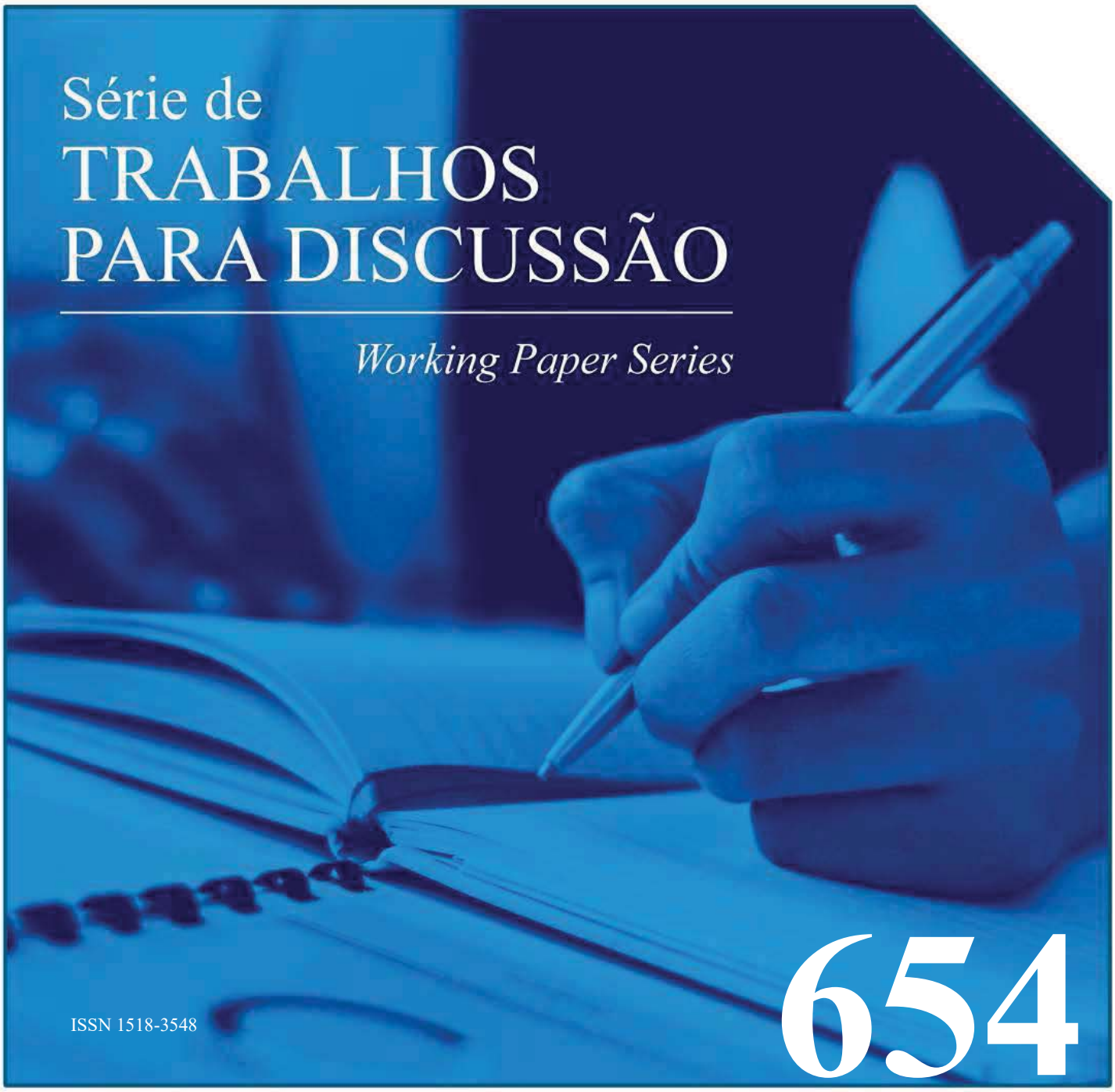


Outubro 2026

How Do Individuals Respond to an Offshore Tax Amnesty?

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BANCO CENTRAL DO BRASIL

ISSN 1518-3548
CGC 00.038.166/0001-05

Working Paper Series	Brasília	no. 654	Outubro	2026	p. 3-98

Working Paper Series

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Non-Technical Summary

The 2010s marked a major shift in offshore financial transparency. At the center of this change was the Common Reporting Standard (CRS), which has enabled the automatic exchange of financial-account information across more than 100 jurisdictions. In parallel with this enhanced transparency, more than 30 governments have offered programs allowing individuals to disclose undeclared offshore assets.

This paper analyzes how the disclosure, repatriation, and allocation of capital respond to this global transparency shock. We exploit Brazil's 2016 offshore tax amnesty, introduced shortly before the authorities gained greater access to information on Brazilians' foreign financial accounts.

The amnesty led to a large increase in disclosed foreign wealth. Using administrative microdata on the universe of reported foreign assets, we find that about 21,000 individuals disclosed USD 59.5 billion, equivalent to 3.3% of Brazil's 2016 GDP. This large disclosure response was driven mainly by the increase in detection risk under the CRS, rather than by the terms of the amnesty.

The effects on capital reallocation were much more limited. Using microdata on foreign-exchange transactions, we show that net capital repatriation averaged only 22% of disclosed wealth in 2016–2017. Most of the disclosed wealth therefore remained abroad. Inflows were also short-lived, as participants resumed net outflows from 2018 onward. We provide evidence that the diversification benefits of offshore investments help explain why individuals continued to hold wealth outside Brazil.

We find no effect on real economic activity. Tracking repatriated capital, we show that it flowed mainly into domestic fixed-income investments rather than into the real economy. Consistent with this pattern, firms owned by amnesty participants experienced no increase in employment or revenues, even when their owners repatriated substantial amounts.

Greater offshore monitoring, combined with tax amnesties, can be highly effective in uncovering previously hidden wealth, but is insufficient to bring this capital back and foster real investments. More broadly, the findings suggest that offshore financial centers serve purposes beyond tax evasion.

Sumário Não Técnico

A década de 2010 marcou uma grande mudança na transparência financeira internacional. No centro dessa transformação esteve o Common Reporting Standard (CRS), que passou a permitir a troca automática de informações sobre contas financeiras entre mais de 100 jurisdições. Paralelamente a esse aumento da transparência, mais de 30 governos implementaram programas que permitiam aos indivíduos declarar ativos mantidos no exterior.

Este artigo analisa como a declaração, a repatriação e a alocação de capital responderam a esse choque global de transparência, explorando o Regime Especial de Regularização Cambial e Tributária, implementado pelo Brasil em 2016, pouco antes de as autoridades passarem a ter maior acesso a informações sobre as contas de brasileiros no exterior.

O programa levou a um grande aumento de declarações às autoridades. Utilizando microdados do universo de ativos declarados no exterior, mostramos que cerca de 21 mil indivíduos declararam US$ 59,5 bilhões no programa, o equivalente a 3,3% do PIB brasileiro de 2016. Essa forte resposta se deve principalmente ao aumento do risco de detecção decorrente do CRS, e não às condições do programa.

Os efeitos sobre a realocação de capital foram muito mais limitados. Utilizando microdados de operações de câmbio, mostramos que a repatriação líquida de capital correspondeu, em média, a apenas 22% do valor dos ativos declarados, com a maior parte do capital permanecendo no exterior. Os ingressos também foram temporários, pois os participantes voltaram a registrar saídas líquidas a partir de 2018. Apresentamos evidências de que os benefícios de diversificação proporcionados pelos investimentos offshore ajudam a explicar por que os indivíduos continuaram a manter parte de sua riqueza fora do Brasil.

Não encontramos efeitos sobre a atividade econômica real. Ao acompanhar o destino do capital repatriado, mostramos que ele foi direcionado principalmente para investimentos domésticos de renda fixa, e não para a economia real. Em linha com esse padrão, as empresas pertencentes a participantes do programa não apresentaram aumento no emprego ou nas receitas, mesmo quando seus proprietários repatriaram montantes substanciais.

Um maior monitoramento de ativos offshore, combinado com programas que incentivam a declaração, pode ser altamente eficaz para revelar ativos não declarados, mas é insuficiente para trazer esse capital de volta e redirecioná-lo para investimentos na economia real. De forma mais ampla, os resultados sugerem que os centros financeiros offshore desempenham funções que vão além da evasão fiscal.

How Do Individuals Respond to an Offshore Tax Amnesty?

Evidence from Brazil*

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September 2026

Abstract

This paper analyzes how offshore wealth responds to greater transparency. We exploit Brazil's 2016 offshore tax amnesty, implemented just before a global agreement introduced automatic third-party reporting of foreign financial accounts. Disclosure was substantial and concentrated among the very wealthy. However, less than a quarter of disclosed wealth was repatriated, and inflows were short-lived. We find no increase in activity at firms owned by participants. Instead, repatriated capital flowed mainly into fixed-income investments. Greater transparency can thus uncover offshore wealth but is insufficient to reverse capital flight.

Keywords: Offshore financial centers, tax amnesty, automatic exchange of information, capital flight, Brazil.

JEL codes: Tax Evasion and Avoidance (H26); International Financial Policy (F38); Portfolio Choice (G11).

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*This project would not have been possible without the help of José Renato Ornelas, Rafael Agostin Palmieri, Renan Abrantes de Sousa, Ricardo Schechtman, and Sérgio Mikio at the Banco Central do Brasil. We also thank Bernardo Fernandes, Gabriel Zucman, Liam Wren-Lewis, Maëlle Stricot, Pierre Bachas, Theo Palomo and an anonymous referee for helpful comments. All data work for this project involving confidential information was done on Banco Central do Brasil computers, and confidential data never left the Banco Central do Brasil computing environment. All results have been reviewed to ensure that no confidential information is disclosed.

1 Introduction

Offshore financial centers (OFCs) play a central role in global capital allocation (Zucman 2013). This has important implications for tax revenues and capital mobilization, as offshore assets are harder for national authorities to monitor and can divert capital away from productive uses at home.

The 2010s marked a big bang in offshore financial transparency. At the center of this shift was the OECD's Common Reporting Standard (CRS), which since 2017 has enabled the automatic exchange of information on financial accounts across more than 100 jurisdictions. Alongside this shift, since 2009, more than 30 governments have implemented programs to facilitate disclosure, raise revenues, and, in some cases, encourage repatriation.[1] This combination of greater transparency and incentives to come forward raised expectations that capital flight would decline and capital would be reallocated away from OFCs.[2] Yet little is known about whether these policies changed capital allocation and investment decisions.

Brazil provides a useful setting to study this question. In 2016, the country implemented an offshore tax amnesty one year before its first CRS information exchanges, at a time when the forthcoming information sharing had already been publicly announced. The program offered a one-time opportunity to declare hidden offshore assets by paying a 30% tax on the amount disclosed, in exchange for a waiver of tax and foreign-exchange penalties related to the hidden assets.

We draw on a previously unexplored foreign-asset census administered by the Central Bank of Brazil, covering all residents with at least USD 100,000 in foreign assets and requiring annual reporting of the assets' value, type, location, and income. These data allow us to document who participated in the amnesty and what they held abroad, and to estimate how much remained hidden. We also use the census to disentangle the roles of the CRS

[1] Benedek et al. (2022) identify offshore tax amnesties or voluntary disclosure programs in 19 countries, and we identify programs in 15 additional countries.

[2] These expectations were explicit in contemporaneous policy statements. In 2016, Indonesian President Joko Widodo stated: "Tax Amnesty Law is expected to repatriate the capital held abroad to Indonesia. [...] We hope that the money can boost our national economy." The government memorandum accompanying Brazil's tax amnesty similarly stated: "the repatriation of financial assets is expected to inject a large amount of resources into the country [...] and allow considerable resources to be used for domestic investment." More broadly, UK Prime Minister Gordon Brown argued in 2009 that coordinated international action would "signal the beginning of the end for offshore tax havens and offshore centres."

and the amnesty in disclosure. Linking it to the universe of international transfers, we trace capital repatriation. We further link participants to their domestic fixed-income holdings and, through the corporate ownership registry, to their firms' employment, transactions, and borrowing, to study whether bringing previously hidden wealth into compliance changed domestic capital allocation. Overall, the increase in offshore transparency led to a large disclosure of offshore wealth, but it did not reverse capital flight or translate into higher real investment in Brazil.

In total, 21,000 individuals disclosed USD 59.5 billion in the amnesty, equivalent to 3.3% of Brazil's 2016 GDP. This was a large increase relative to the 29,870 non-participants reporting USD 70.5 billion in 2014. Participation was concentrated among the wealthy, rising from less than 1% among individuals between the 99th and 99.9th percentiles to 21% among those in the top 0.001%. However, this gradient partly reflects that wealthier individuals are much more likely to hold foreign assets in general. Disclosed wealth was concentrated in equity classified as foreign direct investment (FDI), which accounted for 68% of assets, and in OFCs, where more than 80% of disclosed value was located. We show that these OFC-based FDI positions are mostly vehicles used to invest in global financial markets rather than operating companies.[3]

We use four external benchmarks to assess the disclosure response relative to the stock of hidden wealth, rather than only to previously declared wealth. We show that the share of Brazilians appearing in offshore leaks who could be matched to foreign-asset declarations almost doubled after the amnesty, from only 25% to 45%. Three additional benchmarks use data from the Bank for International Settlements (BIS) on bank deposits attributed to Brazilians, CRS information transmitted to Brazil by other countries, and estimates of Brazilian offshore wealth from the Atlas of the Offshore World (Faye et al. 2025). All three point in the same direction, suggesting even broader disclosure.

This large disclosure response is primarily driven by the increase in detection risk under the CRS, rather than by the amnesty terms. We disentangle the two by exploiting variation in CRS exposure across asset types and jurisdictions. Disclosure exhibits a clear gradient

[3]Brazil follows the IMF Balance of Payments Manual, under which an equity stake of at least 10% is classified as foreign direct investment, regardless of whether the investment is associated with productive activity in the real economy (International Monetary Fund 2009).

with CRS coverage: fully covered financial assets increased by about 215%, partially covered direct investment by about 85%, while uncovered real estate remained on its previous trend.[4] Geographic variation shows the same pattern, with disclosure increasing most in CRS-participating jurisdictions and little elsewhere.

Despite the potential incentive to avoid the amnesty tax, we see no evidence that individuals bypassed the amnesty through quiet disclosure or anticipatory repatriation. The number and wealth distribution of first-time reporters, as well as the value reported by already-compliant individuals, followed their pre-existing trends around the amnesty. In addition, amnesty participants, rather than repatriating funds in anticipation, show net capital outflows before the program, as do other foreign-asset reporters and wealthy individuals who did not report foreign assets in 2015.

The second set of results turns from disclosure to capital repatriation. Comparing disclosed values with individual-level data on foreign-exchange transactions, we show that most disclosed capital remained offshore. On average, amnesty participants repatriated 22% of their foreign wealth in 2016–2017, broadly consistent with the liquidity needed to pay the amnesty tax. However, this limited overall repatriation was not uniform across participants. Repatriation was more common among those with less foreign wealth.

We corroborate this finding through several exercises that address the possibility that international transfers reflect motives unrelated to the amnesty: comparing participants with other foreign-asset reporters, restricting transfers to offshore jurisdictions, and estimating flows at the individual-country level. We also find no evidence of a persistent change in capital flows, as amnesty participants resumed net outflows from 2018 onward. Using unique data on offshore portfolio returns, we document that offshore investments provided diversification away from Brazilian market and currency risk. This finding provides evidence on one potential explanation for the limited repatriation.

The third set of results examines whether the increase in offshore transparency, together with regularization under the amnesty, affected domestic capital allocation. We start with real-

[4]We classify equity FDI positions as partially covered. Under the CRS, firms are looked through to their owners and reported by third parties only when classified as passive entities. Active entities are not looked through, and financial institutions are directly responsible for reporting. This leaves scope to avoid information exchange (Bomare and Collin 2025).

economy investment by studying firms owned by amnesty participants. Using the corporate ownership registry, we link individuals to their firms, including through layers of corporate ownership. This is an important margin, as 48% of participants were employers in 2014, and their firms formally employed 1.2 million workers in 2015. We use a difference-in-differences strategy comparing changes in firm outcomes around the amnesty between firms owned by participants and firms owned by non-participants who reported foreign assets in every year between 2003 and 2014 (hereafter long-term reporters). These individuals provide a natural comparison group for capturing macroeconomic and financial trends affecting wealthy individuals with foreign exposure. Because they were already reporting their foreign assets before the increase in monitoring, the CRS is unlikely to have affected their investment decisions. Across several margins of firm activity, we find no evidence that firms owned by amnesty participants grew more than firms in the comparison group. These null effects hold even among participants who repatriated substantial amounts of capital and among firms majority-owned by an amnesty participant.

The absence of real-economy effects raises the question of where repatriated capital was allocated. We therefore turn to fixed-income investments, the main form of liquid financial investment available to Brazilian households. We examine whether fixed-income holdings evolved differently depending on how much participants repatriated, using the same group of long-term reporters as a comparison. Participants who repatriated more than 40% of their foreign wealth increased their fixed-income holdings by 56% immediately after the amnesty, accounting on average for 61% of the repatriated capital in excess of the amnesty tax. By contrast, participants with near-zero repatriation reduced their holdings by 11%, consistent with using domestic liquid assets to pay the tax. These opposing responses left aggregate fixed-income holdings unchanged. Together, these results suggest that repatriated capital was absorbed primarily by domestic financial markets rather than the real economy.

The amnesty generated substantial one-off tax revenue from individuals at the very top of the wealth distribution, but little repatriation and no increase in real investment. Motivated by these findings, we estimate a simple parametric model to recover the revenue-maximizing amnesty tax rate. The model separates the effect of the amnesty's lower tax rate from that of the increase in detection under the CRS. Its parameters are identified from variation across

individuals in participation, wealth, the split between CRS-covered and uncovered assets, and individual characteristics, combined with our leak-based estimate of the share of holders who report. The baseline yields a revenue-maximizing rate of 47%. The rate stays above the statutory 30% under alternative assumptions, unless the government places a large value on disclosure itself. This high rate reflects a weak reporting response to the amnesty's lower tax rate, compared with the response to the increase in detection under the CRS.

This paper contributes to three strands of literature. First, a growing literature studies offshore tax amnesties and voluntary disclosure programs, documenting their effectiveness in inducing disclosure and raising tax revenue (Alstadsæter et al. 2019; Johannesen et al. 2020; Londoño-Vélez and Ávila-Mahecha 2021; Leenders et al. 2023; Londoño-Vélez and Tortarolo 2025; Baselgia 2026). Analyzing the Brazilian program, we trace the full chain of responses, examining the consequences of the program for capital allocation, firm activity, and domestic financial investment. This analysis reveals that, despite the large disclosure of offshore wealth, greater monitoring did not durably reverse capital flight or increase real investment in Brazil. In addition, by examining offshore portfolio returns, we provide evidence on a previously unexplored reason wealthy individuals continue to hold capital offshore.[5]

Second, we contribute to the literature on how international information exchange affects offshore wealth. Earlier work has largely relied on cross-border banking data (Johannesen and Zucman 2014; Menkhoff and Miethe 2019; Casi et al. 2020), while recent work directly exploits CRS data (Boas et al. 2024; Alstadsæter et al. 2026b; Bachas et al. 2026; Boas et al. 2026; Davoine et al. 2026; Johannesen et al. 2026). This literature shows that stronger third-party reporting substantially increases offshore tax compliance. Using comprehensive offshore portfolio records, we document the disclosure response beyond bank deposits and CRS-covered assets. The disclosure response is less pronounced for offshore investment vehicles, which we show account for the bulk of offshore wealth, and is absent for real estate. Both patterns speak directly to the gaps in CRS coverage (Bomare and Collin 2025; Bomare and Le Guern Herry 2025). Finally, we provide bounds on how much offshore wealth remained hidden following the expansion of automatic information exchange, complementing macro

[5]This evidence relates to a literature that has studied the drivers of offshore wealth accumulation beyond tax evasion, including elite capture, financial crises, and expropriation risk (Andersen et al. 2017; Bayer et al. 2020; Andersen et al. 2022; Marchesi and Marcolongo 2025).

estimates of offshore wealth (Alstadsæter et al. 2018; Faye et al. 2025).

Third, a strand of literature examines how access to offshore financial centers affects firm outcomes (Bilicka et al. 2022; De Simone et al. 2022; Souillard 2022; Alstadsæter et al. 2024; Bernini et al. 2025; Alstadsæter et al. 2026a; Brounstein et al. 2026; Davies et al. 2026). This literature primarily studies firms' own offshore exposure or the transmission of offshore wealth through financial intermediaries. Concurrent work comes closer to our setting by studying firms owned by individuals exposed to offshore transparency shocks (Davoine et al. 2026; Ricciulli Marín 2026). We provide new evidence on whether increased offshore monitoring and the resulting disclosure and repatriation of owners' offshore wealth affect their firms. We find no increase in firm activity following disclosure, including among participants who repatriated substantial amounts. By observing the subsequent allocation of repatriated capital, we show that these funds flowed primarily to domestic financial assets rather than firms. These results illustrate the limits of greater offshore transparency in redirecting capital toward domestic firms, even when it induces repatriation.

