engage in mock compliance (see e.g. Woodward, 2016; Rusina, 2020). Whether countries and jurisdictions 'fake' improvement in financial transparency or genuinely commit to it, cooperation and participation in international agreements is the first action we would expect them to take. In other words, we expect change to be shallow rather than deep.

Third, if financial secrecy decreased in the case of many of the most

secretive countries and jurisdictions, the less secretive ones were not required to change much to comply with international agreements. They were also under less pressure from other countries to increase their own financial transparency. In addition, some of these less secretive countries and jurisdictions could have responded to the explicit definition of the level playing field by moving closer to it, potentially even by decreasing, financial transparency (see e.g. Menkhoff and Miethe, 2019). As a result, less secretive and more secretive countries and jurisdictions might have become more similar, with their financial transparency converging.

Fourth, given the multiplicity and diversity of countries and jurisdictions around the world, with different origins, geographies, and development paths, we expect a significant degree of diversity in terms of financial secrecy change (see e.g. Haberly and Wójcik, 2015; Martinus et al., 2019, 2021). While some jurisdictions may follow mock compliance, others may improve in more genuine ways, and yet others may resist any change whatsoever. Given that ours is the first paper to map recent change in broadly defined financial secrecy in a comprehensive manner, it is premature for us to speculate how we expect specific individual or groups of countries or jurisdictions to have changed. Instead, we embark on the task of creating a typology of financial secrecy behaviours and support it with data and examples based on the Financial Secrecy Index.

3. Methodology and data

We use the data underlying the Financial Secrecy Index as the best available detailed information on the levels of financial secrecy worldwide. Specifically, we use data on 71 countries and jurisdictions that were part of all five editions of the Financial Secrecy Index published by the Tax Justice Network between 2011 and 2020. The sample consists of 58 independent states, 7 British Overseas Territories (Anguilla, Bermuda, British Virgin Islands, Cayman Islands, Gibraltar, Montserrat, Turks and Caicos Islands), 3 British Crown Dependencies (Guernsey, Jersey and the Isle of Man), the US territory of US Virgin Islands, as well as Hong Kong and Macao as the Special Administrative Regions of China.

The coverage of the index has increased significantly over time, but to chart change we are restricted by its scope in 2011. The 71 countries and jurisdictions that were examined by the 2011 edition were selected by the index authors with a purpose and focus. The authors aimed to include the largest economies alongside the most economically significant offshore jurisdictions. Together, in 2020, the 71 countries and jurisdictions represented just under 61 per cent of the global GDP (based on data from the World Bank), while hosting 87 per cent of all cross-border portfolio investment assets (based on data from the International Monetary Fund's Coordinated Portfolio Investment Survey), and 88 per cent of all cross-border bank deposits (based on data from the Bank for International Settlements' Locational Banking Statistics). This means that the coverage of our sample, while far from complete, can be considered comprehensive and allowing a robust analysis of global change in financial secrecy.

For countries that comprise multiple jurisdictions (such as individual states in the United States), the methodology of the Financial Secrecy Index follows the so-called "weakest-link principle". This approach focuses on assessing the most secretive jurisdiction within a country to construct the secrecy score of the country. The rationale behind this approach is that an agent seeking financial secrecy will tend to choose the most secretive scheme available, making such scheme the relevant indicator of financial secrecy in the whole country (Tax Justice Network, 2020).

The editions of the Financial Secrecy Index that we use in this paper were published in years 2011, 2013, 2015, 2018 and 2020, with the latest two published at the beginning of 2018 and 2020, rather than at the end of 2017 and 2019, while the cut-off date for the assessment remained constant (at the end of September of the odd-numbered year)

throughout the period.

The index quantifies the contribution of each secrecy jurisdiction to the global problem of financial secrecy by combining information on the level of financial secrecy (in what are called secrecy scores) with data on the scale of the provision of cross-border financial services (in what are called global scale weights). The index has been endorsed by academics (Clark, Lai, and Wójcik, 2015, Collin, 2016) and its methodology has been audited by the European Commission (Becker et al., 2016; Tax Justice Network, 2018). It has been used by academic research in economic geography (Cobham et al., 2015, Aalbers, 2018), international political economy (Christensen and Hearson, 2019; Janský et al., 2022a), as well as economics and accounting (Janský et al., 2022b; Murphy and Albu, 2018). To date, however, no research has used it to question how the map of financial secrecy changed over a long period of time.

We use the secrecy scores of the Financial Secrecy Index, which indicate the qualitative extent of financial secrecy provided by each secrecy jurisdiction in one of many areas of financial secrecy. The secrecy scores are calculated as arithmetic averages of 20 indicators which can be grouped into four areas of financial secrecy: (i) ownership registration, focusing on how much information governments collect on the physical owners of assets, (ii) legal entity transparency, focusing on the public availability of information on legal entities' activity and ownership structure, (iii) integrity of tax and financial regulation, focusing on the existence of loopholes, exemptions, and inconsistencies that can be exploited by agents to hide their identity, and (iv) international standards and cooperation, focusing on the openness of jurisdictions to other governments. The 20 indicators within these four areas are compiled from a total of 124 individual data points (in the 2020 edition), each with detailed descriptions and often additional explanatory notes, providing unprecedented detail to the systematic study of financial secrecy around the world.

For our empirical analysis, we use the harmonised relative secrecy scores, as introduced and described in detail by Janský et al. (2022b). We express secrecy scores in relative terms as ratios to the sample mean in individual years to enable the comparison of secrecy jurisdictions relative to each other over time. For example, for a relative secrecy score of a jurisdiction to decrease, its absolute secrecy score needs to decrease more than that of other jurisdictions on average, i.e. more than the mean of all secrecy jurisdictions for that year. More formally, for each jurisdiction i in year t , we calculate the relative secrecy scores as:

$$\text{Relative secrecy scores}_{it} = \frac{\text{Secrecy scores}_{it}}{\sum_{i=1}^N \text{Secrecy scores}_{it} / N}$$

The use of the relative secrecy scores, in addition to enabling a comparison of secrecy scores across jurisdictions and time, helps us address any changes over time in the methodology used by the Financial Secrecy Index to calculate the underlying secrecy scores. As documented by Janský et al. (2022b), all of these methodological changes resulted arguably in stricter definitions of secrecy, as the standards of what financial transparency means have increased over time: policies that are considered standard practice in 2020 may have seemed utopian to some in 2011. While the standards of transparency may be perceived as improving continuously over time, the Financial Secrecy Index methodology naturally incorporates these developments in a discrete manner with each consecutive edition by adjusting indicator definitions or by adding newly relevant indicators and dropping old obsolete ones.

With the Financial Secrecy Index methodology becoming stricter over time, we can consider the observed secrecy scores as artificially inflated by changes in methodology over time. Therefore, anyone using absolute, unadjusted secrecy scores needs to keep the following issues in mind. First, if the secrecy scores stay constant, that implies that actual financial transparency has improved. Second, if the secrecy scores decrease, they represent estimates of the lower bound of actual improvements in financial transparency, with actual improvement being

likely larger than the decrease in secrecy score suggests. Third, if the secrecy scores increase, we cannot be sure whether the actual level of financial secrecy has increased or whether the increase in secrecy scores is determined by methodological changes. Our use of the relative versions of secrecy scores is aimed at minimising the impact of the issues posed by these developments in methodology over time, enabling, for the first time, a systematic analysis of the development of financial secrecy over time.

4. Results

In the first part of the analysis, we present three findings: (i) the trend of increasing transparency is primarily driven by one of the four categories of financial secrecy: international standards and cooperation; (ii) secrecy jurisdictions converged in the overall level of offered secrecy; and (iii) the development across secrecy jurisdictions has been very heterogeneous. Indeed, the substantial differences in the levels and changes of financial transparency lead us to propose, in the second part, a geographical typology of different paths of financial secrecy developments and behaviours.

4.1. Changes in financial secrecy and convergence of secrecy jurisdictions

We find that the scores in the category of international standards and cooperation decreased much more than in the other three categories of financial secrecy. Fig. 1 shows the average relative secrecy scores of all 71 countries and jurisdictions included in the last five editions of the Financial Secrecy Index between 2011 and 2020. By definition, the average relative scores have the same unchanged value over time, whereas the changes in the weight of each of the four categories reflect how important the various types of financial secrecy are in the context of financial secrecy as a whole. The weight of international standards and cooperation is the only category that decreased between 2011 and 2020, from 0.23 to 0.07, while the other three categories increased. The detailed indicators within the category of international standards and

cooperation that have contributed most to the decrease relate to the automatic exchange of information, bilateral treaties, and international legal cooperation. This development is at least in part attributable to the OECD's efforts in these areas. For example, following the 2014 adoption of the automatic exchange of information standard, more than 4,500 bilateral exchanges have been implemented by October 2021 (OECD, 2021).

In addition to the average relative secrecy scores, we include the average absolute secrecy scores in the second panel of Fig. 1, which confirms the substantial decrease in the international standards and cooperation category by over 10 percentage points (or 70%) between 2011 and 2020. Moreover, the overall average secrecy scores, which decreased from approximately 75 in 2011 to approximately 65 in 2020, indicate that financial transparency improved globally. This decrease can be considered a lower bound estimate of the actual progress of financial transparency, since the methodology of the secrecy scores has become stricter over time, as we explained in Section 3. These changes to the methodology, which were most significant between the 2015 and 2018 editions, are at least partly responsible for the increase in average secrecy scores between those two years. A consequence of these changes to methodology is that we cannot quantify how much exactly secrecy decreased over time. However, there are important lessons to be drawn from the relative secrecy scores as well as the development of individual categories and across jurisdictions, which we focus on in this paper.

On average, countries and jurisdictions in our sample converged in terms of financial secrecy between 2011 and 2020. Many of the most secretive countries and jurisdictions have become less secretive while the opposite is true of some formerly less secretive ones. This convergence is driven mainly by the most secretive countries and jurisdictions becoming more internationally cooperative, but the trend is observable across all categories. Progress towards financial transparency has been heterogeneous across jurisdictions, but they have, in general, become more alike. As shown in Fig. 2, jurisdictions with higher relative secrecy scores in 2011 are more likely to have seen a larger decrease in relative secrecy scores between 2011 and 2020. The Netherlands, discussed for

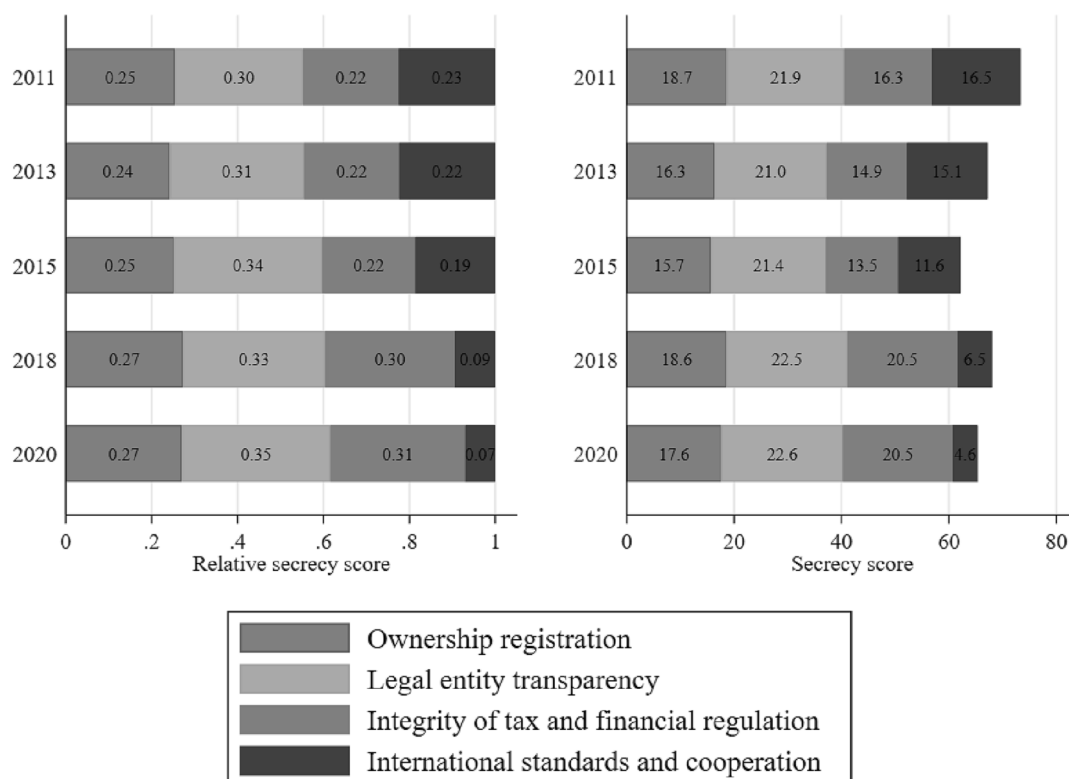


Fig. 1. Average relative secrecy scores in four categories over time Source: Authors based on harmonised secrecy scores from the Financial Secrecy Index.