The remainder of the paper is organized as follows. Section 2 describes the institutional context of Brazil's 2016 offshore tax amnesty and the introduction of the Common Reporting Standard. Section 3 presents the administrative data. Section 4 documents the foreign wealth reported by Brazilian individuals and the disclosure response to the amnesty. Section 5 covers repatriation. Section 6 turns to capital allocation in Brazil, examining the firms owned by participants and domestic financial investments. Section 7 develops a model of the revenue-maximizing amnesty tax. Section 8 concludes.

2 Context

2.1 Brazil's Offshore Tax Amnesty

In 2016, Brazil introduced the *Regime Especial de Regularização Cambial e Tributária* (RERCT), an offshore tax amnesty established by Law No. 13,254, providing individuals with a one-time opportunity to disclose undeclared foreign assets. Participation required a 30% tax on the market value of the disclosed stock of assets, with the rate reduced to 15% for individuals with up to BRL 10,000 in foreign accounts (USD 3,765 on December

31, 2014).[6] The taxed stock was valued as of December 31, 2014, and, once participants joined the amnesty, had to be reported retroactively for 2014 and 2015, in addition to 2016, in accordance with the reporting rules.

The amnesty reduced the taxes that could otherwise have been due upon disclosure. Without the amnesty, the tax liability could reach 48.1% of wealth, rising to 68.8% in cases involving fraud, although the precise amount would depend on the specifics of each case.[7] In addition, the amnesty waived administrative penalties and criminal liability related to prior tax and foreign-exchange violations associated with the disclosed assets, but did not apply to assets originating from illicit activities, such as corruption or trafficking. The law prohibited the participation of elected office holders and high-level public servants, their spouses, and relatives up to the second degree of kinship. It also excluded individuals who had already been convicted of tax or foreign-exchange violations.

The program did not require participants to repatriate their assets. Once the assets were disclosed and the amnesty tax was paid, participants became subject to standard reporting and taxation rules, with rates of 27.5% on distributed foreign income and 15% to 22.5% on realized capital gains.[8] Taxes paid abroad can be credited when there is a tax treaty or reciprocal treatment.

The proposal was submitted to Congress by the government in September 2015, enacted in January 2016, and remained open for participation until October 2016. For disclosures above USD 100,000, participants were required to request that their foreign banks transmit account balances, providing the tax authority with an external means of verifying reported valuations.[9]

[6]The amnesty program briefly reopened between April and July 2017 under Law No. 13,428 of March 30, 2017, at a higher effective rate of 35.25%. The reopening followed legal uncertainty over the tax treatment of assets disposed of before the December 2014 reference date. The second round was an order of magnitude smaller in both the number of participants and the value of disclosed assets. We focus on the 2016 round when describing the program and refer to both rounds jointly as the tax amnesty throughout the paper. Firms could also participate in the amnesty, but firm participation was limited. According to the tax authority, 123 firms disclosed USD 2.29 billion (BRL 6.10 billion), most of it by a single firm (Receita Federal do Brasil 2016a; Receita Federal do Brasil 2016b; Estadão Conteúdo 2017).

[7]Voluntarily regularizing assets normally requires revising the previous five tax returns and paying the corresponding taxes and penalties, a process that triggers tax-authority scrutiny. When the origin of the funds used to acquire foreign assets cannot be documented, the tax authority treats the full stock of assets as taxable income. This implies a tax burden of 48.1% on the stock, rising to 68.8% in cases involving fraud (Law No. 9,430, art. 44). Documenting the origin of these funds may be difficult even when the wealth is of

2.2 Common Reporting Standard

The tax amnesty was closely linked to Brazil's implementation of the Common Reporting Standard (CRS), a global framework for the automatic exchange of information (AEOI) on financial accounts. The CRS enabled Brazilian authorities to receive third-party information on accounts held by Brazilian tax residents across more than 100 participating jurisdictions. Access to this information greatly expanded the government's monitoring capacity. Before the CRS, Brazilian authorities relied primarily on individuals' self-reporting and could request information from foreign jurisdictions only on a case-by-case basis under bilateral agreements, typically requiring an ex ante suspicion about a particular individual. Brazil began discussions to join the CRS in 2014, committed to it in 2016, and conducted its first exchanges for the 2017 fiscal year.

From the perspective of amnesty participants, the program provided an opportunity to disclose foreign assets before AEOI became operational, at a lower cost than the potential liability if those assets were subsequently detected. It also protected participants from criminal prosecution for tax evasion and foreign-exchange violations.[10] From the government's perspective, the amnesty offered a fast and relatively low-cost way to raise revenue. Even with access to foreign account information, the tax authority would still need to investigate cases individually, pursue administrative proceedings, and enforce collection—a process that is typically slow and resource-intensive.

CRS limitations Despite its broad coverage, the CRS has limitations. The first limitation is clear-cut. The CRS does not cover real estate. The second limitation concerns assets

lawful origin, because much of the disclosed wealth appears to have been held abroad since before 2005, and possibly since the 1990s (see Appendix B).

[8]Using offshore investment vehicles allowed individuals to defer personal taxes on investments held through foreign firms until profits were distributed. The law changed in 2024, after our period of analysis, when offshore investments held through foreign firms became subject, in most cases, to an annual 15% tax regardless of distribution or realization.

[9]The tax authority later conducted more than 360 audits of participants, selected using criteria that included low declared values, signs of illicit origin, and not paying the amnesty tax in full. By 2022, 203 of these audits had ended with the participant losing the amnesty's benefits (Receita Federal do Brasil 2023).

[10]The profitability of previous evasion after paying the amnesty tax depended on the origin of the wealth. Table A.1 quantifies different scenarios. Evasion may still have been profitable if the assets were acquired with income on which taxes had been evaded, such as personal or corporate income taxes. However, it was unlikely to have been profitable if the income was tax-exempt or had already been taxed before being transferred

held through foreign firms. Controlling persons are reported by the account-holding financial institution only when the firm is classified as a passive non-financial entity, defined as one with 50% or more of its income or assets in passive investments. By contrast, active non-financial entities, those with mainly real economic activity, are not looked through to their controlling persons, while entities classified as financial institutions are themselves responsible for CRS reporting rather than being reported by their custodian bank. These classifications may create scope for differences in enforcement across jurisdictions and reporting financial institutions, weakening the CRS for those assets (Bomare and Collin 2025).

While the CRS covers most major economies and OFCs, the United States is an exception. It operates a separate AEOI regime, the Foreign Account Tax Compliance Act (FATCA), through bilateral agreements. FATCA is narrower than the CRS in both scope and content. In particular, the United States transmits information on financial income rather than account balances. As a result, accounts with no income in a given year are not captured. FATCA also does not provide the same look-through treatment for assets held through foreign firms. In practice, when an individual holds U.S. financial assets through an entity such as a limited liability company, information on the controlling person may not be transmitted. Brazil signed a reciprocal FATCA agreement in September 2014, and the first exchange, covering 2014, took place in September 2015 (Receita Federal do Brasil 2016c).

3 Data

Foreign assets Foreign assets come from the *Censo de Capitais Brasileiros no Exterior* (CBE). The CBE is an annual reporting system that, since 2001, has required all individuals and firms resident in Brazil with at least USD 100,000 in foreign assets (USD 1 million since 2020) to report these assets to the Central Bank.[11] The reported data include the asset market value, the asset type, the country where each asset is held, the income it generated, and amnesty participation status.[12] The Central Bank uses the CBE to construct the international

abroad.

[11]The threshold was BRL 200,000 in 2001 (USD 86,192 at the official exchange rate on December 31, 2001) and BRL 300,000 in 2002 (USD 84,906 at the official exchange rate on December 31, 2002).

[12]The reporting system has been largely stable over the period. The list of predefined categories changed slightly in 2012 and 2017, but the categories can be harmonized over time based on the reporting rules

investment position (IIP) and the balance of payments. As a result, the reported totals closely match Brazil's IIP assets, as shown in Figure A.1.

Late reporting, misreporting, and non-reporting are subject to administrative penalties imposed by the Central Bank, ranging from 1% to 10% of foreign wealth, independently of any tax-related penalties imposed by the tax authority.[13] The Central Bank verifies reported information through validation checks and may request supporting documentation from declarants. We refer to the stock of reported assets held abroad as *foreign wealth*, to its components as *asset types*, and to the subset held in offshore financial centers (OFCs) as *offshore wealth*. We classify OFCs following O'Reilly et al. (2019), which extends the International Monetary Fund (2000) list.

Foreign-exchange transactions Foreign-exchange transactions come from the *Sistema Câmbio*. This dataset covers international transfers sent and received by individuals and firms in Brazil. Coverage is partial from 2001 and universal from 2006 onward. This information is third-party reported by financial institutions and includes transfer amounts, transaction dates, and the country of origin or destination.

Firm ownership Firm ownership information comes from a 2013 snapshot of the *Quadro Societário* registry maintained by the Brazilian tax authority. All legal entities registered in the corporate taxpayer registry are required to report their owners and ownership shares.[14] We use the registry to construct a shareholder tree as of 2013, tracing up to five layers of corporate ownership. The registry also reports each firm's share capital, which corresponds to the initial subscribed capital plus subsequent capital contributions over the firm's lifetime. Share capital

established by the Central Bank. Real estate was introduced as a separate category only in 2007 and trusts only in 2017. Before then, both were included in an "Other" category. In 2012, as part of methodological changes associated with the transition to the sixth edition of the IMF Balance of Payments Manual, the valuation of foreign direct investment (FDI) shifted from acquisition value to market value, generating a valuation-related increase in reported FDI that year (International Monetary Fund 2009).

[13] Administrative penalties are proportional to the amount subject to reporting and are capped. Fines are 1% for late filing (capped at BRL 25,000), 2% for incorrect or incomplete information (BRL 50,000), 5% for non-filing or failure to provide supporting documentation (BRL 125,000), and 10% for false information (BRL 250,000). Penalties may be increased if declarants fail to correct or supplement information when requested by the Central Bank.

[14] *Sociedades Anônimas* (joint-stock companies) can report directors and board members rather than the full shareholder base. They are the corporate form used to issue shares and are required for publicly listed companies. They face more stringent governance, reporting, and dividend rules. *Sociedades Limitadas*,

is typically lower than book equity, which also includes retained earnings and other reserves. Nevertheless, it provides a useful measure of firm capital, as Brazilian corporate law caps most profit reserves at the amount of share capital, requiring any excess to be either capitalized or distributed. Public procurement rules also impose minimum share-capital requirements.

Bank transfers Bank transfers come from the *Transferência Eletrônica Disponível* (TED) database. TED is an interbank transfer instrument similar to U.S. wires. It is more suitable for medium and large transfers than for daily payments, given fixed costs per transfer and a minimum transfer amount until 2016.[15] This information is third-party reported by financial institutions and includes the transaction date, the transferred amount, and identifiers for the sending and receiving individuals or firms.

Fixed income Fixed-income assets in Brazil come from the central securities depository, where financial institutions are required to register time deposits and fixed-income liabilities when an individual has more than BRL 5,000 (USD 1,280 on December 31, 2015) invested with the bank. These instruments include bank certificates of deposit (*Certificados de Depósito Bancário*), real estate and agribusiness credit notes (*Letras de Crédito Imobiliário* and *Letras de Crédito do Agronegócio*), and financial bills (*Letras Financeiras*). This database was introduced in 2015 and includes monthly data on individuals' fixed-income investments, along with information on the underlying financial instrument. Fixed income constitutes the main form of liquid financial investment for households in Brazil, accounting for approximately one-third of household financial assets in the national accounts and amounting to almost 10 times the value of listed equity.

Employment Employment and wage information comes from RAIS (*Relação Anual de Informações Sociais*), which contains the universe of formal employer–employee links in Brazil and is reported annually by employers. We use RAIS to measure firms' number of employees,

for which full ownership is observed in the registry, are the most common corporate form and face fewer requirements. Both forms provide limited liability.

[15]The minimum value for a TED transfer was reduced in several steps, from BRL 5,000 (USD 1,730 on December 31, 2003) in 2003 until it was abolished in 2016. In the first quarter of 2020, TED represented about 3% of transactions by number across payment instruments, but 48% of the total value transferred (https://www.bcb.gov.br/estatisticas/spbadendos?ano=2020).

their wage bill in December of each year, and individuals' employment status.

Bank loans Bank loans come from the *Sistema de Informações de Crédito* (SCR), the Central Bank's credit registry. Financial institutions report to the SCR, and we use it to measure the outstanding loans of individuals and firms in December of each year.

Third-party sources on foreign assets We use the Locational Banking Statistics from the Bank for International Settlements (BIS). This database reports banks' cross-border positions by bank location, counterparty country, and counterparty sector. We also use the International Consortium of Investigative Journalists (ICIJ) database on offshore leaks, which draws on the Offshore Leaks, Panama Papers, Paradise Papers, and Pandora Papers. This database identifies the jurisdictions of leaked offshore entities and the names and nationalities of their account holders.

4 Foreign Wealth in Brazil and the Offshore Amnesty

4.1 Amnesty Participation and Asset Disclosure

Amnesty participation The first dimension we examine is disclosure. The amnesty substantially expanded the number of individuals disclosing foreign assets. Figure 1.A presents the annual number of individuals reporting foreign assets to the Central Bank, distinguishing between amnesty participants and non-participants. Overall, 21,253 amnesty participants reported foreign assets in 2014, the first year for which participants were required to retroactively report their holdings, and 22,388 reported in at least one year.[16] By comparison, 29,870 non-participants reported foreign assets in 2014, implying that amnesty participants accounted for 42% of all individuals reporting foreign assets that year.

Most amnesty participation occurred along the extensive margin. Only 2,808 participants had reported any foreign assets in 2013 and increased the value reported through the amnesty.

[16] Of the 1,135 amnesty participants who did not report in 2014, 924 first reported in 2016. Some of these individuals may have participated in the 2017 round, which required reporting only from 2016 onward, but we cannot identify participants in that round directly in the CBE. According to the tax authority, only 1,915 individuals joined the 2017 round, disclosing USD 1.42 billion (Estadão Conteúdo 2017; Receita Federal do Brasil 2017).

After the amnesty, the number of individuals reporting declined gradually, reaching 15,241 in 2019. This decline mirrors that observed among non-participants who reported in the same reference year (Figure A.2). A sharper drop occurred in 2020, when the reporting threshold rose from USD 100,000 to USD 1 million.[17]

Asset values The amnesty also greatly increased reported foreign wealth. Amnesty participants reported USD 85.7 billion in 2014, an increase of USD 59.5 billion relative to the amount they reported in 2013 (Figure 1.B).[18] This disclosed amount equals 3.3% of Brazilian GDP in 2016 (Figure A.4.A) and a 68% increase relative to the total reported by all individuals one year earlier. This generated a one-off revenue gain equivalent to 0.81% of GDP.[19] In subsequent years, the total reported by amnesty participants remained stable, while aggregate reported foreign wealth continued to increase, driven by growth in the number of individuals holding foreign assets.

This upward revision had a sizable effect on the international investment position of Brazil, a country that has historically been a net debtor. As shown in Figure A.4.B, individuals' share of Brazil's IIP assets rose from about 10% to about 20% after the amnesty, compared with 36% for firms and 44% for foreign reserves. Measured against Brazil's net foreign debt, individuals' reported foreign assets rose from slightly above 10% to about 30% in the year following the amnesty (Figure A.4.C).

Asset type and location The wealth composition highlights the central role of offshore investment vehicles. Table I breaks down the reported foreign wealth by asset type, location,

[17]Figure A.3 shows no discontinuity in 2020 when restricting the sample to individuals reporting more than USD 1 million, indicating that the decline was entirely driven by the threshold change.

[18]According to the Brazilian tax authority, 25,011 individuals participated in the 2016 amnesty, reporting USD 61.7 billion (Receita Federal do Brasil 2016b). The totals observed in the CBE are slightly lower because individuals with less than USD 100,000 in foreign assets were not required to report to the Central Bank. We also cannot assess how much the 2,808 individuals reporting in 2013 had declared in 2014 before the amnesty.

[19]Among the 25,011 individual participants, 99.4% paid the amnesty tax in full, and payments totaled USD 14.6 billion, 94.6% of the tax declared (Receita Federal do Brasil 2016a; Receita Federal do Brasil 2016b). The total tax equals 24% of the USD 61.7 billion reported to the tax authority. This reflects both the non-payment and that the effective tax on dollar-denominated assets was 25% rather than 30%, given the depreciation of the Brazilian real from BRL 2.66 to BRL 3.18 per USD between December 2014, the valuation date, and October 2016, the payment date.

and amnesty participation in 2014.[20] Table I shows that 84% of the foreign wealth of amnesty participants is located in OFCs, compared with 61% for non-participants. The British Virgin Islands account for the largest share of disclosed value (27%), followed by the Bahamas (16%), the Cayman Islands (12%), Switzerland (11%), Panama (11%), and the United States (6%) (Table A.2). The three largest destinations do not tax individuals' capital income or capital gains, while Panama does not tax foreign-source income. Switzerland and Panama are overrepresented in amnesty participants' holdings relative to those of non-participants, while the United States is underrepresented. The shares in other OFCs are broadly similar across the two groups.

Equity classified as foreign direct investment (FDI) is by far the largest category, accounting for 68% of disclosed assets. The corresponding share among non-participants is similar, at 66%. This FDI classification, however, does not necessarily reflect real-economy activity by the underlying firm, because, under the IMF Balance of Payments Manual, any equity stake of at least 10% is classified as FDI. Since 2017, the Central Bank has required individuals to identify whether these FDI assets are special purpose entities (SPEs) established to hold financial or real estate investments. Figure A.6 shows that close to 80% of OFC-based FDI reported by Brazilian individuals is in investment vehicles.[21] These results are related to Damgaard et al. (2024), who estimate that phantom FDI accounts for around 40% of global FDI, considering both firms and individuals.

The prevalence of these investment vehicles reflects their tax advantages. Their owners can defer Brazilian taxation of foreign income by retaining earnings within the entity and reduce exposure to U.S. estate tax, which applies to certain U.S. assets held directly by non-U.S. residents but not to those held indirectly through a foreign entity.

Other asset types include bank deposits, accounting for 9% of amnesty participants' foreign wealth; portfolio equity, which includes equity stakes below 10%, and fixed-income securities, each accounting for 6%; and real estate, at 1%. The "Trusts and Other" category accounts for

[20] Figure A.5 presents these composition patterns over the 2001–2023 period, both for amnesty participants and for all individuals.

[21] Sector, coded according to Brazil's official economic activity classification (CNAE), was always a mandatory field for equity FDI. An extra sector code for SPEs was introduced in 2017. The share classified as SPEs rose gradually from 60% in 2017 to about 80% by 2020, where it stabilized, likely reflecting gradual take-up of the new sector code.

another 9%. Over 2017–2021, when a breakdown is available, trusts on average represented 86% of the value reported under the "Trusts and Other" category. This composition highlights that focusing primarily on bank deposits, as captured in BIS data, or more generally on directly owned assets, misses the dominant form of offshore wealth in the Brazilian case.

4.2 Who Participated in the Amnesty?

Amnesty participation by wealth To better understand who participated in the amnesty, we examine where participants fall in the wealth distribution in 2015. Considering only foreign wealth, amnesty participants are wealthier. In 2014, participants reported an average of USD 3.8 million in foreign wealth (median USD 0.64 million), compared with USD 2.4 million (median USD 0.45 million) among non-participants (Table II). Figure A.7.C shows the same pattern in 2015.

We then construct a simplified wealth distribution including domestic wealth. We combine individuals' fixed-income investments and equity stakes in Brazilian firms together with foreign wealth.[22] Together, fixed income and domestic equity account for more than 50% of households' financial wealth and are particularly important at the top of the distribution (Bhering and de Castro 2023).

Figure 2 shows that both amnesty participation and foreign-asset ownership rise sharply with wealth. Amnesty participation increases from less than 1% at P99–P99.9 to 8% at P99.9–P99.99 and 18% at P99.99–P99.999, reaching 21% in the top 0.001%. The share of individuals with foreign assets also rises from 2% at P99–P99.9 to 17% at P99.9–P99.99 and 40% at P99.99–P99.999 and in the top 0.001%. This pattern indicates that part of the wealth gradient in amnesty participation reflects differences in the probability of holding foreign assets. Conditional on holding foreign assets, amnesty participation rises modestly with wealth (Figure A.7.A).