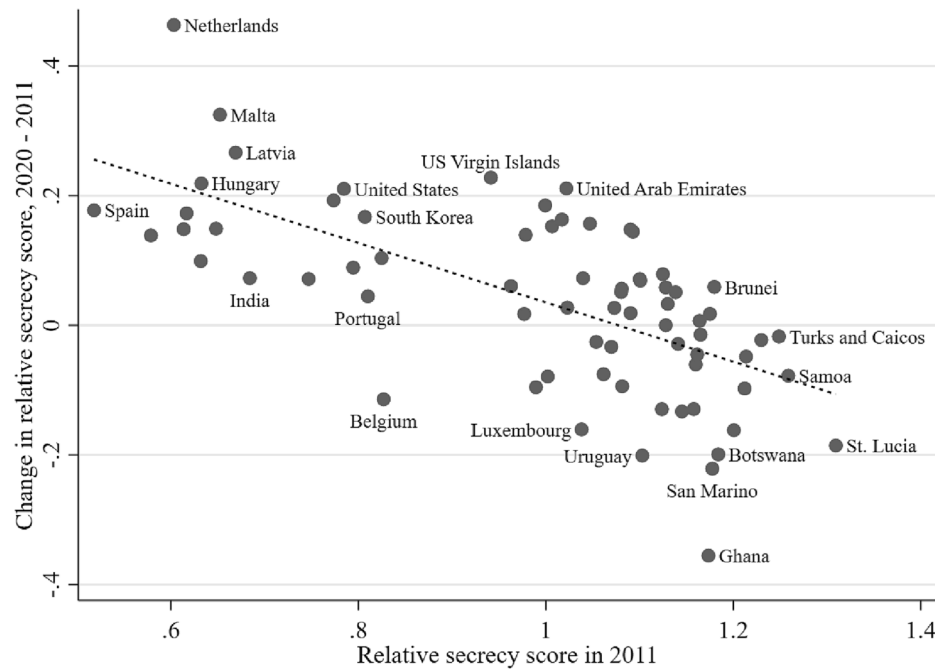


Fig. 2. Convergence in secrecy scores between 2011 and 2020.

example by Garcia-Bernardo et al. (2017) or Weyzig (2013), is an extreme case: its relative secrecy scores increased from one of the lowest levels of around 0.6 in 2011 by more than 0.4 to the above-the-mean value of 1.07 in 2020 (although as we explain in Section 3, it is difficult to assess how much of this increase was due to a genuine increase in secrecy and how much was due to the methodology of the secrecy scores becoming stricter over time). Another case in point is Ghana (e.g. Vlcek 2011) which had a very high relative secrecy score in 2011 of almost 1.2,

which declined by almost 0.4 to some of the lowest levels in 2020.

In addition to observing the convergence in financial secrecy in Fig. 2, we carry out a more formal statistical analysis which confirms our observations of convergence. We use a regression analysis similar to estimating the beta convergence of economic growth rates, with the change in financial secrecy between 2011 and 2020 as the dependent variable and financial secrecy in 2011 as the main independent variable. Table 1 shows that the coefficient of interest is negative at standard

Table 1

Regression results showing convergence in financial secrecy between 2011 and 2020.

Dependent variable: Change in relative secrecy scores (2020–2011)	(1)	(2)	(3)	(4)	(5)	(6)
Relative secrecy score in 2011	–0.458*** (0.0632)	–0.462*** (0.0638)	–0.475*** (0.0669)	–0.497*** (0.0728)	–0.625*** (0.0870)	–0.643*** (0.0964)
Change in average of World Governance Indicators		0.908 (1.288)	1.362 (1.495)	1.311 (1.534)	1.868 (1.359)	1.961 (1.554)
Change in GDP per capita			–0.0824 (0.0847)	–0.0714 (0.0891)		–0.00152 (0.102)
Legal origin: Scandinavian (=base)						
Legal origin: English				0.114 (0.118)	0.0851 (0.110)	0.0685 (0.116)
Legal origin: French				0.0810 (0.118)	0.0996 (0.108)	0.0956 (0.115)
Legal origin: German				0.109 (0.121)	0.119 (0.111)	0.119 (0.118)
Region: Africa (=base)						
Region: Asia					0.00750 (0.0561)	0.00336 (0.0591)
Region: Caribbean					0.116** (0.0527)	0.114* (0.0614)
Region: Europe					–0.0339 (0.0598)	–0.0558 (0.0668)
Region: Latin America					–0.00185 (0.0718)	–0.0105 (0.0764)
Region: Northern America					0.0107 (0.0926)	0.00862 (0.0980)
Region: Oceania					0.0897 (0.0700)	0.106 (0.0808)
Constant	0.493*** (0.0643)	0.492*** (0.0645)	0.491*** (0.0672)	0.414*** (0.119)	0.532*** (0.139)	0.564*** (0.151)
Observations	71	71	63	63	71	63
R-squared	0.432	0.436	0.462	0.480	0.557	0.565

Source: Authors. Notes: Standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

levels of statistical significance, which confirms our convergence hypothesis: jurisdictions with higher secrecy in 2011 are more likely to record a bigger decrease during the period. While we include this regression to corroborate our findings on convergence, and do not want to imply any causality, we include various control variables in additional five specifications and report the results in columns (2) to (6) in Table 1. Including various combinations of control variables (change in the average of the World Governance Indicators, change in GDP per capita, and binary variables for legal origin and geographical region) qualitatively confirms the finding on convergence. In fact, the coefficient capturing the relationship between the starting level of and change in secrecy becomes more pronounced the more control variables are included in the regression.

Despite financial secrecy converging, there are considerable differences across secrecy jurisdictions, including varying paths across categories, in line with studies stressing the heterogeneity of financial transparency (e.g. Haberly and Wójcik, 2015; Martinus et al., 2021). Furthermore, as Table 1 shows, there are no strong predictors of change in secrecy between 2020 and 2011 other than the initial level of secrecy. The only other significant coefficient in our regression is a regional dummy for the Caribbean, indicating an increase, and thus deterioration, in secrecy in that region. It is important to note variables that lack significance in relation to change in financial secrecy. The latter seems statistically unrelated to change in GDP per capita, the legal family of origin, and even the change in overall governance quality (influenced by such factors as the rule of law and the level of corruption).

The results of the regression analysis indicate that financial transparency is not simply a function or by-product of general economic or political development, with transparency improving when a country or jurisdiction gets richer or better governed. Financial secrecy should rather be understood as a specific position and role that countries and jurisdictions evolve into and play in the global economy. The importance of the international standards and cooperation category in explaining changes in secrecy, combined with the finding on convergence, highlights the need for a geographical typology of change in financial secrecy, a task which we undertake in the next section. Such typology can help us shed light on the factors that have affected change in financial secrecy in the tumultuous 2010s.

4.2. Geographical typology of change in financial secrecy

We develop a geographical typology of change in financial secrecy to

better understand the trajectory of secrecy jurisdictions and how the map of secrecy jurisdictions changed between 2011 and 2020. The changes in financial secrecy have been heterogeneous across jurisdictions and across the secrecy categories, with the international standards and cooperation category being of particular importance (see Fig. 1). We therefore systematically divide secrecy jurisdictions into groups according to how they changed in this category in relation to their change in the other three categories, which focus on substantive domestic change. While not being an explicitly causal type of analysis, the typology helps us examine the patterns of shallow and uneven change uncovered in Section 4.1 in more detail.

The typology classifies jurisdictions into five (mutually exclusive and distinctive) groups: relative transparency, cooperation and domestic improvement, domestic improvement with little cooperation, cooperation with little domestic improvement, and little cooperation with little domestic improvement. Each of the five groups is logically defined based on the changes in secrecy between 2011 and 2020 and, by definition, every secrecy jurisdiction is included in one of the five groups, as presented in Table 2. As such, our classification is also exhaustive, covering all logical combinations of change.

Our labels for the five categories are, by necessity, simple. To avoid excessively long and clumsy labels, we attach the adjective ‘relative’ to one category only, but as our methodology and interpretation of results make clear, all five categories are based on relative, not absolute, assessments of financial secrecy. If, after all these qualifications, they still seem provocative, this is an intentional contribution to the critique of financial secrecy. Anyone reading these labels should also be reminded, as explained in section 3, that they capture relative change in secrecy scores, not the values of the Financial Secrecy Index. Many relatively transparent countries, like the US, may still be secretive enough to cause damage to financial transparency globally, which is one of the reasons they are included in the Financial Secrecy Index in the first place. They may also be powerful enough to ‘export’ financial secrecy overseas, through their international financial centres, and with the acquiescence of their governments. While our paper focuses analytically on the secrecy of countries and jurisdictions rather than their relationships and networks, we keep such issues in mind while interpreting the results.

First, the relatively transparent group includes jurisdictions that were transparent (had low relative secrecy scores) in both 2011 and 2020. The 21 relatively transparent are all independent states and almost all developed economies, including many European countries, as well as Japan and the United States. The United States, along with the

Table 2
Typology of paths in the development of financial secrecy over time.

Group	Highly secretive in either 2020 or 2011	Change in secrecy, cat. 1–3 (Ownership registration, Legal entity transparency, Integrity of tax and financial regulation)	Change in secrecy, cat. 4 (International standards and cooperation)	List of jurisdictions
Relative transparency	No	Any	Any	Austria, Belgium, Canada, Cyprus, Denmark, France, Germany, Hungary, India, Ireland, Israel, Italy, Japan, Latvia, Luxembourg, Malta, Portugal, South Korea, Spain, United Kingdom, United States
Cooperation and domestic improvement	Yes	–	–	Bahrain, Ghana, Lebanon, Macao, San Marino, Seychelles, St. Lucia, St. Vincent and the Grenadines, Uruguay
Domestic improvement with little cooperation	Yes	–	+	Botswana, Dominica, Liberia, Philippines
Cooperation with little domestic improvement	Yes	+	–	Andorra, Anguilla, Antigua and Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Cook Islands, Costa Rica, Curacao, Gibraltar, Grenada, Guernsey, Hong Kong, Isle of Man, Jersey, Liechtenstein, Malaysia, Marshall Islands, Mauritius, Monaco, Panama, Samoa, Singapore, St. Kitts and Nevis, Switzerland, Turks and Caicos Islands, United Arab Emirates, Vanuatu
Little cooperation with little domestic improvement	Yes	+	+	Aruba, Belize, Brunei, Cayman Islands, Guatemala, Montserrat, Netherlands, US Virgin Islands

United Kingdom, are among the most important developed countries in global finance and the world of financial secrecy (Cobham, Janský, and Meinzer 2015). This group also include two of the most important tax havens for multinational corporations: Ireland and Luxembourg. The country with the lowest GDP per capita in the group is India. While it seems to be the odd one out in the category, we should remember that other large emerging economies, such as China, Brazil and Indonesia, are not included in the sample.

By calling this group relatively transparent, we do not claim that these are the ‘do-gooders’ in global financial transparency. As mentioned above, they may still cause damage with their sheer size and the extra-territorial outreach of their governments and financial centres. The observation, however, holds that by relative standards, in relation to the time-specific means of the sample, they are relatively transparent. As Fig. 3 shows, their scores remained low (always below 1) and stable during the period of 2011–2020, with slight increases only in the ownership registration and the integrity of tax and financial regulation categories.

The remaining four groups consist of countries and jurisdictions that were highly secretive in either 2010 or 2011 but differ in how their secrecy changed over time. The category of cooperation and domestic improvement covers countries and jurisdictions for which relative secrecy decreased in terms of international standards and cooperation as well as along the other three dimensions of financial secrecy. The nine countries and jurisdictions concerned are mostly small economies scattered across the globe: from Bahrain, Lebanon, and Macao in Asia; Ghana, and Seychelles in Africa; through San Marino in Europe; St. Lucia and St. Vincent and the Grenadines in the Caribbean; to Uruguay in South America. Some of them, such as Uruguay in the 1990 s, tried to

become important offshore jurisdictions in the past but have since largely abandoned that strategy (Ioannou and Wójcik, 2022). Others, like Ghana, seem to have implemented better transparency standards only in the recent decade. As Fig. 3 shows, most of their improvement was recorded from 2015 onwards, indicating a genuine commitment to follow the participation in the Common Reporting Standard through substantive reforms in domestic laws and regulations. As in the group of relative transparency, here again we find only independent states, except for Macao.