Our wealth measure has several limitations. It excludes some financial assets, such as

[22] In the baseline specification, we scale total fixed-income and domestic equity holdings to match the national accounts before adding reported foreign wealth. Share capital understates firm values, and our fixed-income measure captures only part of domestic financial wealth, while foreign wealth is reported comprehensively and at market value. Without this adjustment, the construction could mechanically overstate the importance of foreign wealth.

bank deposits and pension funds, and non-financial assets, such as real estate, and does not provide population-wide coverage. It may also overstate the importance of foreign wealth, which is more comprehensively measured by construction. To assess the extent to which these limitations affect the results, Figure A.8 considers several alternative wealth definitions: (i) applying external wealth-percentile thresholds from Bhering and de Castro (2023), who estimate Brazil's wealth distribution using tax returns; (ii) considering only domestic wealth; and (iii) leaving total fixed-income and domestic equity holdings unscaled. Across all measures, amnesty participation increases monotonically with wealth, and the participation probability in the top 0.001% ranges from 13% to 29%.

Characteristics of amnesty participants Beyond wealth, Table II shows that amnesty participants are more likely to be firm owners and less likely to be employees than non-participants reporting foreign assets in 2014. In 2014, 48% of participants were employers, compared with 37% among these non-participants. Conversely, only 15% of participants were employees, half the share among these non-participants. These non-participants were also younger and 25 percentage points less likely to be Brazilian. Amnesty participants are more similar along several dimensions to a more stable group of non-participants who reported foreign assets in every year between 2003 and 2014 (long-term reporters). They are similarly likely to be firm owners and employees. They also have more similar shares of Brazilians and of assets held in OFCs, although participants hold less wealth, both foreign and domestic.

4.3 Quiet Disclosure and Anticipation

Quiet disclosure A central concern is that the amnesty might have induced *quiet disclosure*, defined as individuals starting to report previously undisclosed foreign assets outside the amnesty's scope. Despite the potential incentive to avoid the amnesty tax, we find no evidence of such behavior. Figure A.9 shows that the number of non-participant reporters and the total value they report continue along their pre-2014 growth trends after the amnesty. They remain within the 95% forecast interval of the 2003–2013 trend, with no apparent anomaly after the first announcements in 2014 that Brazil could join the CRS or in the subsequent years surrounding the amnesty. Focusing on individuals reporting foreign assets for the first time

corroborates this pattern. Figure A.10.A shows no spike in the number of first-time reporters around the amnesty year, suggesting no strategic entry into regular reporting. Figure A.10.B further shows that these first-time reporters entering after 2013 report amounts similar to those of earlier entrants and below the average and median disclosed by amnesty participants. This result provides further evidence against substantial *quiet disclosure*.

Anticipation Another potential response is the repatriation of foreign assets in anticipation of the amnesty. We use data on international transfers to assess this possibility. Figure 3 shows that, before 2016, future participants exhibit net outflows on average, contrary to what we would expect under anticipatory repatriation. The same figure also examines groups of individuals who may not have participated precisely because they had already repatriated their assets: non-participants who reported foreign assets in every year between 2003 and 2014 (long-term reporters), non-participants who reported foreign assets in any year between 2001 and 2023 (any-year reporters), and individuals in the top 0.1% of the wealth distribution who reported no foreign assets in 2015 (wealthy non-reporters). As with amnesty participants, all three groups exhibit net outflows on average. Figure A.11 shows that this pattern holds for each group when transfers are split by the CRS commitment of the counterpart country.

One explanation for the absence of quiet disclosure and anticipation is that the hidden stocks were large, at USD 2.8 million per participant on average, making them difficult to pass off as newly acquired wealth. Reporting or repatriating amounts of this magnitude without a credible justification is likely to attract scrutiny from the authorities.

4.4 The Role of the CRS

The amnesty was implemented in anticipation of the introduction of the CRS, which substantially increased the government's monitoring capacity. This timing raises the question of which of the two was primarily responsible for the large disclosure response we observe. To investigate this question, we exploit the asset-type and geographic limitations of the CRS discussed in Section 2.2.

We start by exploiting differences in asset coverage within CRS jurisdictions. Figure 4.A compares relative changes in reported foreign assets according to their degree of CRS cov-

erage. Assets that are fully covered by the CRS—bank deposits, portfolio equity, and fixed income—exhibited the largest relative increase in reported value around the amnesty, rising by about 215% in 2014, the first year of retroactive reporting. Equity FDI, which we classify as partially covered, increased by about 85% in 2014, while real estate, which falls outside CRS coverage, rose by only about 10%. By 2019, CRS-covered assets and equity FDI showed a similar increase relative to 2013. This convergence reflects the continued growth and a reallocation to equity FDI (see Appendix D). It also reflects the fact that individuals who repatriated more held more deposits.

The total value reported can be sensitive to a handful of very wealthy individuals. Pre-2013 trends are also affected by the 2012 change in the valuation method for equity FDI and by reclassifications of portfolio equity as FDI when ownership crosses the 10% threshold. The number of individuals reporting each asset type provides a complementary measure. Figure 4.B shows that this series follows similar trends across asset types before 2013. It displays a comparable spike in CRS-covered assets after the amnesty and a much smaller increase in real estate, of about 25%. However, the increases in CRS-covered assets and equity FDI are closer in magnitude than in the total value, at 128% and 112%, respectively.

Geographic variation provides similar evidence. Figure A.12.A compares CRS jurisdictions with the United States, which accounts for about 97% of the value reported in non-CRS jurisdictions. Bank deposits, portfolio equity, and fixed income increased by about 90% in the United States in 2014, consistent with FATCA covering part of these assets. By contrast, equity FDI in the United States increased by only about 30%, roughly one-third of the increase in CRS jurisdictions, consistent with its more limited coverage under FATCA. Figure A.12.B shows a similar pattern for other non-CRS jurisdictions, which are covered by neither regime. In these jurisdictions, total reported assets increased by about 40%.

Disclosures during the amnesty are concentrated in asset–jurisdiction pairs where third-party reporting increased. Taken together, these patterns suggest that the disclosure response was primarily triggered by the perceived rise in detection risk induced by the CRS and FATCA, rather than by the terms offered by the amnesty.

4.5 Share of Foreign Assets Disclosed

The previous sections showed that disclosure was large relative to previously reported assets. This comparison, however, does not reveal how much of total offshore wealth was disclosed. We assess this share using four external sources for Brazilians' foreign wealth: offshore leaks, BIS international banking statistics, aggregate CRS data, and the Atlas of the Offshore World. Across these approaches, we consistently find that a substantial share of foreign wealth was disclosed through the amnesty.

Offshore leaks The first exercise uses data from four offshore leaks: the Offshore Leaks, Panama Papers, Paradise Papers, and Pandora Papers. These leaks identify a subset of Brazilians linked to offshore entities regardless of whether they report foreign assets to Brazilian authorities.[23] We match these individuals to the CBE and examine how the share reporting foreign assets changes around the amnesty.

Across the four leaks, we identify 3,617 Brazilian individuals associated with 6,444 offshore entities.[24] Figure 5 shows that before the amnesty, in 2013, the share of these individuals ever reporting foreign assets is 25%. This share rises sharply by 20 percentage points in 2014 and then grows roughly in line with its previous trend, reaching 56% by 2023. Excluding cases that are less likely to match because they were not required to report in Brazil, such as binationals, joint owners, or entities not active in a given year, the share ever reporting increases from 33% in 2013 to 56% in 2014.

To test whether leaks themselves influenced reporting, Figure A.13 compares the matching probability of individuals in the Pandora Papers, which were published in 2021 and therefore postdate the amnesty, with that of individuals in the other leaks. We obtain similar pre-leak reporting probabilities, suggesting that the public nature of leaks is unlikely to be the main

[23]The leaked sample is concentrated in major offshore centers but also reflects leak-specific coverage. As in the reported data, the British Virgin Islands are the main jurisdiction in the leaks for Brazil, accounting for 58% of entities, while Malta is overrepresented, accounting for 15%. The Pandora Papers are the largest leak for Brazil, accounting for 39% of the entities, followed by the Panama Papers with 35%, the Paradise Papers with 25%, and the Offshore Leaks with the remaining 1%.

[24]We use the ICIJ classification to identify Brazilian owners. We then split jointly owned accounts into individual names and standardize names by removing accents, special characters, and generational suffixes. Of the resulting 3,967 names, 3,617 match at least one individual in administrative records covering the universe of Brazilian names, and 81% are unique names, substantially reducing the risk of false matches. Match failures mainly reflect incomplete names or records incorrectly classified by the ICIJ as Brazilian.

driver of disclosure.

Non-matches do not necessarily imply evasion: leaked names may be incomplete, an offshore entity may be closed, balances may fall below reporting thresholds, the individual may no longer be resident in Brazil, or reporting may not be required, as for settlors of irrevocable trusts. Table A.3 describes individuals by match status, restricted to the 2,916 names that match a single individual in the administrative records. Individuals without a match have substantially less domestic wealth and lower international and bank transfers, suggesting that some may not have been resident in Brazil or otherwise subject to the reporting requirement. The similar reporting response among individuals appearing in leaks available only after the amnesty also suggests that some non-matches do not reflect non-compliance, since being publicly identifiable in a leak implies a high risk of detection.

Bank for International Settlements The BIS Locational Banking Statistics allow us to compare Brazilian deposits held in BIS-reporting jurisdictions with deposits reported to Brazilian authorities for the same set of jurisdictions.[25] Figure A.14 presents the comparison. Between 2001 and 2013, the value reported by individuals to the Central Bank corresponded, on average, to only 21% of the deposits recorded in the BIS data. In 2014, the coverage ratio rose sharply and remained high, averaging 82% between 2014 and 2023.

Methodological differences may explain part of the residual gap. First, individuals may report deposits under other asset types, such as fixed income or money market funds. Second, our adjustment for firm deposits may be imperfect. Third, reporting thresholds exclude smaller balances that may still be captured in BIS statistics, and deposits are more common among smaller holders. Finally, residence may be classified differently across sources. While foreign banks typically rely on customer registration information, Brazilian declarations are based on residence.

To assess some of these concerns, Figure A.15.A considers an alternative specification that includes both deposits and fixed-income assets reported by Brazilian individuals. This

[25]The BIS bilateral data group households and non-financial firms within the non-bank, non-financial sector. To focus on individuals, we subtract from the BIS total the value of foreign deposits reported to the Central Bank by Brazilian non-financial firms, defined as firms outside CNAE section K (financial intermediation, insurance and pension funds, and auxiliary financial activities). We restrict the comparison to the eight countries with continuous bilateral BIS deposit series vis-à-vis Brazil over 2001–2023: Belgium, France, Ireland, Luxembourg, Switzerland, Taiwan, the United Kingdom, and the United States.

specification provides an upper bound, because fixed income may include securities issued by non-bank borrowers, such as corporations or sovereigns, which are outside the scope of BIS bank-liability statistics. Including fixed-income assets only modestly reduces the gap before the amnesty, but eliminates it after the amnesty. Figure A.15.B includes both firms and individuals, providing a direct comparison between non-bank deposits recorded in the BIS data and deposits reported by non-bank Brazilian residents. This comparison shows that the reduction in the gap is not driven by an increase in firm reporting.

Common Reporting Standard Figure A.16 compares the USD 157.0 billion balance (EUR 142.1 billion at the European Central Bank rate of December 29, 2023) transmitted to Brazil through the CRS in 2023, obtained from Boas et al. (2026), with the foreign assets reported by Brazilian individuals, broken down by treatment under the CRS. Assets reported directly by custodian banks, namely deposits, portfolio equity, and fixed income, account for only USD 21.2 billion. Most of the potentially reportable value is instead held through foreign entities classified as FDI, with USD 114.2 billion in SPEs and USD 28.7 billion in investment funds.[26] SPEs should generally fall under the CRS rules for passive non-financial entities, with their financial accounts looked through to their controlling persons, while investment funds should generally qualify as financial institutions and report their investors directly.

Together, the categories that should in principle be transmitted through the CRS amount to USD 164.1 billion, slightly above the USD 157.0 billion received by Brazil.[27] The SPE value likely overstates the amount actually transmitted through the CRS because entities in CRS jurisdictions may hold underlying accounts in non-CRS jurisdictions, such as the United States, and these accounts would not be reported through the CRS. We cannot observe the location of these underlying accounts, but the evidence presented in Appendix C suggests that part of this value is invested in the United States.

Overall, the aggregate magnitudes suggest broad CRS coverage of the foreign wealth reported by Brazilians. However, the decomposition highlights that only a small share of

[26] As with firms, investment funds are classified as equity FDI when the individual owns at least 10% of the fund (International Monetary Fund 2009).

[27] USD 40.9 billion reported in CRS-participating jurisdictions falls outside CRS coverage. Most of this is equity FDI in operating companies, at USD 31.5 billion, followed by USD 3.0 billion in real-estate holding companies and USD 6.3 billion in directly owned real estate. Individuals also report USD 23.9 billion in non-CRS jurisdictions, 97% of which is held in the United States.

reportable wealth is reported directly by custodian banks. Most is held through entities, where reporting depends on entity classification, look-through or self-reporting rules, and the location of the underlying financial accounts.

Atlas of the Offshore World We complement these exercises with the Atlas of the Offshore World (Faye et al. 2025), which provides country-level estimates of offshore wealth from 2001 onward using BIS and Swiss National Bank data to allocate global offshore holdings (Zucman 2013; Alstadsæter et al. 2018). Figure A.17 shows that pre-amnesty reported amounts fall below Atlas estimates, while post-amnesty reported amounts exceed them. The Atlas's underestimation after the amnesty can be explained by its reliance on deposit information. Deposits represent a small share of Brazilian offshore portfolios, especially outside Switzerland (Table A.2). Johannesen et al. (2026) similarly find, using CRS and FATCA data, that the Atlas underestimates total offshore wealth in South Africa by a factor of two.

5 Global Capital Allocation

The previous section established that the increase in offshore monitoring induced a large disclosure of foreign wealth under the amnesty. Beyond improving reporting, stronger monitoring and the associated regularization may also affect capital flight, which United Nations Conference on Trade and Development (2009) defines as "the transfer of domestic or national savings to foreign accounts and as such entails a loss of resources that could otherwise be invested domestically." The program could reduce capital flight by facilitating transfers back to Brazil, making offshore assets less attractive once they no longer escape taxation, and requiring funding for the amnesty tax payment.

We begin by examining whether participants repatriated capital to Brazil. We construct an individual-level measure of repatriation by dividing net international transfers to Brazil in 2016–2017 by individuals' foreign wealth in 2015.[28] Figure 6 presents the distribution of this measure among amnesty participants. Three groups stand out. Around 35% of individuals

[28]The sample in the repatriation analysis is slightly smaller than the full sample of amnesty participants because the measure is not defined for individuals without foreign assets in 2015. Results are similar with 2014 wealth as the reference value.

have essentially no net transfers. A second group, accounting for around 20%, has net transfers between 20% and 35% of foreign wealth, roughly the amount needed to pay the amnesty tax. A third group, representing about 5%, has net transfers close to 100%. On average, net transfers correspond to 22% of foreign wealth, broadly in line with the amnesty tax.

Figure A.18 shows that aggregate repatriation was even lower, at 13%. This difference reflects higher repatriation rates among individuals with smaller foreign wealth. Figure A.19 demonstrates that 20% of participants with up to USD 500,000 in foreign wealth have net transfers in 2016 exceeding 40% of their holdings. This share declines steadily with foreign wealth, reaching 11% among those with USD 2.5–3 million and 6% among those with USD 5 million or more. This gradient points to fixed costs of holding assets offshore, which make offshore holdings less advantageous for individuals with lower balances. Columns (2) and (3) of Table II compare, along several dimensions, participants who repatriated more than 40% with those who repatriated less. High-repatriation individuals are older, have lower domestic wealth, and are slightly less likely to own a firm.

To assess whether these net transfers capture repatriation associated with the amnesty rather than other cross-border flows, we present the same distribution for long-term reporters (non-participants who reported foreign assets in every year between 2003 and 2014) in Figure A.20.A. The distribution is concentrated around zero, with no mass between 20% and 35% or near 100%, and average net transfers are −6%. Relative to this counterfactual, amnesty participants repatriated an average of 28% of their foreign wealth, and their distribution is significantly different (Figure A.20.B). The results are similar when using non-participants who reported foreign assets in 2014 as the comparison group, whose average net transfers are −13%, implying a difference of 34 percentage points (Figure A.20.C and Figure A.20.D).

Figure A.21.A presents a conservative approach that compares individual transfers and assets in the same country. The distribution retains the same two masses around 30% and 100%, although they are more muted. This restriction is conservative because the jurisdiction of equity FDI, the main asset type, can differ from that of the account through which funds are transferred. A less restrictive comparison matching transfers and assets across OFCs yields similar results (Figure A.22). Finally, Figure A.23.A plots aggregate monthly transfers by individuals to and from Brazil and shows that October 2016 marks the largest inflow from

OFCs over the entire sample period, exceeding average monthly inflows by more than 25 standard deviations.

The amnesty does not appear to have had a lasting effect on aggregate international transfers after 2017 either. Figure 3 shows that participants returned to net outflows from 2018 onward, indicating that the program did not reverse capital flight.[29]

The low levels of repatriation raise the question of why individuals kept most of the disclosed assets offshore. Appendix C uses unique data on individuals' offshore returns to show that offshore assets were largely invested in global financial markets and provided diversification from Brazilian markets and currency risk.

6 Capital Allocation in Brazil

6.1 Empirical Strategy

The increase in offshore transparency, together with regularization under the amnesty, may have affected capital allocation in Brazil along several margins. First, it may have reduced the attractiveness of offshore relative to domestic investments by bringing offshore assets into the tax system. Second, it could have unlocked capital previously difficult to repatriate. Third, part of the repatriated resources may have been invested domestically. Fourth, paying the amnesty tax may have required mobilizing domestic assets. To identify these effects causally, we estimate event-study specifications for amnesty participants and the firms they own:

$$Y_{it} = \sum_{k \neq 2015} \beta_k \, \mathbf{1}[t = k] \cdot \text{Participant}_i + \alpha_i + \lambda_t + \varepsilon_{it}, \tag{1}$$

where Y_{it} is an outcome for individual i (or for a firm owned by individual i) in period t, α_i and λ_t are unit and time fixed effects, and Participant_i indicates amnesty participation.[30] The coefficients β_k recover amnesty participants' outcomes relative to the control group over time, with 2015, the last year before the amnesty, as the omitted period (June 2016 in the monthly fixed-income regressions). Standard errors are clustered at the individual level. The

[29] Despite the return to net outflows, amnesty participants became significantly more likely to record both foreign-exchange inflows and outflows (Figure A.24).

[30] Log outcomes exclude observations with zero values.

outcomes, samples, and frequency differ across analyses and are detailed in each subsection.

As the control group, we use non-participants who reported foreign assets in every year between 2003 and 2014 (long-term reporters). This group aims to absorb the macroeconomic and financial trends affecting wealthy individuals with foreign exposure, and is similar to participants along several margins (see Section 4.2). Long-term reporters' firms are also comparable in size and other observable characteristics, as shown in Table A.4.[31]

The empirical design exploits the expected increase in offshore monitoring as a common shock that differentially affected individuals according to their pre-existing reporting status. Amnesty participants had previously unreported foreign assets and faced a substantial increase in the consequences of offshore monitoring, whereas long-term reporters had already disclosed their foreign assets. The estimated effect bundles the consequences of enforcement-induced disclosure with those of the amnesty terms, including the regularization and tax payment.

Identification relies on three assumptions: parallel trends, no anticipation, and the stable unit treatment value assumption (SUTVA). Amnesty participation was an individual decision, raising the concern that participants may have selected into the program, and consequently into our treated group, based on anticipated changes in their outcomes. Two facts limit this concern. The increase in disclosure was mostly driven by the rise in offshore monitoring rather than by the amnesty terms (Section 4.4), and, in response to this common shock, take-up was high (Section 4.5). Pre-existing reporting status could nevertheless be correlated with differential outcome trends. The long pre-period allows us to assess whether the two groups were already on different trajectories, while their similarity in observable characteristics makes differential exposure to concurrent shocks less likely. Regarding anticipation, Section 4.3 finds little evidence of changes in disclosure or international transfers before the amnesty. Finally, SUTVA is plausible because long-term reporters had already been complying for an extended period under low monitoring, so neither their tax liabilities nor their ability to move reported

[31] Alternative comparison groups have important limitations. Individuals reporting foreign assets in 2014 display mean reversion in employment status and own younger firms. Figure A.25.A shows that employment among individuals reporting foreign assets in a given year reverts strongly over time, consistent with a group of highly mobile individuals who may reside in Brazil only temporarily. Figure A.25.B shows that their firms also tend to have begun operating more recently, and have different trajectories before the amnesty. By contrast, long-term reporters follow employment paths similar to those of amnesty participants and own firms with similar activity trajectories. Wealthy individuals without foreign exposure may be subject to different macroeconomic and financial shocks.

assets should have changed with the increase in monitoring. Using long-term reporters also prevents quiet disclosure from contaminating the control group.