The third group, domestic improvement with little collaboration, includes countries and jurisdictions that recorded declines in the first three categories of financial secrecy combined with increases in the international standards and cooperation category. The four constituents of this group are diverse developing countries from three continents: Botswana and Liberia in Africa, the Philippines in Asia, and Dominica in the Caribbean. While these countries have seen similar decreases in the first three categories of secrecy as the group discussed directly above, they are so far lagging in international collaboration. In particular, they have not yet joined the Common Reporting Standard scheme to automatically exchange information with other countries (except for Dominica, which is, however, only exchanging information with a relatively small number of partner countries), making their relative secrecy scores in the fourth category in 2020 high. The existence of this group, however small, highlights that international cooperation and standards are not a pre-requisite for domestic change.

The fourth group, cooperation with little domestic improvement, is by far the largest group with 29 members. These countries and jurisdictions have reduced their financial secrecy in the international standards and cooperation category, while increasing the other three

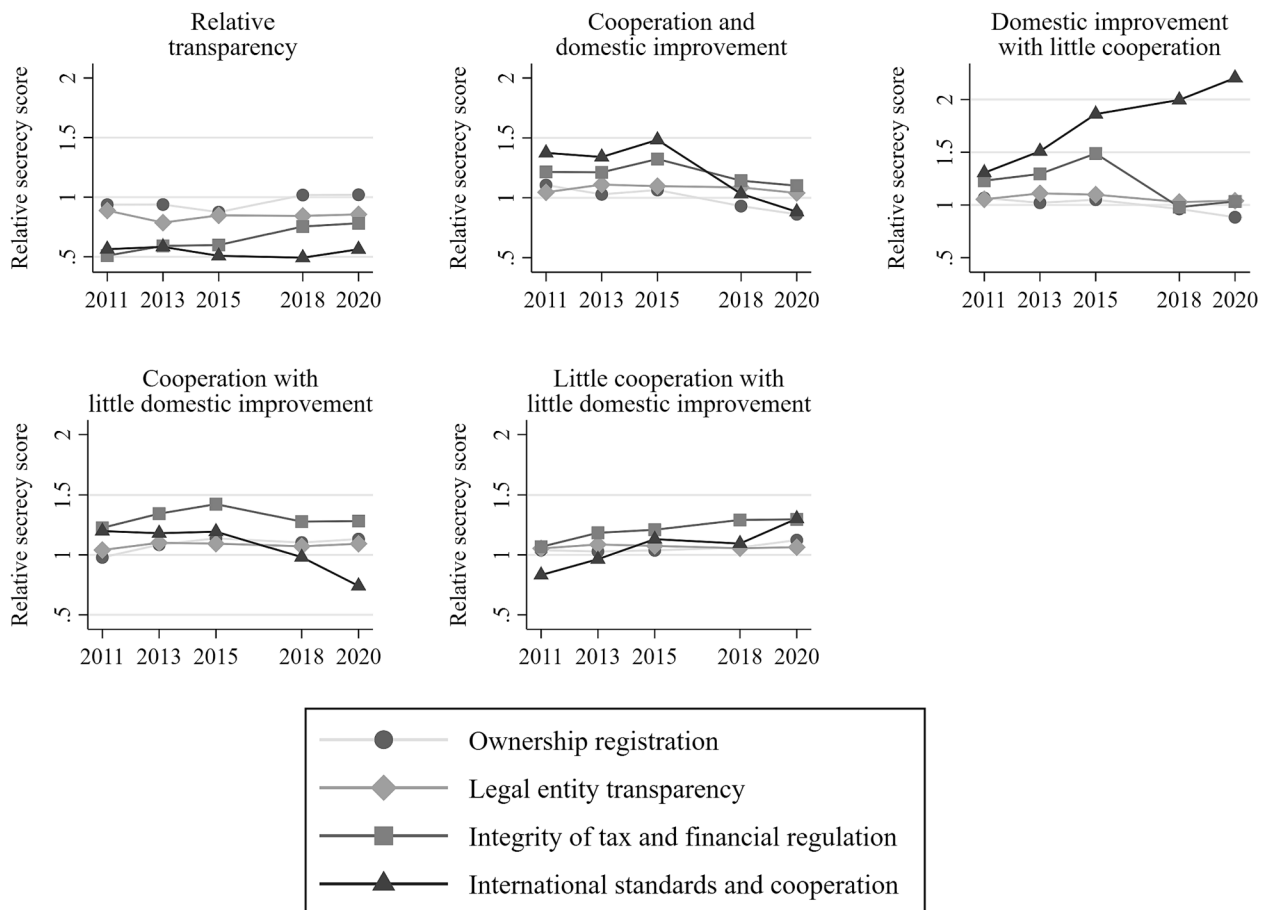


Fig. 3. Development of financial secrecy categories by geographical groups. Note: The plots show a simple average relative score for all countries and jurisdictions in a given group.

categories of financial secrecy, as Fig. 3 shows in more detail. This group includes most of the economically important countries and jurisdictions with high secrecy levels, such as the British Virgin Islands, Hong Kong, Singapore, and Switzerland. They have been in the spotlight after the global financial crisis and have faced strong pressure to improve their financial transparency. Significant change has been achieved in international standards and cooperation, with most constituents of the group having signed up to the Common Reporting Standard for automatic information exchange. Recent research suggests that these increases in transparency indeed had a real impact on at least some cross-border economic activity: bank deposits in such jurisdictions, for example, decreased after an information exchange treaty was implemented (Menkhoff and Miethe, 2019; Ahrens and Bothner, 2020; Casi, Spengel, and Stage, 2020). However, as discussed in the literature review, others have highlighted that there remain ways to circumvent this information exchange (Beer, Coelho, and Leduc, 2019). We corroborate these sceptical claims by empirically identifying countries and jurisdictions that seem to have chosen the strategy of mock compliance pretending that they improved their transparency while continuing to offer other ways to hide financial information behind the veil of offshore secrecy. It is also possible that these countries and jurisdictions simply have not had enough time yet to transpose the implications of international standards into domestic laws and regulations. The evidence on the second group presented above, however, indicates that the time that has lapsed since the introduction of the Common Reporting Standard is sufficient for significant domestic improvement to be expected.

As an example of this pattern, Emmenegger (2017) explains how the Swiss resistance to international cooperation in tax matters was overcome, and Straumann (2018) argues that the external pressure on Swiss financial hubs was key in eliminating some of their (in)famous banking secrecy laws that prevented other countries to identify owners of bank accounts in Swiss banks. However, Switzerland remains one of the most secretive countries in the world in the first three categories of secrecy, offering ample opportunities to create obscure corporate structures. Another example is Panama, which has been previously studied by economic geographers (Sigler, 2013) and attracts particular attention given the Panama Papers revelations. Panama also improved in international standards and cooperation but did not improve in the other types of financial secrecy it still offers.

The group includes most countries and jurisdictions that have become increasingly important to Asian cross-border financial activity. Singapore, for instance, is now the largest exporter of financial services in Asia, slightly ahead of another constituent of the group, Hong Kong (see Lai (2018) for a discussion on Singapore's role).

Fifth and finally, the group of little cooperation with little domestic improvement consists of countries and jurisdictions that increased their financial secrecy in all categories of financial secrecy. The eight resisters include a geographically diverse group of seven small economies: Aruba, Cayman Islands, Montserrat, and US Virgin Islands in the Caribbean; Belize and Guatemala in Central America; Brunei in Asia; and the Netherlands in Europe – the only large economy in this group. As Fig. 3 shows, among the four categories of financial secrecy in this group, the international standards and cooperation category increased most substantially, followed by the integrity of tax and financial regulation. The Cayman Islands and the Netherlands are among the most important offshore jurisdictions, which is highlighted by their presence in the top ten largest contributors to the global problem of financial secrecy in the Financial Secrecy Index 2020, making their apparent resistance to transparency reforms a particularly important development. Both, but particularly the Cayman Islands, have seen a corresponding surge in cross-border economic activity over the 2011–2020 period: inward portfolio investment in the Cayman Islands increased by USD 2.58 trillion, which is the second-highest increase in the world in absolute terms, only behind the United States. Both are also among the most important tax havens used by multinational corporations for profit shifting (García-Bernardo and Janský, 2021). When countries and jurisdictions such

as the Cayman Islands (Fichtner, 2016) or the Netherlands (Engelen et al., 2010; Fernandez & Wigger, 2016) resist international pressure and an overall trend towards improving transparency, then the global improvements in financial transparency must indeed be described as shallow and uneven.

5. Conclusions and implications

In this paper, we set out to provide the first-ever comprehensive mapping of how financial secrecy has changed across countries and jurisdictions in the 2010s. While other studies before us focused on a narrow aspect of financial transparency or buried details of individual countries in statistical analysis, our coverage of financial secrecy was broad and attention to countries and jurisdictions and their geographies direct and explicit.

Largely confirming the results of prior studies (e.g. Christensen and Hearson, 2019; Casi, Spengel, and Stage, 2020), our findings document significant progress towards financial transparency in terms of international standards and cooperation. Between 2011 and 2020, dozens of countries and jurisdictions have started cooperating much more intensively with others on policies such as automatic exchange of information. At the same time, however, we show that change in other areas of secrecy, such as transparency of ownership, legal entities, and the integrity of tax and financial regulations, international progress has been much more limited, sometimes non-existent. This in turn questions the very benefits of international cooperation and standards. For example, a country or jurisdiction might commit to exchange information automatically, but that can be toothless if they do not enforce the registration of beneficial owners of its companies. Commitments to transparency made through participation in international initiatives do not necessarily produce genuine change. Put bluntly, jurisdictions may commit to sharing information internationally, but then neglect the collection of information that could and should be shared. All these observations lead to the conclusion that improvement in financial transparency has been shallow.

Our results also show that this new-found willingness to engage with the rest of the world, particularly strong in the most secretive countries and jurisdictions, led to convergence in financial secrecy. Many of the most secretive countries and jurisdictions have become more transparent while the opposite is true of those starting with relatively high transparency. The main way through which the most secretive countries and jurisdictions became more transparent was not genuine change in domestic laws, regulations, and practices, but rather by signing up to international standards and cooperation. Put differently, international convergence in financial transparency has been driven by international standards and cooperation.

We offer a typology of change in financial secrecy and divide countries and jurisdictions into five groups: relative transparency, cooperation and domestic improvement, domestic improvement with little cooperation, cooperation with little domestic improvement, and little cooperation with little domestic improvement. Reflecting our findings on convergence and shallow improvement, nearly half of the countries and jurisdictions in our sample (29 out of 71) exhibit cooperation with little domestic improvement. In contrast, only 13 countries and jurisdictions demonstrate domestic improvement, including four that improved on the domestic front despite little progress in international collaboration and standards.

Groups of countries based on our typology cut across simple geographical divisions, highlighting the significance of studying the evolution of each country and jurisdiction in its own right. At the same time, there are two general patterns that emerge. First, with the important exceptions of the Netherlands and Switzerland, all OECD countries in our sample are relatively transparent. Given that the OECD has spearheaded many international reforms of financial transparency, this result makes sense, though how much financial secrecy of other countries and jurisdictions (often former colonies) remains orchestrated

by the governments and the financial centres of OECD countries is an open question. Second, independent states tend to exhibit a more positive development of financial transparency than jurisdictions produced by colonialism. Linking this finding with the first, it is plausible to expect that the colonial and post-colonial ties of jurisdictions with their former colonial governments and financial centres, impedes the genuine progress of financial transparency. This can be illustrated with the example of the Caribbean region. While the independent states of St. Lucia, St. Vincent and the Grenadines, and Dominica achieved domestic improvement in financial transparency, all British Overseas Territories in the region and a US territory did not.

What appears overall is that governments, with the help of financial and business services, play a financial transparency 'game', which during the 2010s led to convergence resulting from shallow and uneven improvements. While costs of secrecy have increased, so have arguably the benefits due to the possibilities of attracting growing amounts of footloose capital in the increasingly financially globalised and digitalised economy. This is good news in so far as the 'game' no longer results in a race to the bottom. The global financial crisis of 2008 may have indeed changed the 'game' in the long run. As we show, it is quite a unique game, with change in secrecy not correlated highly with the change of general governance indicators. Even countries moving towards better rule of law do not necessarily improve their financial transparency. Only time will tell whether future regulation can make a difference and achieve genuine progress in financial transparency. In any case, economic geographers should be among the scholars analysing this process and its implications.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data and code are available at <https://osf.io/f3cqj/>.