6.2 Real Effects on Amnesty Participants' Firms

When individuals own the firms they manage, personal wealth, liquidity, and tax incentives can affect firm decisions (Chetty and Saez 2005; Schmalz et al. 2017; Bach et al. 2024; Leite 2024). The link between offshore wealth and domestic capital formation is central to the capital-flight argument and of potential macroeconomic relevance, as firms owned by individuals with foreign wealth accounted for 6.1% of all formal employment in 2015.[32] This section examines participants' firms to test whether the crackdown on offshore evasion shifted capital toward productive investment in Brazil.

We compare firm outcomes of amnesty participants and long-term reporters between 2009 and 2022, aggregating them at the owner level in proportion to each individual's ownership share. To focus on existing firms, we hold pre-amnesty ownership fixed and require firms to employ workers in 2015. Employment and the wage bill capture firm growth on the labor margin, and total bank transfers received proxy for revenues. We also analyze outstanding loans, although this outcome is less straightforward to interpret. Higher borrowing may finance firm expansion, but it may also reflect financial distress.

Figure 7 presents the event-study coefficients for these outcomes. Pre-trends since 2009 are parallel and jointly non-significant. After 2015, we find no significant change in employment, the wage bill, outstanding loans, or the revenue proxy. In the four years after the amnesty, the 95% confidence intervals reject effects larger than 6% for employment and 8% for the wage bill. The bounds are wider for the revenue proxy and for outstanding loans, at 22% and 25%, respectively, so we can only rule out large effects for these two outcomes.

We perform several robustness tests. We restrict the sample to owners with more than 50% ownership, attribute entire firm outcomes to each individual, focus on a balanced sample, estimate the regressions at the firm rather than owner level, focus on capital-intensive sectors,

[32]These firms employed 2.94 million people in 2015, 1.20 million of them in firms owned by amnesty participants and 1.74 million in firms owned by non-participants reporting foreign assets that year, excluding firms with owners in both groups. RAIS records 48.1 million formal employment relationships in Brazil in December 2015.

and define high repatriation based on net inflows relative to firm capital. The estimates remain mostly similar across specifications, although the pre-trends test is not satisfied for some subgroups and outcomes (Table A.5).

The average null effect could mask offsetting responses depending on repatriation. Those with high repatriation experienced a domestic liquidity inflow, whereas those with little may have faced a liquidity outflow to finance the amnesty tax. Column (4) of Table A.5 confirms the null effects on firm outcomes even for high-repatriation individuals, although estimates by repatriation subgroup should be interpreted with caution because repatriation, and hence selection into each subgroup, is endogenous.

6.3 Financial Investments

If the amnesty did not affect participants' firms, including among those who repatriated substantial amounts, where was the repatriated wealth invested? To examine this question, we exploit data on individuals' fixed-income investments in Brazil. Fixed income is the largest liquid asset in household portfolios in Brazil, nearly 10 times larger than listed equity.

We estimate three event studies based on amnesty participants' repatriation in 2016, because the response is likely to vary with repatriation. Guided by the distribution shown in Figure 6, we define three groups: participants who repatriated more than 40%, clearly above the amount needed to pay the amnesty tax; participants who repatriated between 5% and 40%, broadly in line with the tax payment; and participants who repatriated at most 5%, indicating little or no repatriation. Since the fixed-income data only start in 2015, we run the regressions at the monthly level from 2015 to 2022, with June 2016 as the omitted period.

Figure 8 presents the results for the three groups. High-repatriation individuals experience a sharp and significant 56% increase (0.44 log points) in fixed-income investments in the last quarter of 2016, just after the amnesty ended. This increase persists until the end of the period, although it declines to 31% (0.27 log points) by the end of 2022. An accounting exercise indicates that the immediate increase in fixed-income holdings can account for about 61% of repatriated capital net of the amnesty tax.[33]

[33]On average, high-repatriation individuals held USD 1.52 million in foreign wealth in December 2015 and had net inflows of USD 0.90 million over 2016–2017. At an amnesty tax rate of 30%, the implied tax liability

Individuals repatriating 5–40% experience no change, in line with using repatriated capital primarily to pay the amnesty tax. Individuals with near-zero repatriation experience a small but significant 11% decline (-0.12 log points) in fixed-income investments immediately after the amnesty. This is consistent with these participants paying the amnesty tax out of domestic investments rather than repatriating foreign assets.[34]

Because the large increase among those who repatriated is offset by the decline among the larger group that did not repatriate, the aggregate net effect on the fixed-income holdings of all amnesty participants is not statistically different from zero (Figure A.26). This limits the scope for macroeconomic effects operating through an aggregate increase in domestic bank liquidity.

7 Revenue-Maximizing Amnesty Tax

The Brazilian amnesty generated substantial disclosure despite its 30% tax rate, but little repatriation and no increase in real investment. It also primarily concerned individuals at the very top of the wealth distribution, a group facing lower effective tax rates than average and for whom available tax instruments are more limited (Palomo et al. 2025). Motivated by these findings, this section asks what the revenue-maximizing amnesty tax would have been. We set up a simple parametric model and bring it to the data, leveraging our empirical findings.

7.1 Individual and Government Decision

Individuals There is a continuum of individuals $i \in [0, 1]$ with offshore wealth W^i. Each chooses to report ($D^i = 1$) or hide ($D^i = 0$), given the price of reporting R and the penalty P paid if hidden wealth is detected, both expressed as shares of wealth, the probability p of detection, and a hiding cost K^i. Individuals are risk neutral and report if the payoff of reporting is at least the expected payoff of hiding: $D^i = 1 \iff W^i(1 - R) \geq W^i(1 - pP) - K^i$.

The amnesty and the CRS simultaneously change two parameters of the reporting decision.

is USD 0.46 million, leaving USD 0.44 million in inflows net of taxes. Their domestic fixed-income holdings were USD 0.49 million in June 2016 and rose by 56% by December 2016, an increase of USD 0.27 million. This increase equals 61% of the USD 0.44 million inflow net of taxes.

[34]Results using Poisson pseudo-maximum likelihood are similar, although the coefficients are smaller. This estimator gives greater weight to larger holdings.

Before them, regularizing hidden wealth meant paying the full taxes and penalties due, $R = t_{\text{pre}}$, and hidden wealth was detected with a low probability, $p = p_{\text{pre}}$. The amnesty lowered the price of reporting to t, and the CRS raised the probability of detection to p_{post}. Individuals who start reporting because of either change are the amnesty participants.

Government The government chooses t to maximize the revenue from participants plus the value λ it attaches to each unit of wealth disclosed through the amnesty. We set λ based on the share of disclosed wealth that is repatriated, which assumes that the government values disclosure to the extent that it brings capital back:

$$\max_{t} \ (t + \lambda) \int_i \left[\pi^i(t, p_{\text{post}}) - \pi^i(t_{\text{pre}}, p_{\text{pre}})\right] W^i \, di, \tag{2}$$

where $\pi^i(R, p) \equiv \Pr(D^i = 1 \mid R, p)$ is the probability that i reports at price R and detection probability p. The term in brackets, $\pi^i(t, p_{\text{post}}) - \pi^i(t_{\text{pre}}, p_{\text{pre}})$, is the probability that i starts to report given the CRS shock p_{post} and the amnesty rate t. At the optimum, the government trades off a higher rate against lower participation.[35]

7.2 Model Estimation

We parameterize the hiding cost as a fixed amount plus a component proportional to CRS-covered wealth and another to total wealth, whose rate depends on individual characteristics Z^i and an idiosyncratic term, $K^i = \beta_0 + (\alpha + \gamma' Z^i + \eta^i) W^i + \alpha_c W_c^i$, with $\eta^i \sim N(0, \sigma_k^2)$. The increase in detection under the CRS applies only to assets covered by automatic exchange of information, $W_c^i \leq W^i$, while uncovered assets keep the pre-CRS probability p_{pre}. The separate slope α_c lets the cost of hiding covered assets differ from that of uncovered ones. This prevents differences in reporting across pre-amnesty portfolios, whether due to differences in hiding costs or in detection rates before the CRS, from being attributed to the CRS. The

[35] Individuals who already reported before the amnesty and the CRS are inframarginal, as their decision does not depend on t. They pay no amnesty tax, so they do not contribute to the amnesty tax revenue.

reporting probabilities before and after the CRS and the amnesty are

$$\pi^i(t_{\text{pre}}, p_{\text{pre}}) = \Phi\big(m^i\big),$$
$$\pi^i(t, p_{\text{post}}) = \Phi\big(m^i + \delta_0 + \delta_c\, s_c^i\big),$$

with $m^i \equiv \big(\alpha + \beta_0/W^i + \alpha_c\, s_c^i + \gamma' Z^i - t_{\text{pre}} + p_{\text{pre}} P\big)/\sigma_k$ the net cost of hiding per unit of wealth, in units of σ_k; $\delta_0 \equiv (t_{\text{pre}} - t)/\sigma_k$ the price cut of the amnesty; $\delta_c \equiv (p_{\text{post}} - p_{\text{pre}})\, P/\sigma_k$ the increase in the expected penalty on covered assets under the CRS, both in the same units; $s_c^i \equiv W_c^i/W^i$ the share of wealth covered by the CRS; and Φ the standard normal distribution.

The parameters are identified from variation in amnesty participation, wealth, CRS-covered and non-covered wealth, individual characteristics, and the share of individuals who disclosed (see Section 4.2 for the corresponding reporting patterns). The amnesty reduced the cost of disclosing for everyone, which shifts the index by δ_0, and the CRS raised the expected cost of hiding covered wealth, which shifts it by $\delta_c s_c^i$ (see Section 4.4 for the disclosure response to these shocks).

We set P and t based on the legislation. Before the amnesty, regularization implied a 48.1% liability on undeclared wealth, so $P = t_{\text{pre}} = 0.481$. We set the amnesty rate to its statutory value, $t = 0.30$. The price cut, $t_{\text{pre}} - t$, is known, but the increase in detection, $p_{\text{post}} - p_{\text{pre}}$, is not. We set $p_{\text{post}} - p_{\text{pre}} = 1$, the largest possible increase, under which the CRS makes covered assets fully detectable, based on the CRS evidence in Section 4.5.

We estimate the remaining parameters with a maximum likelihood estimator of the participation indicators subject to the model reproducing the share of reporters in the population. We impose this constraint because individuals who keep hiding after the amnesty and the CRS never appear in the data. We use the share of the population that reports after the amnesty, s, estimated in Section 4.5 from the offshore leaks. We assume the leak share applies only to holders of assets in OFCs and that holders of other foreign assets report fully. This constraint pins down the dispersion of the idiosyncratic hiding cost per unit of wealth, σ_k.

Once the structural parameters are estimated, we solve the government's first-order condition for t^*, initially setting $\lambda = 0$, in which case the government values revenue only.

The resulting t^* is the amnesty rate that maximizes tax revenue from the population hiding foreign wealth.

7.3 Model Output

The baseline yields a revenue-maximizing amnesty rate of 47%, just below the 48.1% pre-amnesty liability. This reflects the weak response of uncovered assets to the price of reporting, which fell from 48.1% of wealth to 30% under the amnesty. Matching the observed reporting share requires substantial dispersion in idiosyncratic hiding costs, estimated at 69% of wealth ($\sigma_k = 0.69$). This dispersion implies that reporting decisions are driven more by heterogeneity in hiding costs than by monetary incentives.[36]

Figure 9 examines the sensitivity of this result by changing one assumption at a time. First, we set a smaller increase in detection ($p_{\text{post}} - p_{\text{pre}} = 0.5$). This attributes more of the observed reporting response to the price cut. The revenue-maximizing rate falls to 36%. Second, we restrict the sample to individuals whose foreign wealth consists entirely of foreign direct investment held either in OFCs or in the United States. This holds asset type fixed, so that differences between covered and uncovered wealth reflect only exposure to the CRS. The revenue-maximizing rate is 46%, essentially unchanged from the baseline.[37] Third, we set the pre-amnesty tax liability to 68.8%. This scales up the pre-amnesty penalty and the price cut. As a result, the estimated dispersion in hiding costs increases. The revenue-maximizing rate rises to 66%, just below the maximum feasible rate of 68.8%. Fourth, we use the effective amnesty rate of 25% instead of the statutory rate of 30%. This changes the price paid under the amnesty but leaves the estimated optimum unaffected. The revenue-maximizing rate remains 47%. Finally, we allow the government to place a direct value on disclosure itself. This increases the benefit of inducing additional reporting. The revenue-maximizing rate falls to 38% when $\lambda = 0.20$ per unit of disclosed wealth and to 29% when $\lambda = 0.40$. Under the estimated parameters, a 30% amnesty rate is optimal only if the government places substantial value on disclosure itself.

[36] Figure A.27 shows that the baseline model reproduces the rise in participation with foreign wealth, although it slightly understates participation in the top deciles.

[37] In the baseline, the hiding cost differs across asset types only through α_c. The fixed cost, the effect of individual characteristics, and the idiosyncratic component are common to all asset types.

8 Conclusion

The transparency big bang created by the CRS and FATCA led to substantial capital disclosure and large one-off tax revenues in Brazil. However, it fell short of reversing capital flight or increasing real domestic investment. Most disclosed capital remained abroad, and the capital that returned to Brazil flowed mainly into financial assets rather than firms. These results temper the promise of offshore transparency as a tool for capital mobilization. While stronger monitoring can improve fiscal capacity by expanding the tax base through disclosure, it may be insufficient to redirect capital toward domestic investment in developing economies.

The Brazilian context should be taken into account when generalizing our results. Compared with other developing countries, Brazil has strong technological and enforcement capacity (OECD 2022). This made the CRS threat more credible. Repatriation can also depend on the broader tax and economic environment. Brazil does not impose a wealth tax, and foreign income is taxed at broadly similar rates to domestic income. Regularization therefore mainly equalized the tax treatment of domestic and foreign investments rather than subjecting foreign investments to a higher tax burden. Relative to developed countries, Brazil faces greater output and exchange-rate volatility (Neumeyer and Perri 2005; Agosin and Díaz 2023), which may strengthen incentives to keep wealth abroad even after disclosure. Finally, interest rates are relatively high in Brazil (Segura-Ubiergo 2012; International Monetary Fund 2023), increasing the attractiveness of fixed income.

The findings raise broader questions for future research and policy, concerning why individuals use OFCs, how offshore investment structures operate, and how foreign wealth is measured. First, they put the role of OFCs in global capital allocation into perspective. Further understanding the non-tax motives for OFC use remains a promising research agenda. A second implication concerns the role of offshore investment vehicles. These structures matter for legal and tax enforcement because their ownership chains and legal classification make monitoring and taxation more complex. Our results provide a first step toward piercing these structures, but our understanding of their scale, use, and implications remains limited. Finally, the findings highlight the limitations of international financial statistics. Before the amnesty, Brazil's foreign asset position was substantially underestimated. Even after

disclosure, the recording of passive investment vehicles in OFCs as FDI makes it difficult to identify how and where offshore wealth is ultimately invested. Improving the measurement of these positions would help assess external vulnerabilities more accurately.

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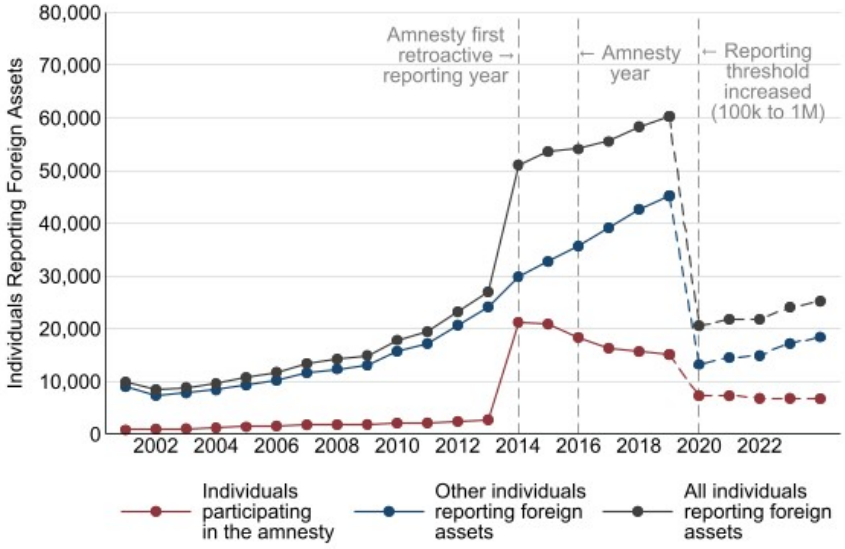
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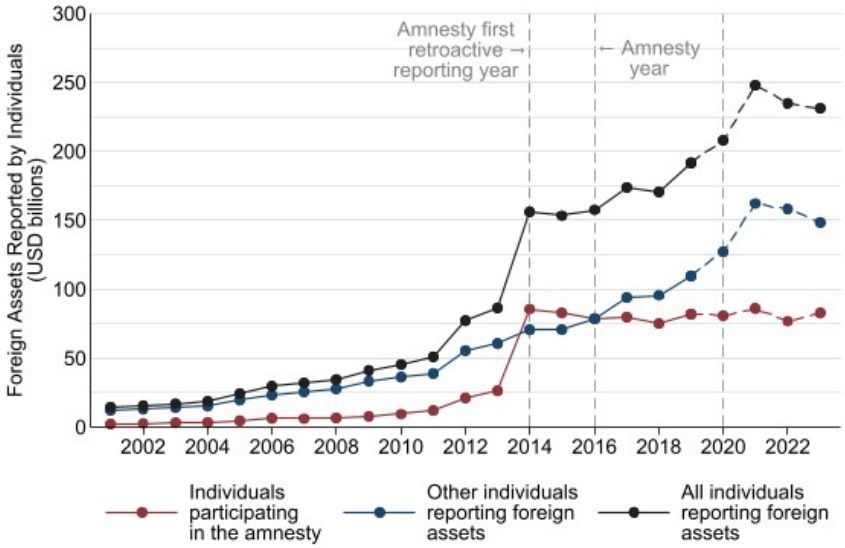
Figures and Tables

Figure 1: Foreign assets reported by individuals, 2001–2023

(a) Number of individuals reporting

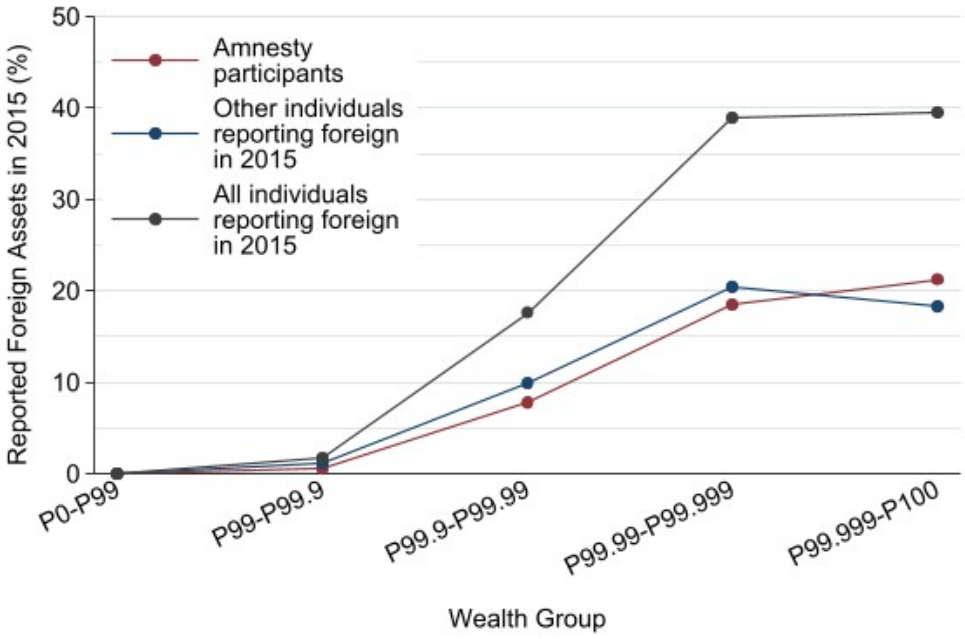


(b) Total value reported



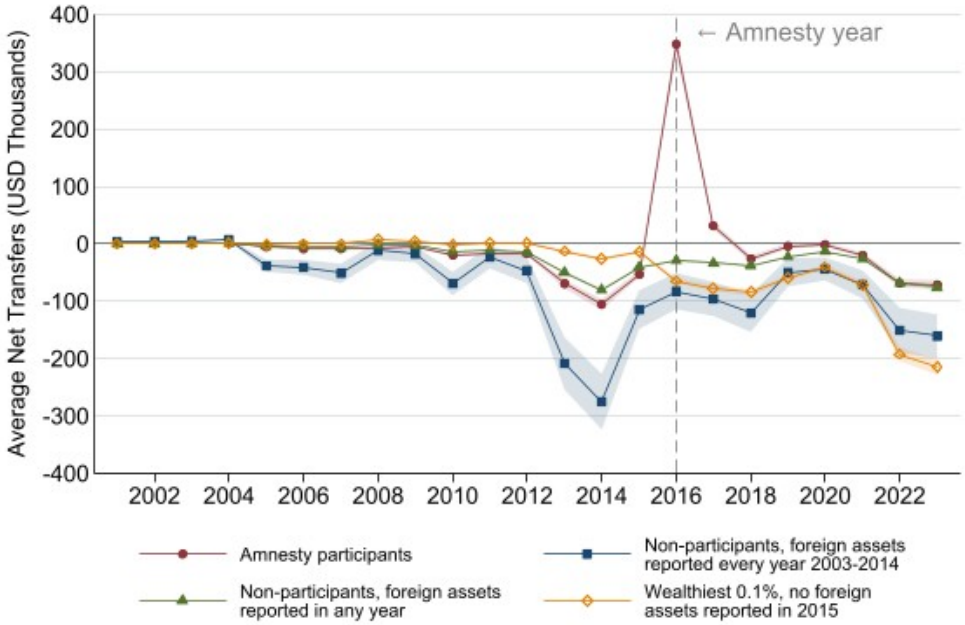
Note: Panel A presents the number of individuals reporting foreign assets to the Central Bank in each year, and Panel B the total value reported, in USD billion, for amnesty participants, non-participants, and all individuals. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, 2016, the amnesty year, and 2020, when the reporting threshold rose from USD 100,000 to USD 1 million. The series are dashed after 2019 because of the threshold change. This figure is discussed in Section 4.1.