References

- Aalbers, M.B., 2018. Financial Geography I: Geographies of Tax. *Progress in Human Geography* 42 (6), 916–927. <https://doi.org/10.1177/0309132517731253>.
- Ahrens, L., Bothner, F., 2020. The Big Bang: Tax Evasion after Automatic Exchange of Information under FATCA and CRS. *New Political Economy* 25 (6), 849–864.
- Ahrens, L., Bothner, F., Hakelberg, L., Rixen, T., 2022. New Room to Maneuver? National Tax Policy under Increasing Financial Transparency. *Socio-Economic Review* 20 (2), 561–583.
- Beaverstock, J.V., Hubbard, P., Short, J.R., 2004. Getting Away with It? Exposing the Geographies of the Super-Rich. *Geoforum* 35 (4), 401–407.
- Becker, W., Paruolo, P., Saisana, M., Saltelli, A., 2016. Weights and Importance in Composite Indicators: Mind the Gap. In: Ghanem, R., Higdon, D., Owahdi, H. (Eds.), *Handbook of Uncertainty Quantification*. Springer International Publishing, Cham, pp. 1–30. http://link.springer.com/10.1007/978-3-319-11259-6_40-1.
- Beer, S., Coelho, M., Leduc, S., 2019. Hidden Treasure: The Impact of Automatic Exchange of Information on Cross-Border Tax Evasion. IMF Working Paper no. 286. <https://doi.org/10.5089/9781513519975.001>.
- Bilicka, K., Fuest, C., 2014. With Which Countries Do Tax Havens Share Information? *International Tax and Public Finance* 21 (2), 175–197. <https://doi.org/10.1007/s10797-013-9267-y>.
- Casi, E., Spengel, C., Stage, B.M.B., 2020. Cross-Border Tax Evasion after the Common Reporting Standard: Game Over? *Journal of Public Economics* 190, 104240. <https://doi.org/10.1016/j.jpubeco.2020.104240>.
- Christensen, R.C., Hearson, M., 2019. The New Politics of Global Tax Governance: Taking Stock a Decade after the Financial Crisis. *Review of International Political Economy* 26 (5), 1–21. <https://doi.org/10.1080/09692290.2019.1625802>.
- Clark, G.L., Lai, K.P.Y., Wójcik, D., 2015. Editorial Introduction to the Special Section: Deconstructing Offshore Finance. *Economic Geography* 91 (3), 237–249. <https://doi.org/10.1111/ecge.12098>.
- Cloke, Jonathan (Ed.), 2019. Speaking in Riddles: The Panama Papers and the Global Financial Services Sector. *Area* 1, 190–192. <https://doi.org/10.1111/area.12431>.
- Cobham, A., Janský, P., Meinzer, M., 2015. The Financial Secrecy Index: Shedding New Light on the Geography of Secrecy. *Economic Geography* 91 (3), 281–303. <https://doi.org/10.1111/ecge.12094>.
- Collin, M., 2016. The Panama Papers and the Correlates of Hidden Activity. Center for Global Development. <https://www.cgdev.org/blog/panama-papers-and-correlates-hidden-activity>.
- Dehejia, V.H., Genschel, P., 1999. Tax Competition in the European Union. *Politics & Society* 27 (3), 403–430.
- Desai, M.A., Foley, C.F., Hines, J.R., 2006. The Demand for Tax Haven Operations. *Journal of Public Economics* 90 (3), 513–531.
- Dyregang, S., Lindsey, B.P., Thornock, J.R., 2013. Exploring the Role Delaware Plays as a Domestic Tax Haven. *Journal of Financial Economics* 108 (3), 751–772. <https://doi.org/10.1016/j.jfineco.2013.01.004>.
- Emmenegger, P., 2017. Swiss Banking Secrecy and the Problem of International Cooperation in Tax Matters: A Nut Too Hard to Crack? *Regulation & Governance* 11 (1), 24–40.
- Engelen, E., Konings, M., Fernandez, R., 2010. Geographies of Financialization in Disarray: The Dutch Case in Comparative Perspective. *Economic Geography* 86 (1), 53–73.
- Fernandez, R., Wigger, A., 2016. Lehman Brothers in the Dutch Offshore Financial Centre: The Role of Shadow Banking in Increasing Leverage and Facilitating Debt. *Economy and Society* 45 (3–4), 407–430. <https://doi.org/10.1080/03085147.2016.1264167>.
- Fichtner, J., 2016. The Anatomy of the Cayman Islands Offshore Financial Center: Anglo-America, Japan, and the Role of Hedge Funds. *Review of International Political Economy* 23 (6), 1034–1063.
- García-Bernardo, J., Janský, P., 2021. Profit Shifting of Multinational Corporations Worldwide. Working Papers IES, no. 14/2021: 1–76.
- García-Bernardo, J., Fichtner, J., Takes, F.W., Heemskerk, E.M., 2017. Uncovering Offshore Financial Centers: Conduits and Sinks in the Global Corporate Ownership Network. *Scientific Reports* 7 (1), 6246. <https://doi.org/10.1038/s41598-017-06322-9>.
- Haberly, D., Wójcik, D., 2019. Fragile Renegades: Offshore Banking Centers in the Global Financial Crisis. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2652184.
- Hakelberg, L., 2020. The Hypocritical Hegemon: How the United States Shapes Global Rules against Tax Evasion and Avoidance. Cornell University Press.
- Hall, T., 2010. Economic Geography and Organized Crime: A Critical Review. *Geoforum* 41 (6), 841–885.
- Helgadóttir, O., 2020. The New Luxury Freeports: Offshore Storage, Tax Avoidance, and 'Invisible' Art. *Environment and Planning A: Economy and Space* 0308518X20972712.
- Ioannou, S., Wójcik, D., 2022. The Limits to FinTech Unveiled by the Financial Geography of Latin America. *Geoforum* 128, 57–67. <https://doi.org/10.1016/j.geoforum.2021.11.020>.
- Janský, P., Meinzer, M., Palanský, M., 2022a. Is Panama Really Your Tax Haven? Secrecy Jurisdictions and the Countries They Harm. *Regulation & Governance* 16 (3), 673–704. <https://doi.org/10.1111/rego.12380>.
- Janský, P., Palanská, T., Palanský, M., 2022b. 'Hide-Seek-Hide? The Effects of Financial Secrecy on Cross-Border Financial Assets', World Institute for Development Economic Research (UNU-WIDER).
- Johannessen, N., Zucman, G., 2014. The End of Bank Secrecy? An Evaluation of the G20 Tax Haven Crackdown. *American Economic Journal: Economic Policy* 6 (1), 65–91.
- Lai, K.P.Y., 2018. Connecting Asian Markets with Global Finance. *International Financial Centers after the Global Financial Crisis and Brexit*, p. 154.
- Ledyeva, S., Karhunen, P., Kosonen, R., Whalley, J., 2015. Offshore Foreign Direct Investment, Capital Round-Tripping, and Corruption: Empirical Analysis of Russian Regions. *Economic Geography* 91 (3), 305–341. <https://doi.org/10.1111/ecge.12093>.
- Martins, K., 2021. The Brokerage Role of Small States and Territories in Global Corporate Networks. *Growth and Change* 52 (1), 12–28.
- Martins, K., Sigler, T., Iacopini, I., Derudder, B., 2019. The Role of Tax Havens and Offshore Financial Centers in Asia-Pacific Networks: Evidence from Firm-Subsidiary Connections. *Asian Business & Management* 18 (5), 389–411.
- Menkhoff, L., Miethe, J., 2019. Tax Evasion in New Disguise? Examining Tax Havens' International Bank Deposits. *Journal of Public Economics* 176, 53–78. <https://doi.org/10.1016/j.jpubeco.2019.06.003>.
- Morgan, J., 2017. Taxing the Powerful, the Rise of Populism and the Crisis in Europe: The Case for the EU Common Consolidated Corporate Tax Base. *International Politics* 54 (5), 533–551.
- Murphy, J., Albu, O.B., 2018. The Politics of Transnational Accountability Policies and the (Re)Construction of Corruption: The Case of Tunisia, Transparency International and the World Bank. *Accounting Forum* 42 (1), 32–46. <https://doi.org/10.1016/j.accfor.2017.10.005>.
- Tax Justice Network, 2022. 'Financial Secrecy'. 2022. <https://taxjustice.net/topics/financial-secrecy/>.
- O'Donovan, J., Wagner, H.F., Zeume, S., 2019. The Value of Offshore Secrets: Evidence from the Panama Papers. *The Review of Financial Studies* 32 (11), 4117–4155. <https://doi.org/10.1093/rfs/hhz017>.
- Obermayer, B., Obermaier, F., 2016. Panama Papers: Die Geschichte einer weltweiten Enthüllung, 3rd ed. KiWi-Paperback, Köln.
- OECD, 2021. Activated Exchange Relationships for CRS Information. OECD. <http://www.oecd.org/tax/automatic-exchange/international-framework-for-the-crs/exchange-relationships/>.
- Palan, R., 2002. Tax Havens and the Commercialization of State Sovereignty. *International Organization* 56 (1), 151–176.
- Palan, R., 2006. The Offshore World: Sovereign Markets, Virtual Places, and Nomad Millionaires. Cornell University Press.