Figure 2: Probability of foreign-asset reporting and amnesty participation by wealth group, 2015



Note: This figure presents, by 2015 wealth group, the share of individuals who participated in the amnesty, the share of non-participants who reported foreign assets in 2015, and the share of all individuals who reported foreign assets in 2015. Wealth is measured in 2015 as fixed income held in Brazilian banks plus the share capital of Brazilian firms owned, both rescaled to national accounts totals, plus reported foreign wealth. Wealth groups are defined by rank, with the top 1,500,000, 150,000, 15,000, and 1,500 individuals corresponding approximately to the top 1%, 0.1%, 0.01%, and 0.001% of Brazil's adult population. This figure is discussed in Section 4.2.

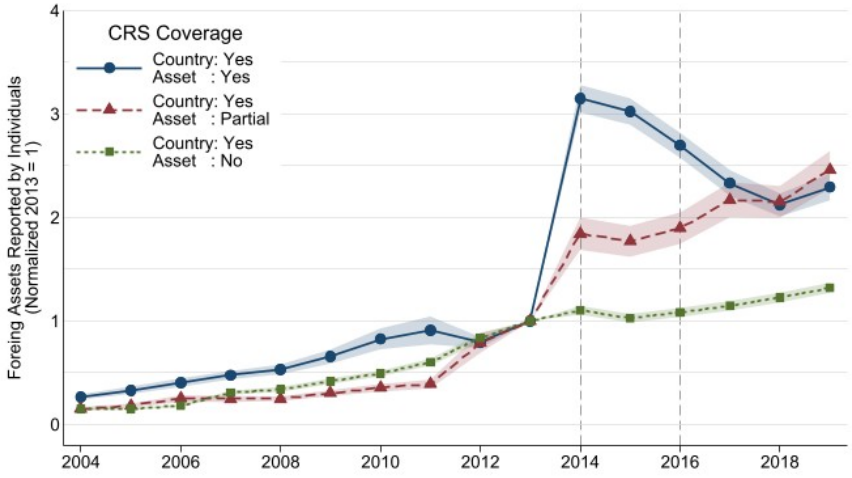
Figure 3: International transfers, 2001–2023



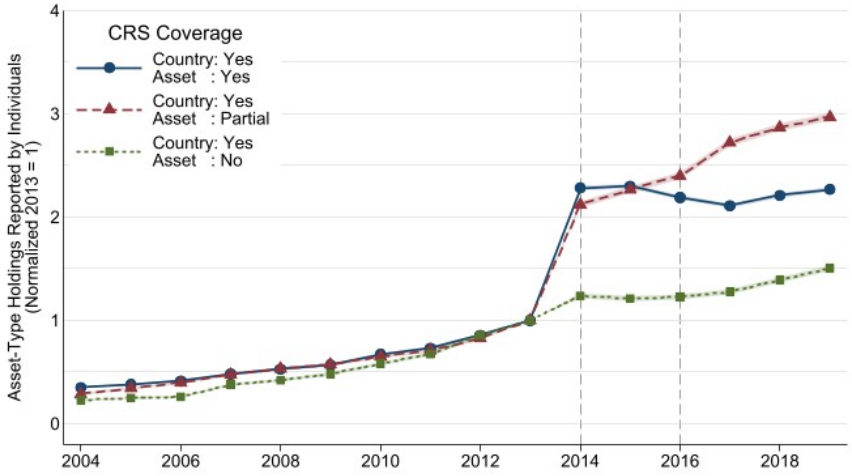
Note: This figure presents the average net international transfer to Brazil (inflows minus outflows) per individual and year, in USD thousand, for four groups. Amnesty participants are compared with long-term reporters (non-participants who reported foreign assets in every year 2003–2014), with any-year reporters (non-participants who reported foreign assets in at least one year between 2001 and 2023), and with wealthy non-reporters (individuals in the top 0.1% of the 2015 wealth distribution who did not report foreign assets in 2015). Net transfers below the 0.1st or above the 99.9th percentile of each year are excluded. Shaded areas are 95% confidence intervals of the group mean. The vertical dashed line marks the amnesty year. This figure is discussed in Sections 4.3 and 5.

Figure 4: Foreign assets reported by CRS coverage of the asset type, 2004–2019

(a) Total value reported

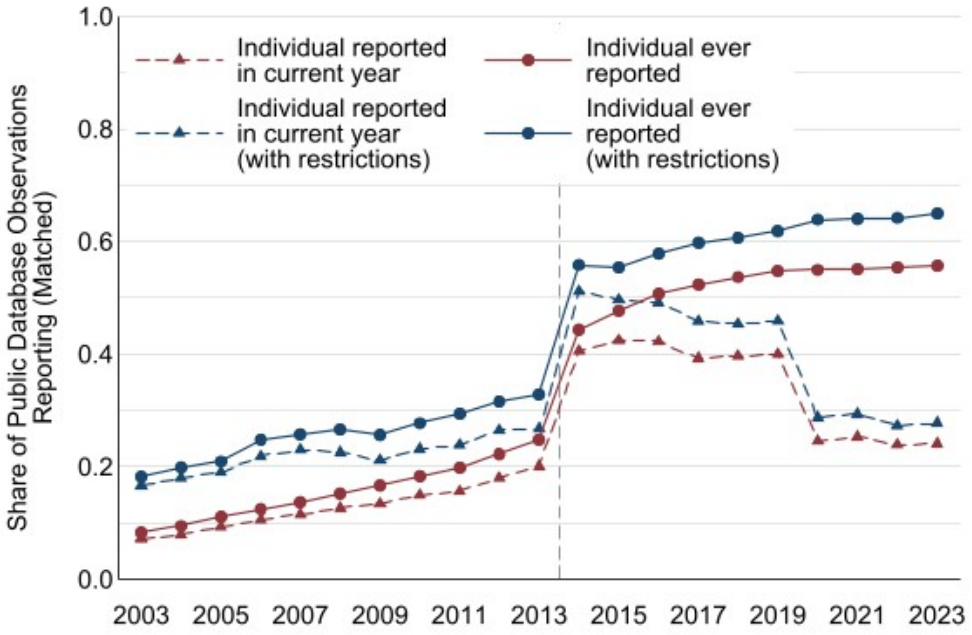


(b) Number of individuals reporting



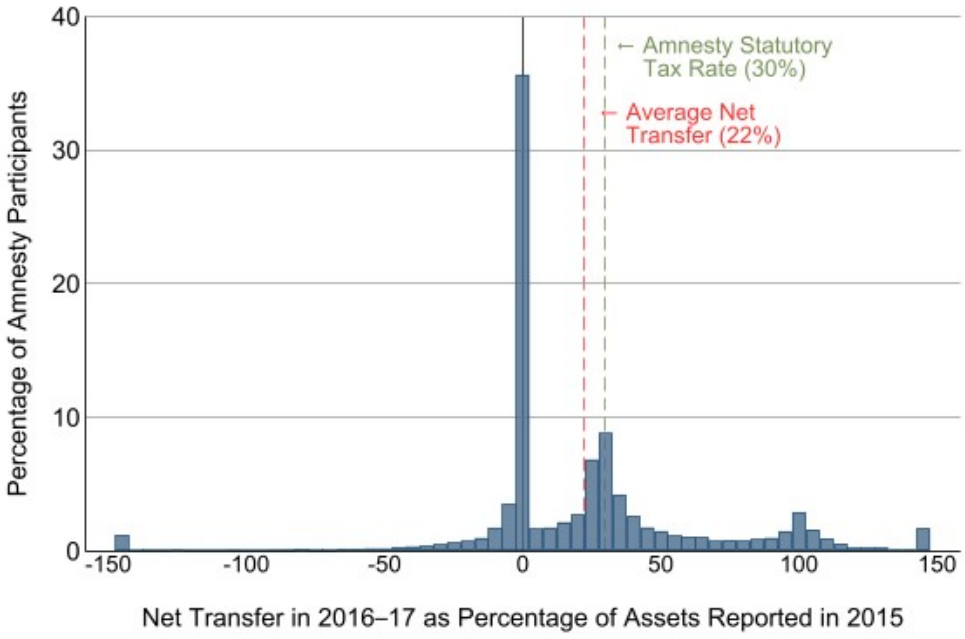
Note: Panel A presents the total value of foreign assets held in jurisdictions committed to the Common Reporting Standard (CRS) as of 2017, by degree of CRS coverage of the asset type, and Panel B the number of individuals reporting each asset type in these jurisdictions, both normalized to 1 in 2013. Covered assets are deposits, portfolio equity, and fixed income. Partially covered assets are equity classified as foreign direct investment. Non-covered assets are real estate. Trusts and other assets are excluded. In Panel A, in each asset type and year, holdings above the 99.9th percentile are capped at that value. In Panel B, an individual reporting more than one covered asset type is counted once per asset type, and the counts are not capped. Shaded areas are 95% bootstrap confidence bands based on 1,000 resamples of individuals in Panel A and 95% binomial confidence intervals in Panel B. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, and 2016, the amnesty year. This figure is discussed in Section 4.4.

Figure 5: Probability of individuals in offshore leaks reporting foreign assets, 2003–2023



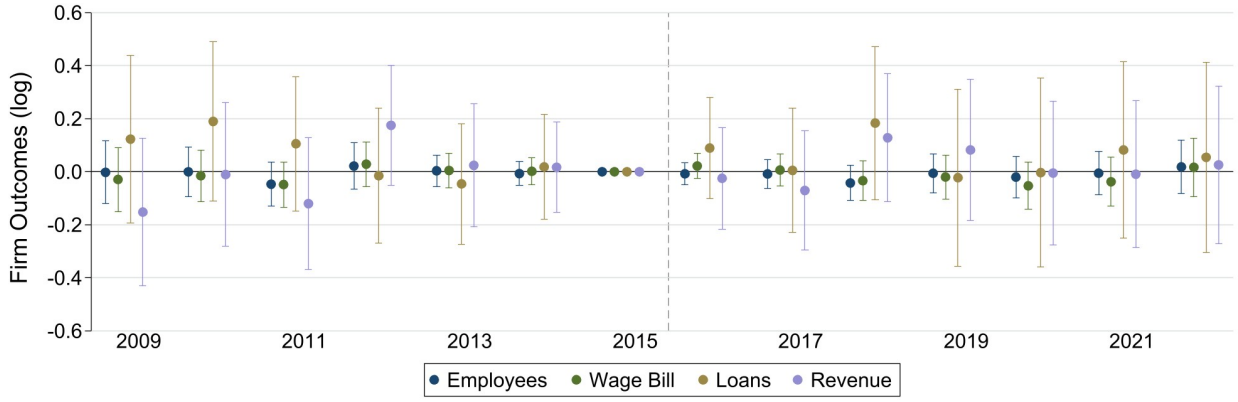
Note: This figure presents the share of individuals named in the offshore leaks, matched by name to administrative records, who report foreign assets to the Central Bank in a given year (triangles) or in any year up to that year (circles). The restricted series exclude individuals with another nationality, with abbreviated names, or appearing only as joint owners, and count each individual only in years in which the leaked entity was active. The vertical dashed line marks 2014, the first year with retroactive reporting by amnesty participants. The drop in the yearly series in 2020 reflects the increase in the reporting threshold. This figure is discussed in Section 4.5.

Figure 6: Repatriation share of amnesty participants, 2016–2017



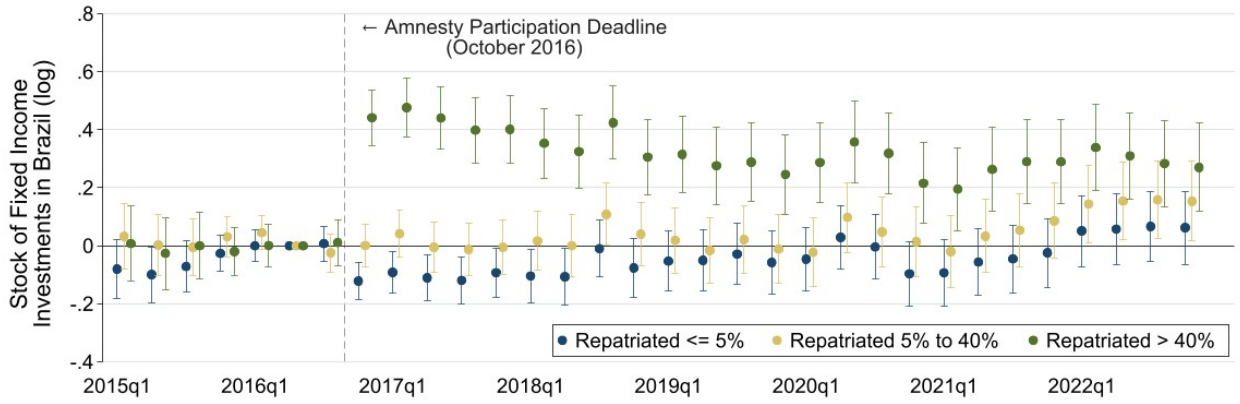
Note: This figure presents the distribution across amnesty participants of net international transfers received in 2016–2017 as a share of the foreign assets reported at the end of 2015. Bins are 5 percentage points wide and centered on the labeled value, so that 50 covers (47.5, 52.5]. Negative values indicate net outflows, and values are winsorized at −150 and 150. The sample excludes participants without foreign assets in 2015. Dashed lines mark the statutory amnesty rate of 30% and the average share, computed on the winsorized values. This figure is discussed in Sections 5 and 6.3.

Figure 7: Event study: outcomes of firms owned by amnesty participants, 2009–2022



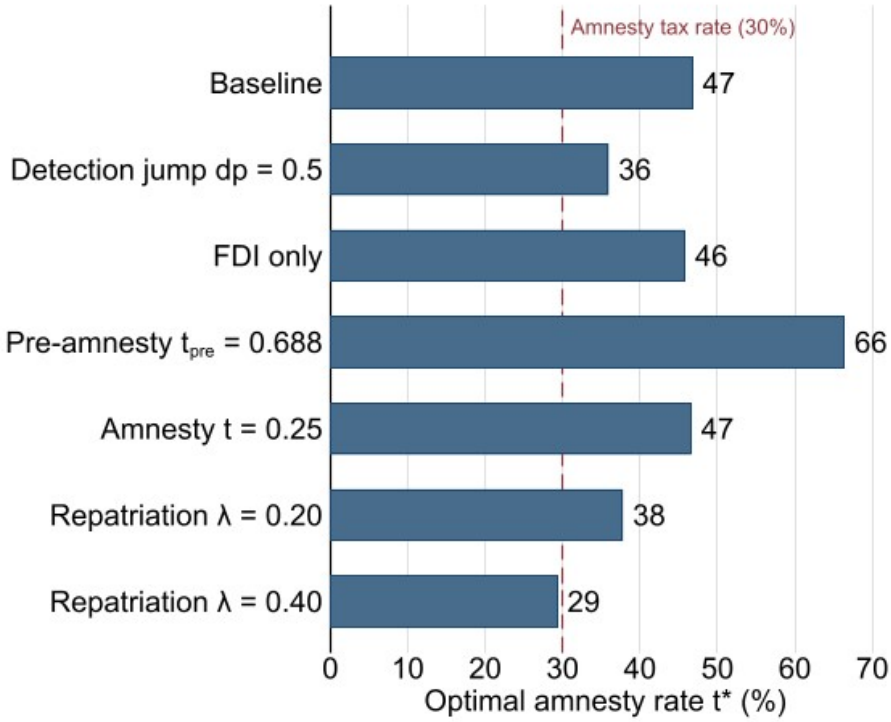
Note: This figure presents event-study coefficients from equation (1) for the log number of employees, log wage bill, log outstanding bank loans, and log revenue of firms owned by amnesty participants, relative to firms owned by long-term reporters (non-participants who reported foreign assets in every year 2003–2014), over 2009–2022 with 2015 as the base year. Revenue is proxied by bank transfers received by the firm from third parties. Firm outcomes are attributed to each owner in proportion to the ownership share measured in 2013 and summed at the owner level. The sample excludes firms without employees in 2015. Bars are 95% confidence intervals with standard errors clustered by owner. This figure is discussed in Section 6.2.

Figure 8: Event study: bank fixed-income investments in Brazil, 2015–2022



Note: This figure presents event-study coefficients from equation (1) for the log stock of fixed income held in Brazilian banks, estimated monthly over 2015–2022 with June 2016 as the base period, and shown for the last month of each quarter. Three regressions split amnesty participants by net international transfers received in 2016 as a share of the foreign assets reported at the end of 2015: at most 5% (no repatriation), between 5% and 40% (in line with the amnesty tax), and more than 40%. Each regression uses the same control group of long-term reporters (non-participants who reported foreign assets in every year 2003–2014). The vertical dashed line marks the amnesty deadline of October 2016. Bars are 95% confidence intervals with standard errors clustered by individual. This figure is discussed in Section 6.3.

Figure 9: Revenue-maximizing amnesty tax rate under alternative assumptions



Note: This figure presents the revenue-maximizing amnesty tax rate, t^*, in percent, under the baseline calibration and under alternative assumptions, changing one assumption at a time. The baseline uses all individuals reporting foreign assets for 2014 with individual controls (domestic wealth, employment, firm ownership, and foreign nationality), the share of the population that reports, s, obtained by applying the leak share only to holders of assets in offshore financial centers (OFCs), an increase of one in the probability of detection of covered assets ($\text{dp} = p_{\text{post}} - p_{\text{pre}} = 1$), an amnesty rate of 30% ($t = 0.30$), a pre-amnesty liability of 48.1% ($P = t_{\text{pre}} = 0.481$), and no value attached to disclosure ($\lambda = 0$). The other bars set $\text{dp} = 0.5$, restrict the sample to individuals whose foreign wealth is only foreign direct investment (FDI) in OFCs or the United States (without controls), set $t_{\text{pre}} = 0.688$, set $t = 0.25$, and set λ to 0.20 and 0.40. The rate solves the government's problem in equation (2) at the estimated parameters. The dashed vertical line marks the 30% amnesty tax rate. This figure is discussed in Section 7.

Table I: Foreign-asset composition: amnesty participants and non-participants, 2014

	Total (%)	Equity FDI	Trusts and Other	Equity Portfolio	Deposits	Fixed Income	Real Estate
Amnesty participants	54.9	68.2	9.4	6.4	8.9	6.2	0.9
OFC	83.9	73.0	8.6	5.7	6.5	6.0	0.2
Non-OFC	16.1	43.3	13.6	10.0	21.2	7.4	4.5
Non-participants	45.1	66.1	4.2	8.4	11.1	2.8	7.4
OFC	61.1	85.3	2.7	4.6	4.3	2.2	0.8
Non-OFC	38.9	35.9	6.4	14.4	21.7	3.8	17.8

Note: This table presents the composition of foreign assets reported in 2014 by amnesty participants and by non-participants, split by whether the assets are held in offshore financial centers (OFCs). The Total column reports each group's share of the two groups' combined foreign assets, so the participant and non-participant rows sum to 100, while the OFC and non-OFC subrows report shares of their own group's assets. The remaining columns report the asset-type composition of each row, in percent, summing to 100 across asset types. Trusts and Other includes trusts and other rights and investments. This table is discussed in Section 4.1.

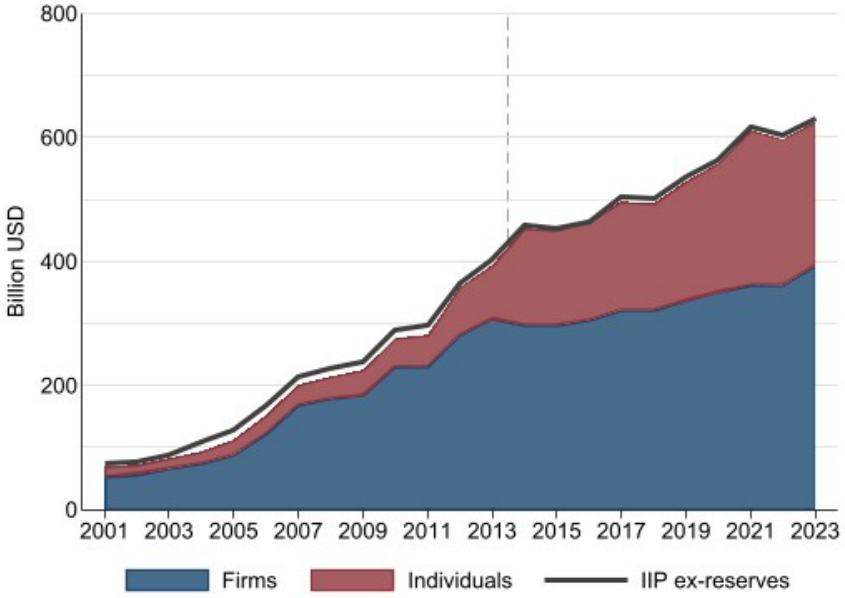
Table II: Amnesty participants and non-participants, 2014

	Amnesty			Non-participants	
	All	Repat. ≤40%	Repat. >40%	2014 reporters	Long-term reporters
Individuals	22,388	17,406	3,340	29,805	2,175
Age	54 (12) [54]	54 (12) [54]	56 (13) [56]	50 (11) [49]	58 (11) [58]
Brazilian Nationality	0.94 (0.25)	0.94 (0.24)	0.94 (0.24)	0.69 (0.46)	0.88 (0.32)
Reports Foreign Assets	0.95 (0.22)	0.99 (0.10)	0.99 (0.08)	1.00 (0.00)	1.00 (0.00)
Foreign Wealth Reported	3,829 (31,100) [641]	4,503 (34,900) [784]	1,822 (9,964) [524]	2,364 (18,800) [449]	9,897 (53,900) [1,169]
Share in OFCs	0.65 (0.45) [1.00]	0.65 (0.44) [0.99]	0.67 (0.45) [1.00]	0.26 (0.42) [0.00]	0.50 (0.47) [0.56]
Share in FDI	0.31 (0.44) [0.00]	0.33 (0.44) [0.00]	0.22 (0.40) [0.00]	0.22 (0.40) [0.00]	0.43 (0.47) [0.00]
Share Capital of Firms in Brazil	678 (3,618) [3]	742 (3,840) [4]	422 (2,447) [2]	836 (3,878) [12]	1,427 (5,647) [8]
Fixed Income in Brazil (2015)	275 (917) [13]	312 (986) [18]	151 (602) [5]	196 (723) [5]	499 (1,344) [34]
Is Employee	0.15 (0.36)	0.15 (0.36)	0.13 (0.34)	0.31 (0.46)	0.16 (0.37)
Is Employer	0.48 (0.50)	0.50 (0.50)	0.41 (0.49)	0.37 (0.48)	0.47 (0.50)
Bank Transfer Outward	259 (1,221) [2]	308 (1,351) [5]	80 (475) [0]	284 (1,270) [0]	586 (2,130) [10]
Net International Transfers Inward in 2016	348 (1,212) [0]	280 (1,177) [0]	829 (1,405) [363]	-55 (488) [0]	-82 (749) [0]
Share Repatriated in 2016	0.19 (0.49) [0.00]	0.06 (0.39) [0.00]	0.85 (0.41) [0.85]	-0.09 (0.60) [0.00]	-0.04 (0.44) [0.00]

Note: This table reports means, standard deviations (in parentheses), and medians (in brackets) in 2014. The Amnesty columns cover all amnesty participants and two subgroups split by the share of foreign assets reported at the end of 2015 that was received as net international transfers in 2016 (at most 40% or more than 40%). This share is undefined for participants without assets in 2015. The Non-participant columns cover 2014 reporters (non-participants who reported foreign assets in 2014) and long-term reporters (non-participants who reported foreign assets in every year 2003–2014). Share in OFCs and Share in FDI are the shares of reported foreign wealth held in offshore financial centers (OFCs) and classified as foreign direct investment (FDI). Is Employer indicates owning a firm with employees. Bank Transfer Outward is the value of domestic bank transfers sent to third parties. Fixed income in Brazil is observed from 2015 and is reported for that year. Wealth and transfers are in USD thousand at the end-of-year exchange rate. Continuous variables are winsorized at the 99.9th percentile by year, and net transfers and the share repatriated at the 0.1st and 99.9th percentiles. This table is discussed in Sections 4.2 and 5.

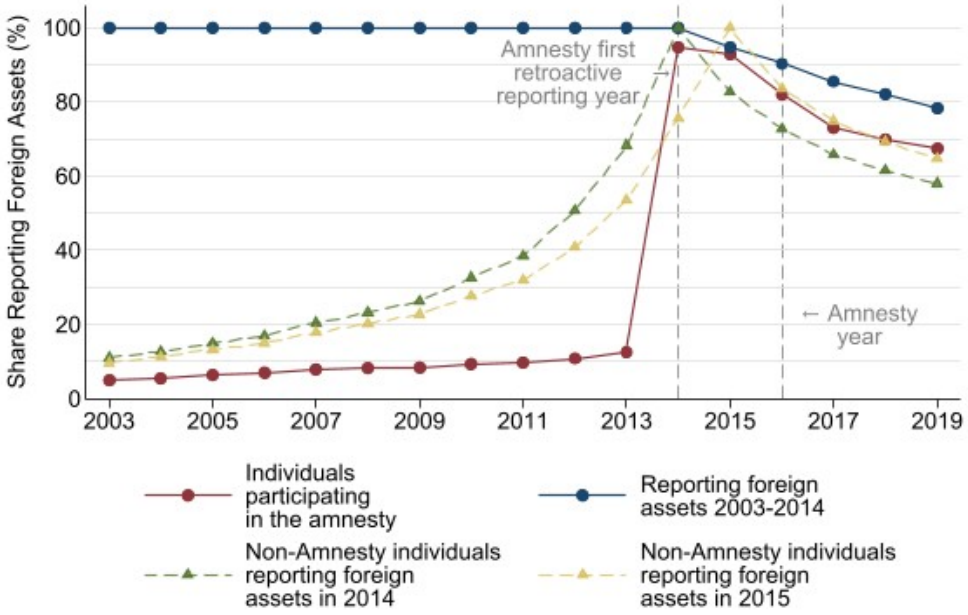
A Appendix Figures and Tables

Figure A.1: Brazil's international investment position, 2001–2023



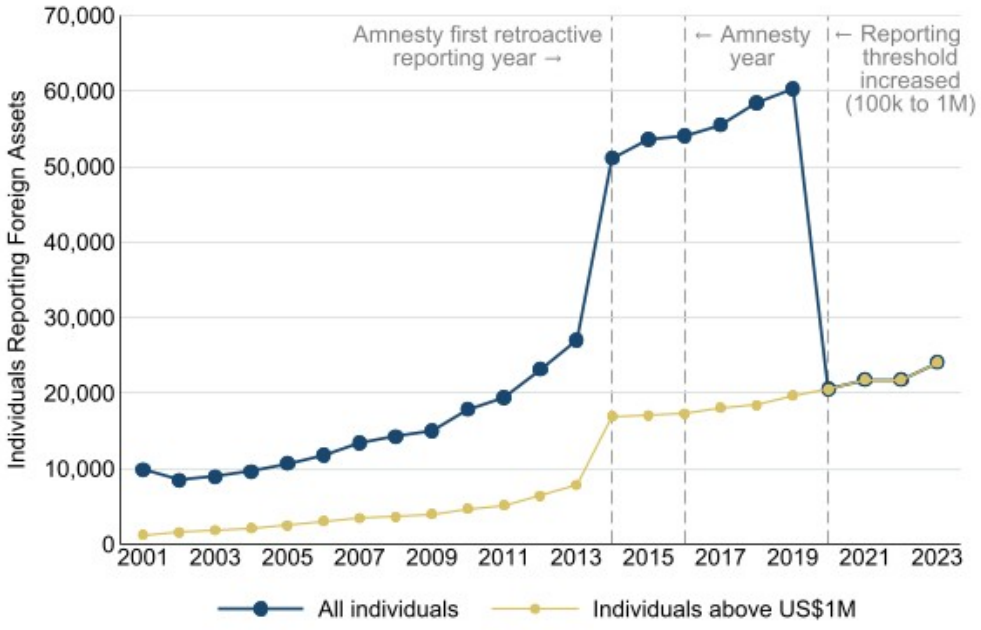
Note: This figure compares the total value of foreign assets reported to the Central Bank by individuals and by firms (stacked areas) with Brazil's international investment position assets excluding reserve assets (line), in USD billion. The vertical dashed line marks 2014, the first year with retroactive reporting by amnesty participants. This figure is discussed in Section 3.

Figure A.2: Share of individuals reporting foreign assets, 2003–2019



Note: This figure presents the share of individuals in each group who report foreign assets to the Central Bank in a given year. Amnesty participants are compared with long-term reporters (non-participants who reported foreign assets in every year 2003–2014), with 2014 reporters (non-participants who reported in 2014), and with 2015 reporters (non-participants who reported in 2015). By construction, long-term reporters report in every year through 2014. Vertical dashed lines mark 2014, the first year with retroactive reporting by participants, and 2016, the amnesty year. This figure is discussed in Section 4.1.

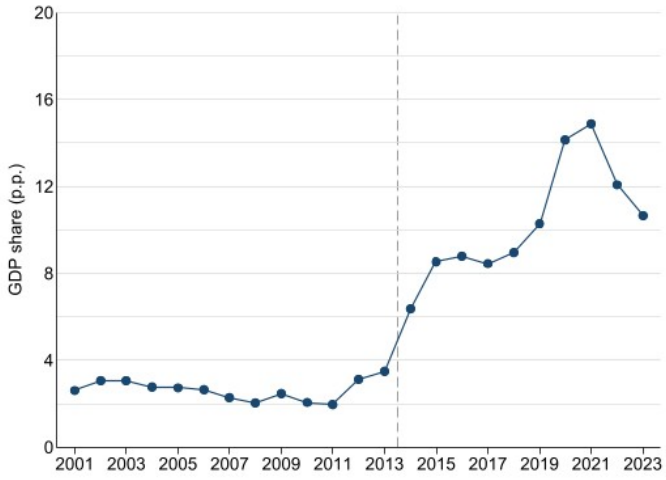
Figure A.3: Number of individuals reporting foreign assets, 2001–2023



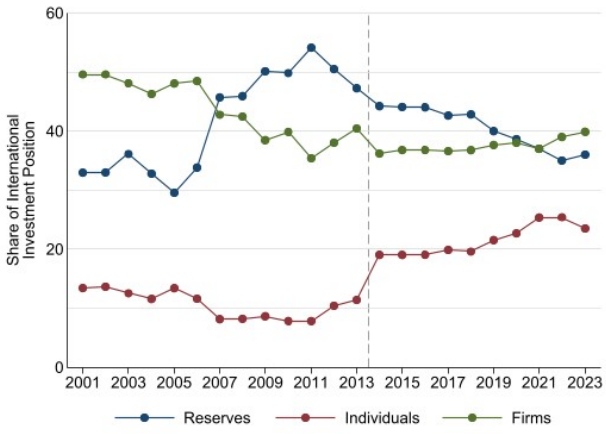
Note: This figure presents the number of individuals reporting foreign assets to the Central Bank in each year, for all individuals and for those reporting more than USD 1 million, the reporting threshold from 2020 onward. The vertical dashed line marks 2014, the first year with retroactive reporting by amnesty participants. This figure is discussed in Section 4.1.

Figure A.4: Macroeconomic significance of individuals' foreign assets, 2001–2023

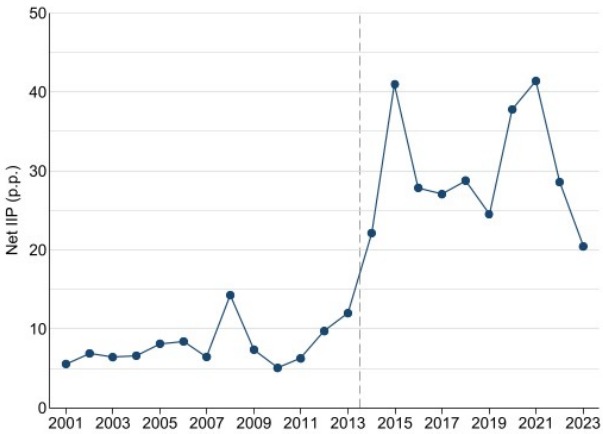
(a) GDP share



(b) Share of IIP by group

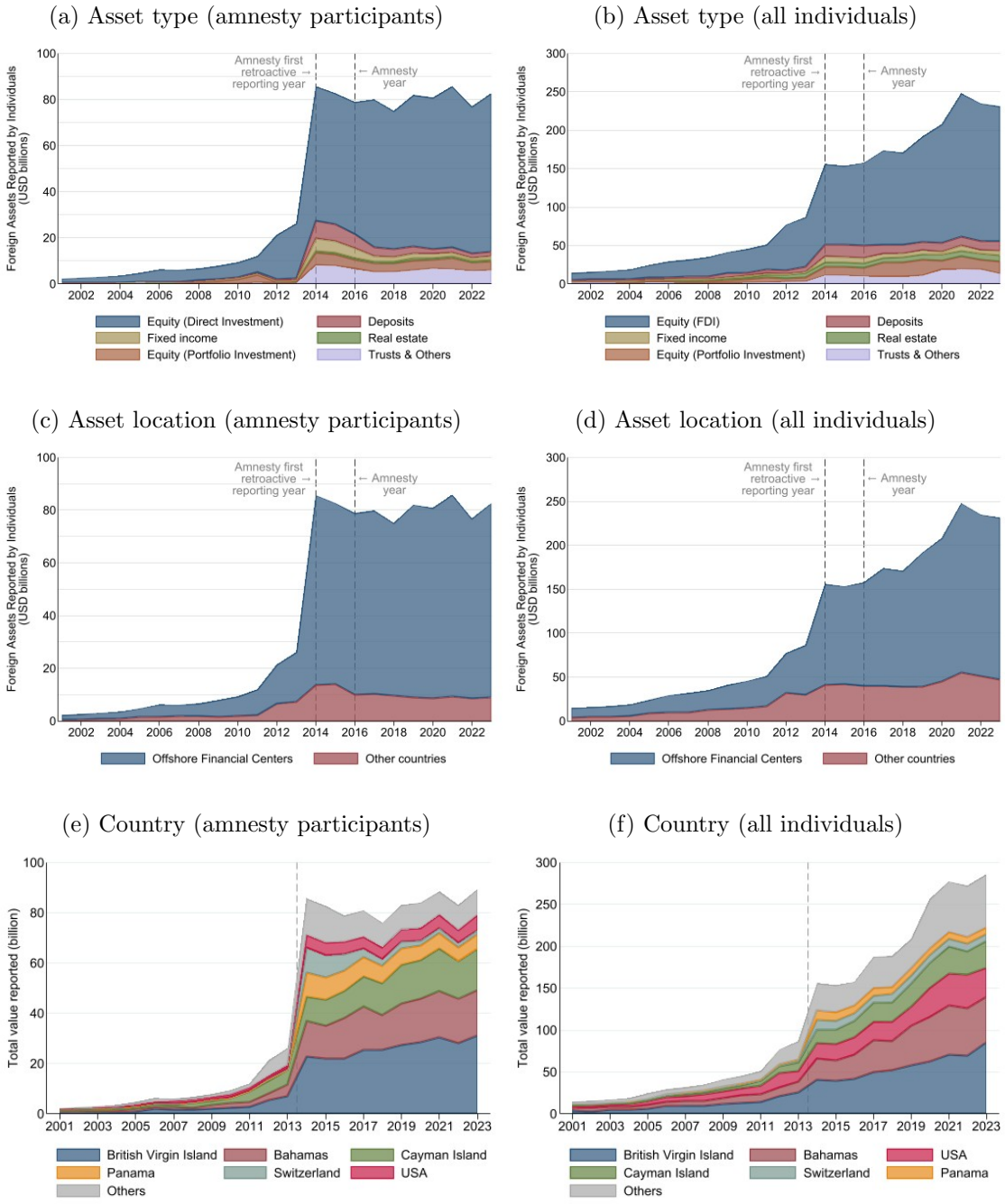


(c) Share of net foreign debt



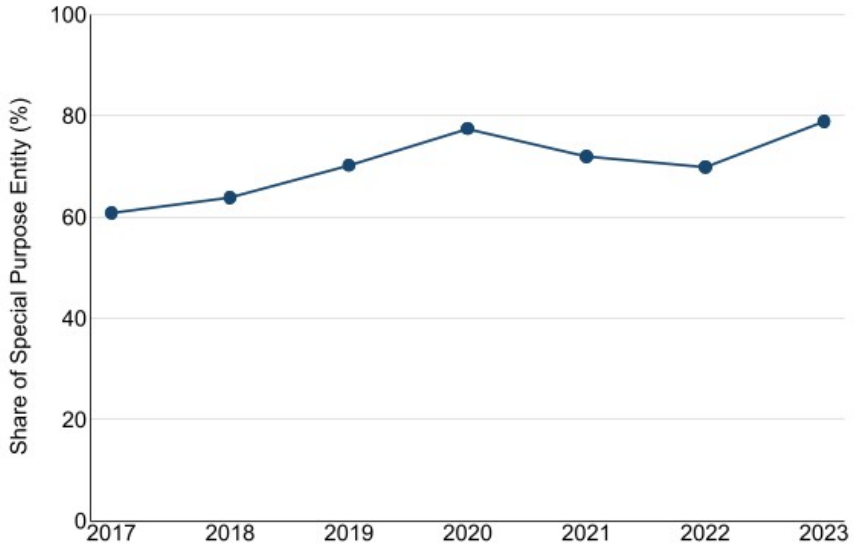
Note: Panel A presents the total value of foreign assets reported by individuals as a share of Brazil's gross domestic product (GDP) in current U.S. dollars, from the World Bank's World Development Indicators. Panel B presents the shares of Brazil's international investment position assets held by individuals, by firms, and as official reserves. Panel C presents the foreign assets reported by individuals as a share of Brazil's net foreign debt, the negative of the net international investment position. The vertical dashed line marks 2014, the first year with retroactive reporting by amnesty participants. This figure is discussed in Section 4.1.

Figure A.5: Foreign assets reported by individuals, by asset type, location, and country, 2001–2023



Note: This figure presents the total value of foreign assets reported by individuals, in USD billion, for amnesty participants (left column) and all individuals (right column). Panels A–B break the total down by asset type, Panels C–D by location (offshore financial centers versus other countries), and Panels E–F by the six countries with the largest values reported by participants in 2015, with all other countries grouped in Others. Vertical dashed lines mark 2014, the first year with retroactive reporting by participants, and 2016, the amnesty year. This figure is discussed in Section 4.1.