- Palan, R., Wigan, D., 2014. 'Herding Cats and Taming Tax Havens: The US Strategy of "Not In My Backyard"'. *Global Policy* 5 (3). <https://doi.org/10.1111/1758-5899.12135>.
- Pistor, K., 2019. *The Code of Capital*. Princeton University Press.
- Rixen, T., 2008. *The Political Economy of International Tax Governance*. Palgrave Macmillan. http://www.sfb597.uni-bremen.de/download/en/publikationen/sfbReihen_flyer_The_Political_Economy_of_International_Tax_Governance.pdf.
- Rusina, A., 2020. Name and Shame? Evidence from the European Union Tax Haven Blacklist. *International Tax and Public Finance* 27 (6), 1364–1424.
- Schjelderup, G., 2015. Secrecy jurisdictions. *International Tax and Public Finance* 23, 168–189. <https://doi.org/10.1007/s10797-015-9350-7>.
- Sharman, J., 2010. Shopping for Anonymous Shell Companies: An Audit Study of Anonymity and Crime in the International Financial System. *The Journal of Economic Perspectives* 24 (4), 127–140.
- Sharman, J., 2012. Chinese Capital Flows and Offshore Financial Centers. *The Pacific Review* 25 (3), 317–337.
- Shaxson, N., Christensen, J., 2011. Time to Black-List the Tax Haven Whitewash. *Financial Times*, London <http://www.ft.com/cms/s/0/0f687dee-5eea-11e0-a2d7-00144feab49a.html?siteedition=intl#axzz1lcwBEiPA>.
- Sigler, T.J., 2013. Relational Cities: Doha, Panama City, and Dubai as 21st Century Entrepôts. *Urban Geography* 34 (5), 612–633.
- Sigler, T.J., Martinus, K., Iacopini, I., Derudder, B., 2020. The Role of Tax Havens and Offshore Financial Centres in Shaping Corporate Geographies: An Industry Sector Perspective. *Regional Studies* 54 (5), 621–633. <https://doi.org/10.1080/00343404.2019.1602257>.
- Straumann, Tobias. 2018. 'The End of the Golden Age'. *International Financial Centres after the Global Financial Crisis and Brexit*, 106.
- Tax Justice Network, 2018. *Financial Secrecy Index 2018 Methodology*. London. <https://fsi.taxjustice.net/fsi2018/methodology.pdf>.
- Tax Justice Network, 2020. *Financial Secrecy Index 2020 Methodology*. London. <https://fsi.taxjustice.net/fsi2020/methodology.pdf>.
- Tiebout, C.M., 1956. A Pure Theory of Local Expenditures. *Journal of Political Economy* 64 (5), 416–424.
- Tørslov, T., Wier, L., Zucman, G., 2022. The Missing Profits of Nations. *Review of Economic Studies*.
- Vlcek, W., 2011. Offshore Finance in Ghana: Why Not? *Review of African Political Economy* 38 (127), 143–219. <https://doi.org/10.1080/03056244.2011.552704>.
- Vlcek, W., 2014. From Road Town to Shanghai: Situating the Caribbean in Global Capital Flows to China. *The British Journal of Politics and International Relations* 16 (3):), 534–553. <https://doi.org/10.1111/1467-856X.12010>.
- Weyzig, F., 2013. Tax Treaty Shopping: Structural Determinants of Foreign Direct Investment Routed through the Netherlands. *International Tax and Public Finance* 20 (6), 910–937. <https://doi.org/10.1007/s10797-012-9250-z>.
- Wójcik, D., 2015. Accounting for Globalization: Evaluating the Potential Effectiveness of Country-by-Country Reporting. *Environment and Planning C: Government and Policy* 33 (5), 1173–1189.
- Wójcik, D., Camilleri, J., 2015. "Capitalist Tools in Socialist Hands"? China Mobile in Global Financial Networks. *Transactions of the Institute of British Geographers* 40 (4), 464–478.
- Woodward, R., 2016. A Strange Revolution: Mock Compliance and the Failure of the OECD's International Tax Transparency Regime. In: Rixen, T., Dietsch, P. (Eds.), *Global Tax Governance – What Is Wrong with It, and How to Fix It*. ECPR Press, Colchester, pp. 103–122.
- Zucman, G., 2015. *The Hidden Wealth of Nations: The Scourge of Tax Havens*. University of Chicago Press, Chicago, IL.