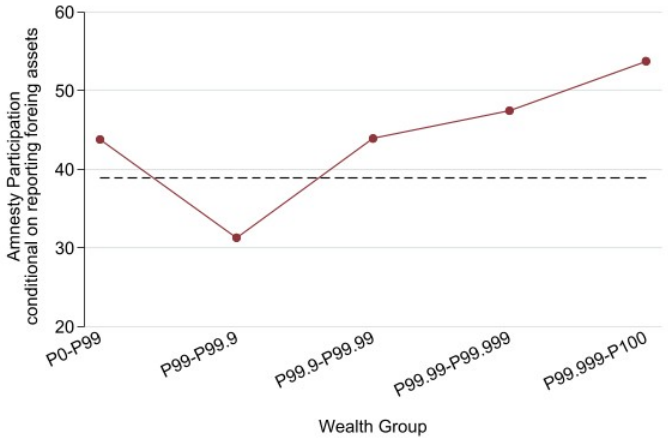
Figure A.6: Share of FDI self-reported as a special purpose entity (SPE), 2017–2023



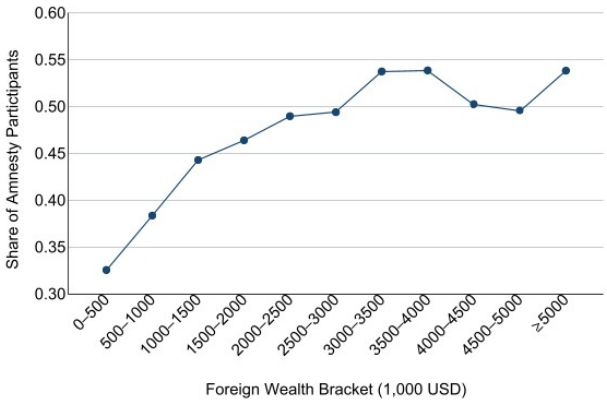
Note: This figure presents the share of the value of equity classified as foreign direct investment (FDI) held by individuals in offshore financial centers that is reported under the special purpose entity (SPE) sector code. An SPE is an entity established abroad primarily to hold financial or real estate investments. The SPE code was introduced in 2017. This figure is discussed in Section 4.1.

Figure A.7: Amnesty participation and foreign wealth, conditional on reporting foreign assets, 2015

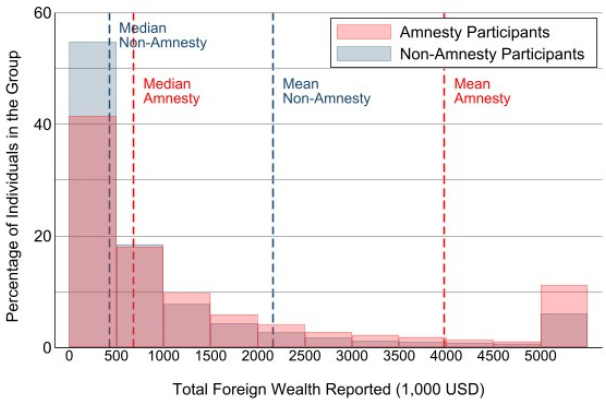
(a) Participation by wealth group



(b) Participation by foreign wealth

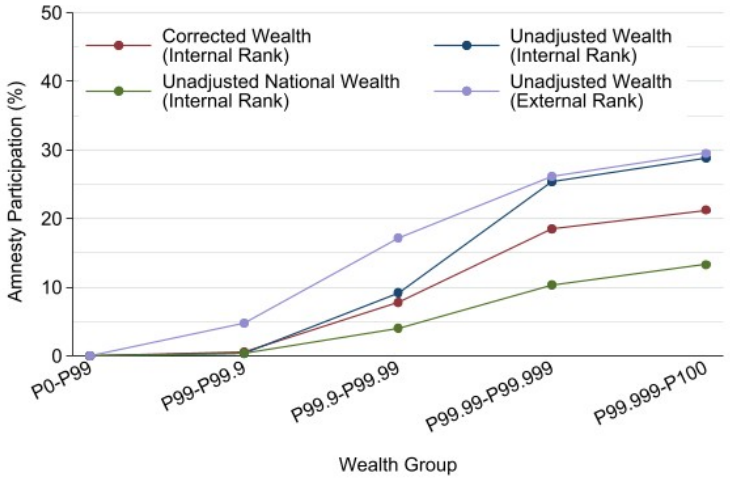


(c) Distribution of foreign wealth



Note: All panels are restricted to individuals reporting foreign assets to the Central Bank in 2015. Panel A presents the share of amnesty participants by 2015 wealth group. Wealth is measured in 2015 as fixed income held in Brazilian banks plus the share capital of Brazilian firms owned, both rescaled to national accounts totals, plus reported foreign wealth. Wealth groups are defined by rank, corresponding approximately to percentiles of Brazil's adult population. In Panel A, the dashed line is the share of participants among all reporters. Panel B presents the share of participants by bracket of foreign wealth reported in 2015, in USD thousand. Panel C presents the distribution of foreign wealth reported in 2015 for participants and non-participants, in bins of USD 500,000, with values above USD 5 million grouped in the last bin. Dashed lines mark group means and medians. This figure is discussed in Section 4.2.

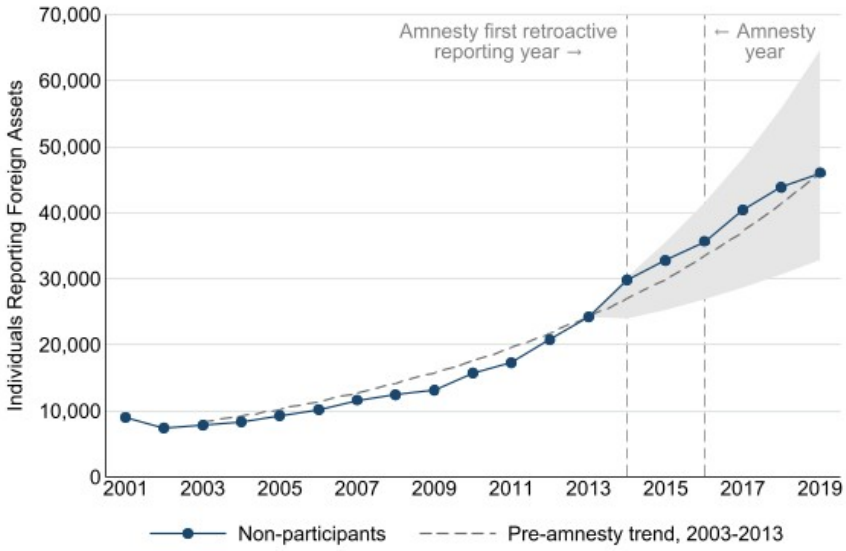
Figure A.8: Probability of foreign-asset reporting and amnesty participation by wealth group, 2015 (robustness)



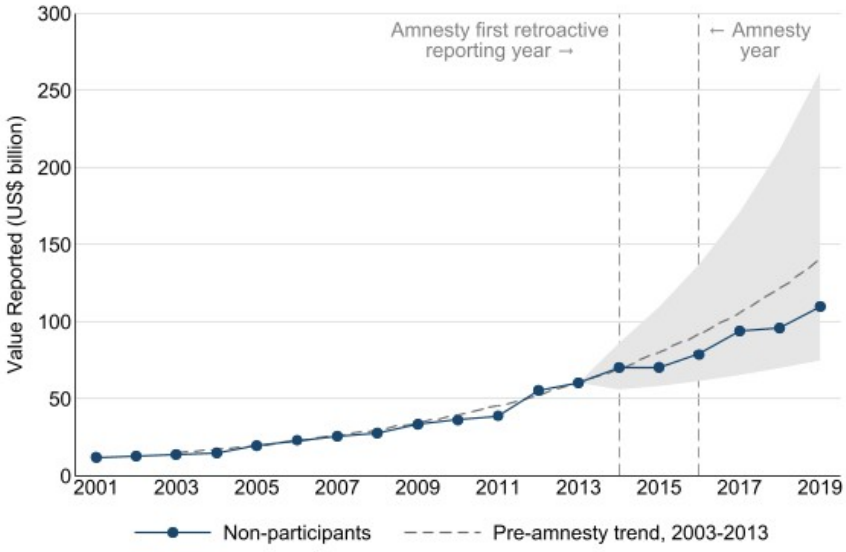
Note: This figure presents the share of amnesty participants by 2015 wealth group under alternative wealth definitions. Corrected wealth is fixed income held in Brazilian banks plus the share capital of Brazilian firms owned, both rescaled to national accounts totals, plus reported foreign wealth. Unadjusted wealth omits the rescaling, and unadjusted national wealth further omits foreign wealth. Internal rank defines wealth groups by rank within the data, corresponding approximately to percentiles of Brazil's adult population. External rank applies the wealth thresholds estimated from tax returns by Bhering and de Castro (2023). This figure is discussed in Section 4.2.

Figure A.9: Foreign assets reported by non-participants and the pre-amnesty trend, 2001–2019

(a) Number of individuals reporting



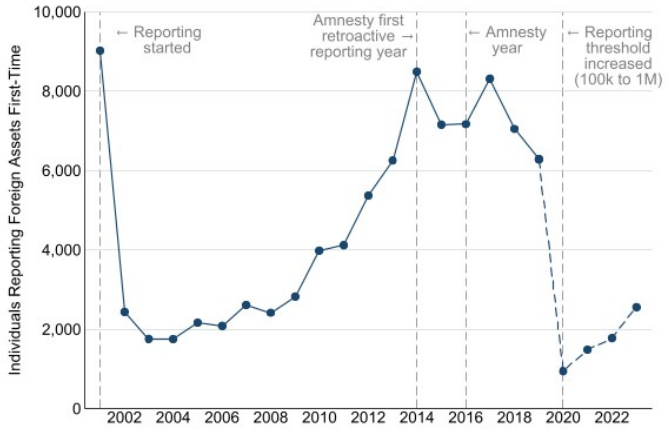
(b) Total value reported



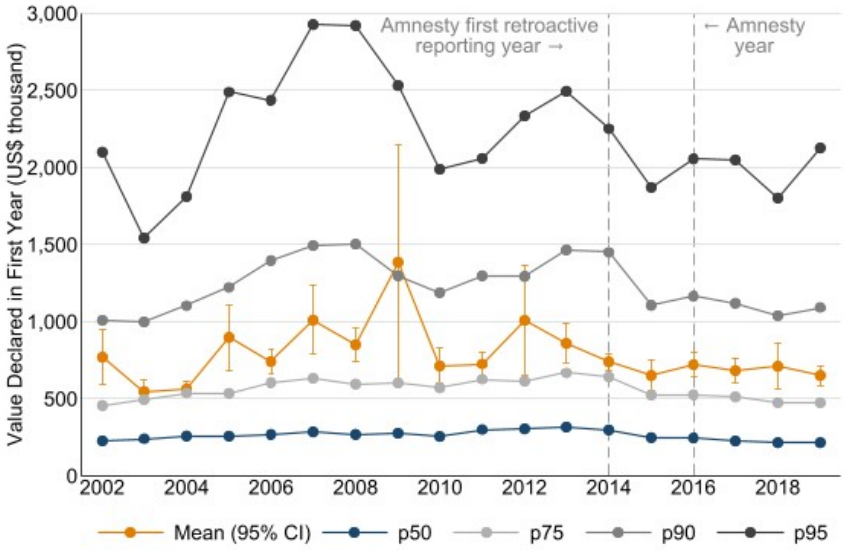
Note: Panel A presents the number of non-participants reporting foreign assets to the Central Bank in each year, and Panel B the total value they report, in USD billion. The dashed line extrapolates from 2013 the average annual log growth rate estimated over 2003–2013, and the shaded area is its 95% forecast interval. The trend excludes 2001–2002, the first years of the reporting system, and stops in 2019, before the increase in the reporting threshold. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, and 2016, the amnesty year. This figure is discussed in Section 4.3.

Figure A.10: Individuals reporting foreign assets for the first time, 2001–2023

(a) Number of individuals reporting for the first time

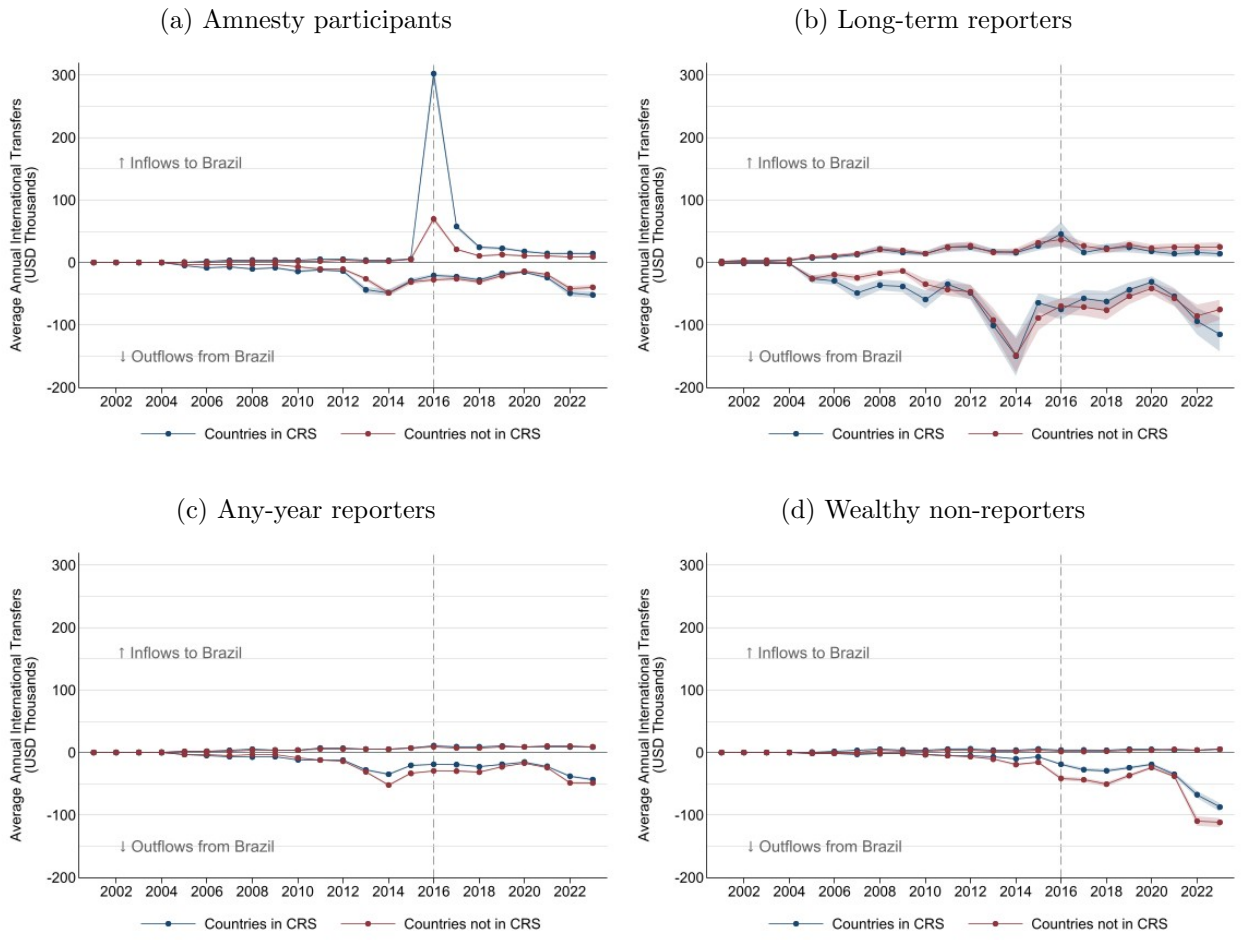


(b) Value reported in the first reporting year



Note: Panel A presents the number of non-participants reporting foreign assets to the Central Bank for the first time in each year. All reporters count as first-time reporters in 2001, when the system started, and the series is dashed after 2019 because of the increase in the reporting threshold. Panel B presents the mean and the 50th, 75th, 90th, and 95th percentiles of the value reported by these individuals in their first year, in USD thousand, over 2002–2019. Bars are 95% confidence intervals of the mean. Vertical dashed lines mark 2014, the first year with retroactive reporting by participants, and 2016, the amnesty year. This figure is discussed in Section 4.3.

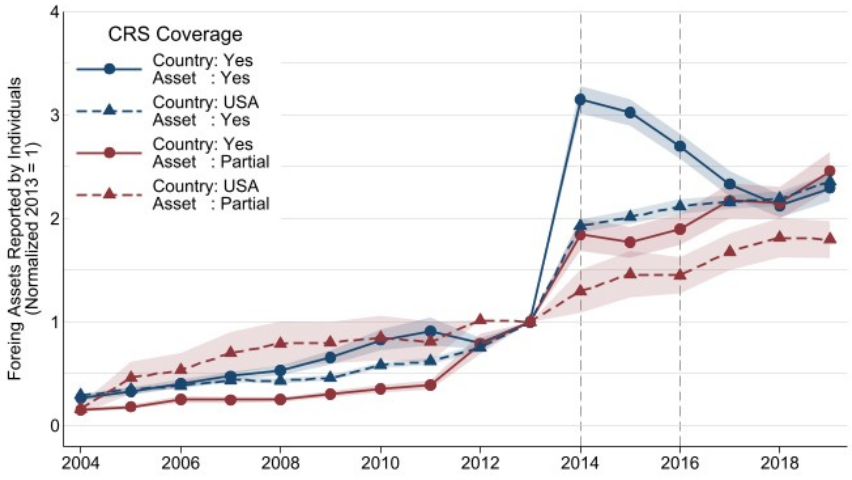
Figure A.11: International transfers by CRS status of the counterpart country, 2001–2023



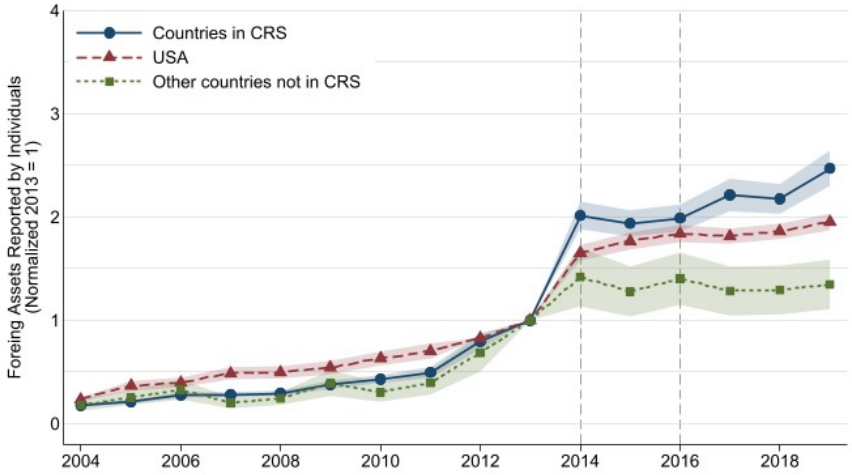
Note: Each panel presents the average international inflows to Brazil (positive values) and outflows from Brazil (negative values) per individual and year, in USD thousand, split by whether the counterpart jurisdiction was committed to the Common Reporting Standard (CRS) as of 2017. Panel A covers amnesty participants. Panel B covers long-term reporters (non-participants who reported foreign assets in every year 2003–2014). Panel C covers any-year reporters (non-participants who reported foreign assets in at least one year between 2001 and 2023). Panel D covers wealthy non-reporters (individuals in the top 0.1% of the 2015 wealth distribution who did not report foreign assets in 2015). Inflows and outflows above the 99.9th percentile of each year are excluded. Shaded areas are 95% confidence intervals of the group mean. The vertical dashed line marks the amnesty year. This figure is discussed in Section 4.3.

Figure A.12: Foreign assets reported by country CRS coverage, 2004–2019

(a) CRS jurisdictions and the United States, by asset CRS coverage

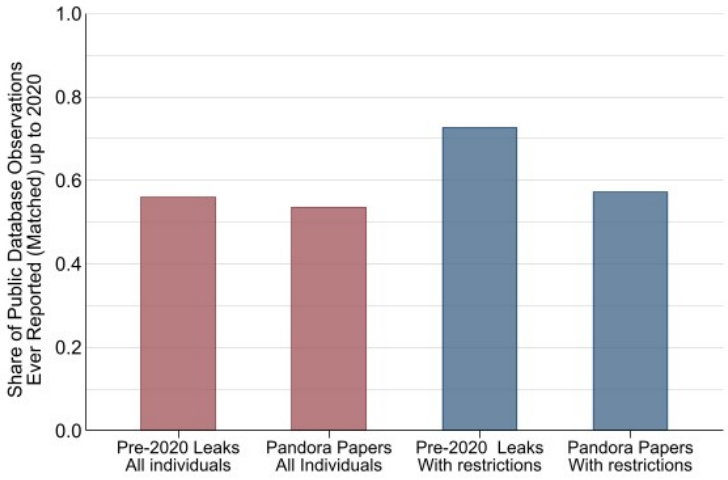


(b) Total by jurisdiction group



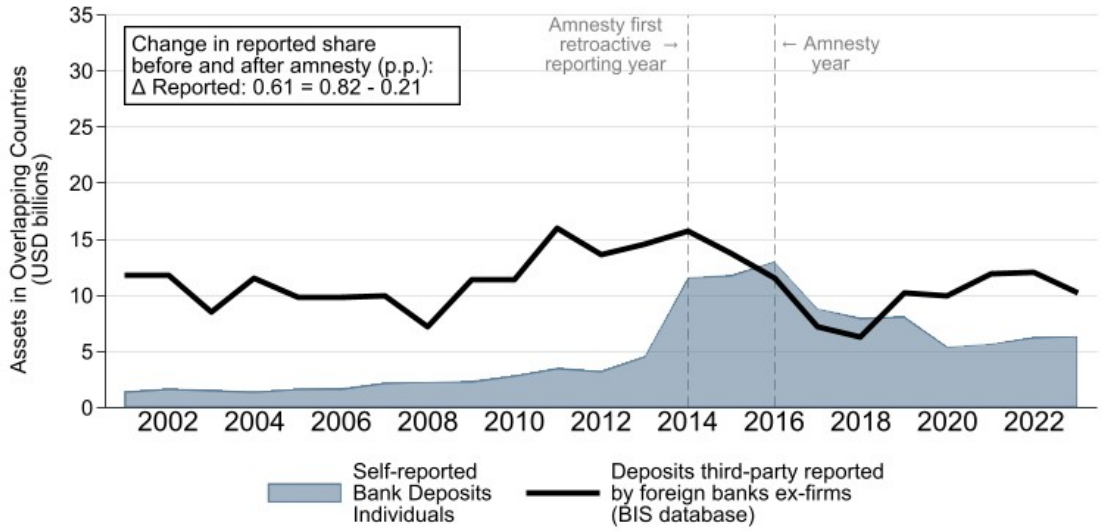
Note: Panel A presents the total value of foreign assets held in jurisdictions committed to the Common Reporting Standard (CRS) as of 2017 and in the United States, separately for assets covered by the CRS (deposits, portfolio equity, and fixed income) and partially covered assets (equity classified as foreign direct investment), excluding trusts and other assets. Panel B presents the total value of all foreign assets held in CRS jurisdictions, in the United States, and in other non-CRS jurisdictions. Values are normalized to 1 in 2013, and, in each series and year, holdings above the 99.9th percentile are capped at that value. Shaded areas are 95% bootstrap confidence bands based on 1,000 resamples of individuals. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, and 2016, the amnesty year. This figure is discussed in Section 4.4.

Figure A.13: Share of individuals in offshore leaks ever reporting foreign assets by 2020, by leak



Note: This figure presents the share of individuals named in the offshore leaks who reported foreign assets to the Central Bank in at least one year up to 2020, separately for individuals in the leaks published before 2020 (Offshore Leaks, Panama Papers, and Paradise Papers) and in the Pandora Papers, published in October 2021. The restricted bars exclude individuals with another nationality, with abbreviated names, or appearing only as joint owners, and count only years in which the leaked entity was active. This figure is discussed in Section 4.5.

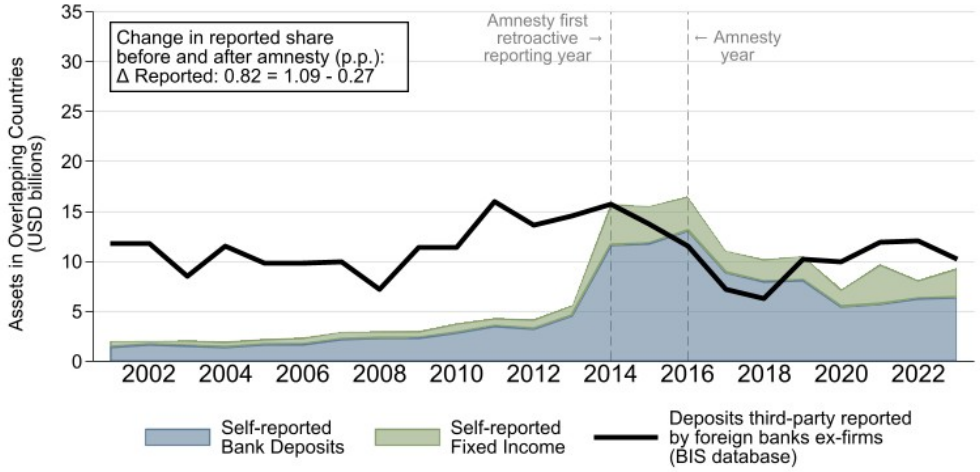
Figure A.14: Foreign deposits reported by individuals compared with BIS statistics, 2001–2023



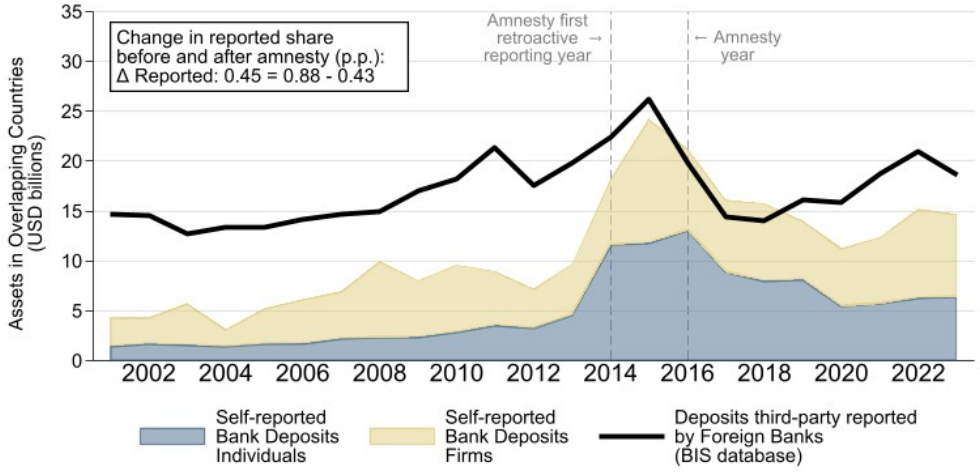
Note: This figure compares bank deposits reported to the Central Bank by Brazilian individuals (shaded area) with the deposits of Brazilian non-bank residents reported by banks in the Bank for International Settlements (BIS) Locational Banking Statistics, net of the foreign deposits reported by Brazilian non-financial firms (line), in USD billion. Both series are summed over the eight BIS-reporting countries with deposit data on Brazil in every year 2001–2023. The box reports the average ratio of the reported to the BIS series before (2001–2013) and after (2014–2023) the amnesty and their difference. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, and 2016, the amnesty year. This figure is discussed in Section 4.5.

Figure A.15: Foreign assets reported by individuals compared with BIS statistics (robustness), 2001–2023

(a) Deposits and fixed income

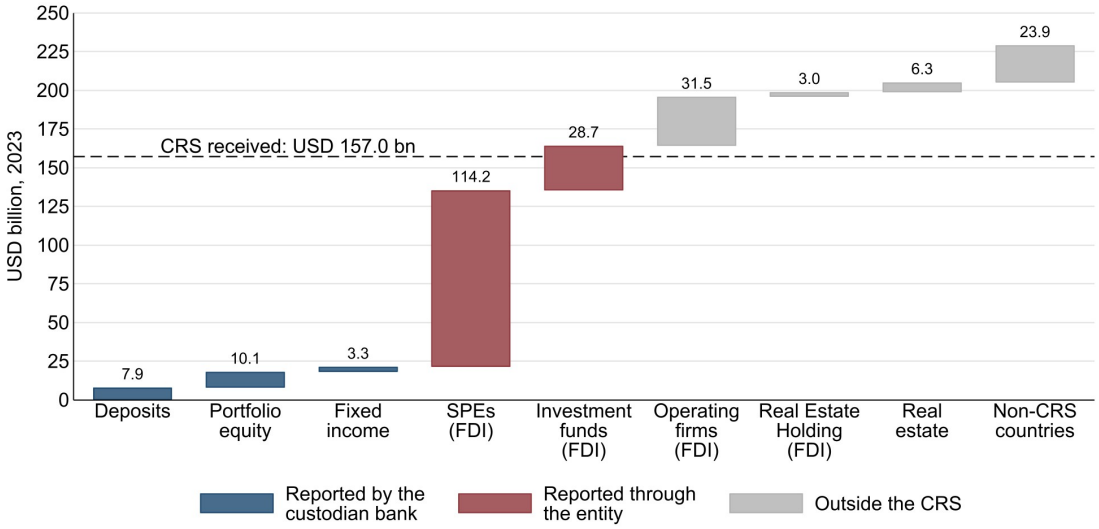


(b) Deposits of individuals and firms



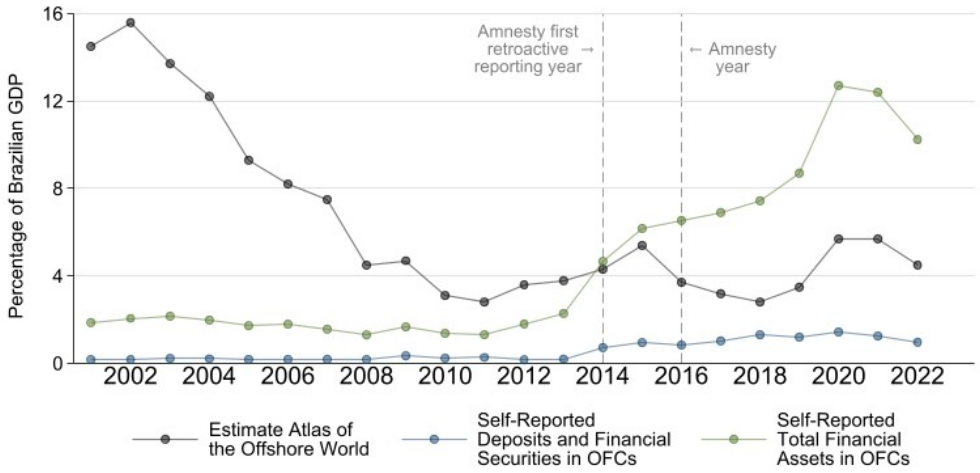
Note: Both panels compare assets reported to the Central Bank by Brazilian residents (shaded areas) with the deposits of Brazilian non-bank residents reported by banks in the Bank for International Settlements (BIS) Locational Banking Statistics (line), in USD billion, summed over the eight BIS-reporting countries with deposit data on Brazil in every year 2001–2023. Panel A adds the fixed income reported by individuals to their reported deposits and nets the deposits of Brazilian non-financial firms out of the BIS series. This sum is an upper bound because fixed income may include securities issued outside the banking sector. Panel B adds the deposits reported by Brazilian firms to those reported by individuals and compares the total with the BIS deposits of all non-bank residents. Boxes report the average ratio of the reported to the BIS series before (2001–2013) and after (2014–2023) the amnesty and their difference. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, and 2016, the amnesty year. This figure is discussed in Section 4.5.

Figure A.16: Foreign assets reported by individuals compared with CRS data received by Brazil, 2023



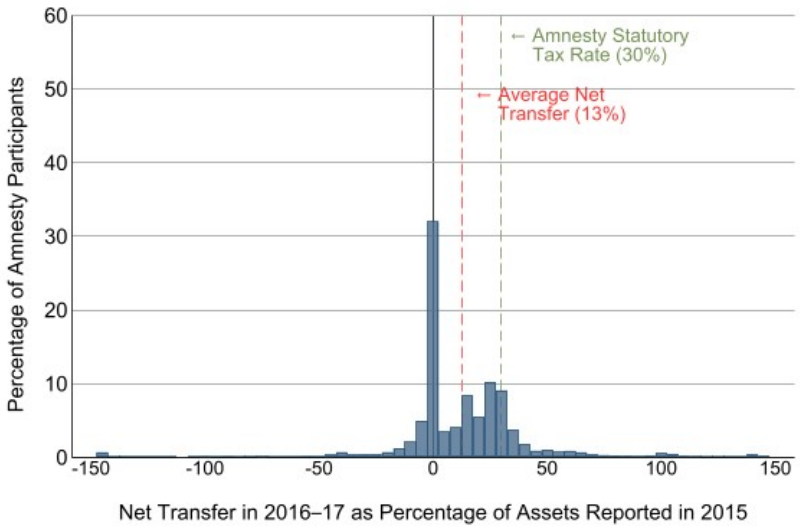
Note: This figure decomposes the foreign assets reported by Brazilian individuals in 2023, in USD billion, by their treatment under the Common Reporting Standard (CRS). Deposits, portfolio equity, and fixed income in CRS jurisdictions are reported by the custodian bank. Equity classified as foreign direct investment (FDI) in special purpose entities and in investment funds is reported through the entity. Equity FDI in operating firms and in real estate holding companies, directly held real estate, and all assets in non-CRS jurisdictions fall outside the CRS. The dashed line marks the USD 157.0 billion balance transmitted to Brazil through the CRS in 2023, from Boas et al. (2026). This figure is discussed in Section 4.5.

Figure A.17: Foreign assets reported by individuals compared with the Atlas of the Offshore World, 2001–2022



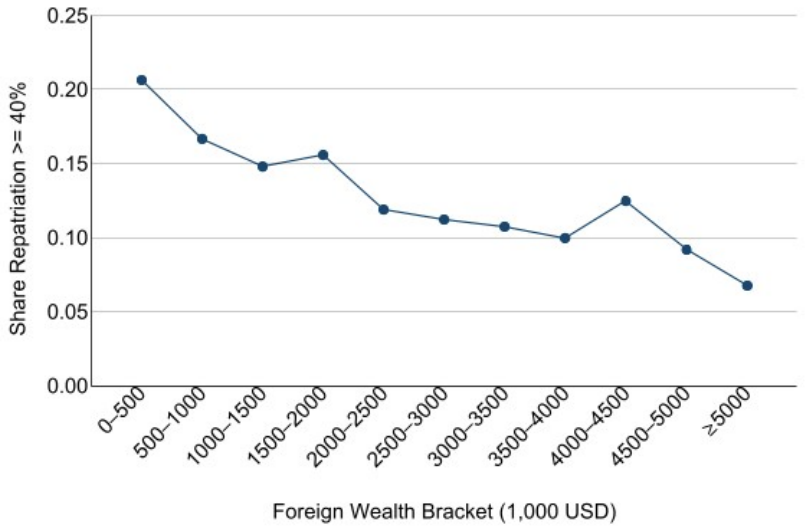
Note: This figure compares the offshore wealth of Brazilian households estimated by the Atlas of the Offshore World with the foreign assets reported by Brazilian individuals in offshore financial centers, both as a share of Brazil's gross domestic product. Reported assets are shown for deposits, portfolio equity, and fixed income (the categories closest to the Atlas concept) and for all financial assets. Vertical dashed lines mark 2014, the first year with retroactive reporting by amnesty participants, and 2016, the amnesty year. This figure is discussed in Section 4.5.

Figure A.18: Repatriation share of amnesty participants weighted by foreign wealth, 2016–2017



Note: This figure presents the distribution across amnesty participants of net international transfers received in 2016–2017 as a share of the foreign assets reported at the end of 2015, weighting each participant by those assets, so that bars measure the share of participants' 2015 foreign assets rather than the share of participants. Bins are 5 percentage points wide and centered on the labeled value. Negative values indicate net outflows, and values are winsorized at −150 and 150. The sample excludes participants without foreign assets in 2015. Dashed lines mark the statutory amnesty rate of 30% and the weighted average share. This figure is discussed in Section 5.

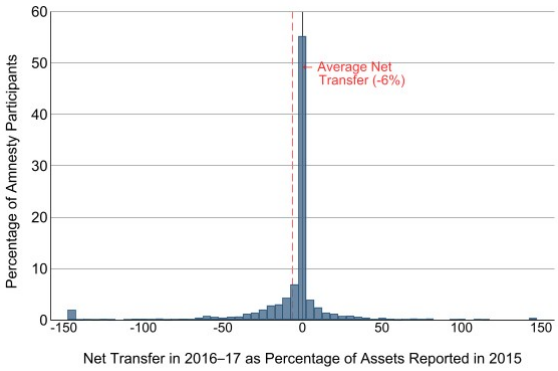
Figure A.19: Share of amnesty participants repatriating more than 40%, by foreign wealth, 2016



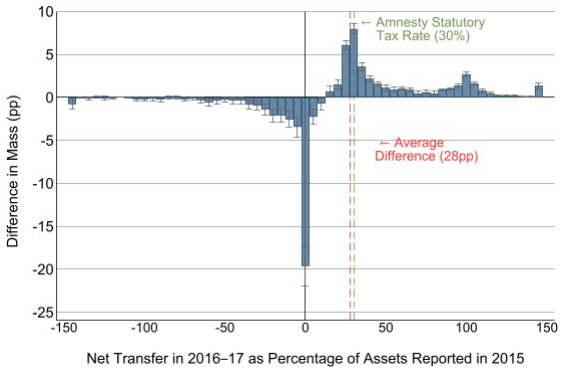
Note: This figure presents the share of amnesty participants whose net international transfers received in 2016 exceed 40% of the foreign assets reported at the end of 2015, by bracket of 2015 foreign assets in USD thousand. Values above USD 5 million are grouped in the last bracket. This figure is discussed in Section 5.

Figure A.20: Repatriation share of non-participants, 2016–2017

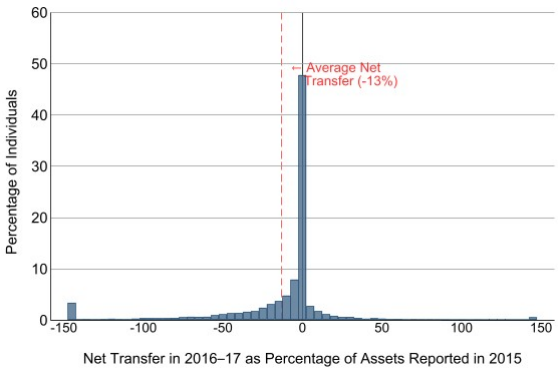
(a) Long-term reporters



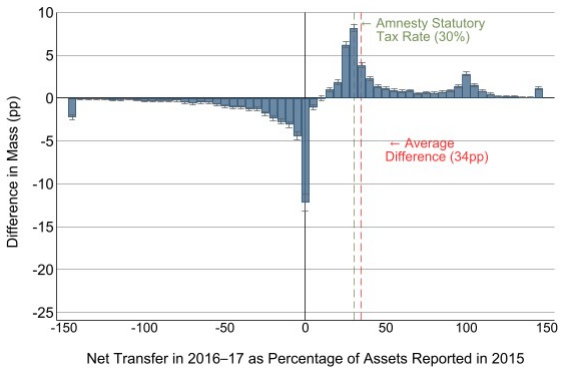
(b) Participants vs. long-term reporters



(c) 2014 reporters



(d) Participants vs. 2014 reporters

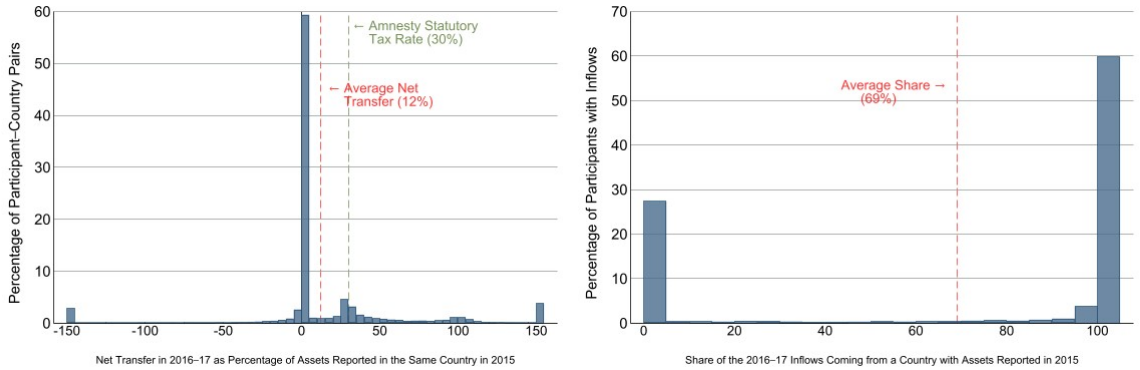


Note: The left column presents, for two groups of non-participants, the distribution of net international transfers received in 2016–2017 as a share of the foreign assets reported at the end of 2015. Bins are 5 percentage points wide and centered on the labeled value. Negative values indicate net outflows, and values are winsorized at −150 and 150. The right column presents the difference, in percentage points, between the share of amnesty participants and the share of the comparison group in each bin, with 95% confidence intervals for the difference between two independent proportions. Panels A–B use long-term reporters (non-participants who reported foreign assets in every year 2003–2014), and Panels C–D use 2014 reporters (non-participants who reported foreign assets in 2014). All groups exclude individuals without foreign assets in 2015. Dashed lines mark the statutory amnesty rate of 30%, the average share, and the difference in averages. This figure is discussed in Section 5.

Figure A.21: Repatriation of amnesty participants, matching assets and transfers by country, 2016–2017

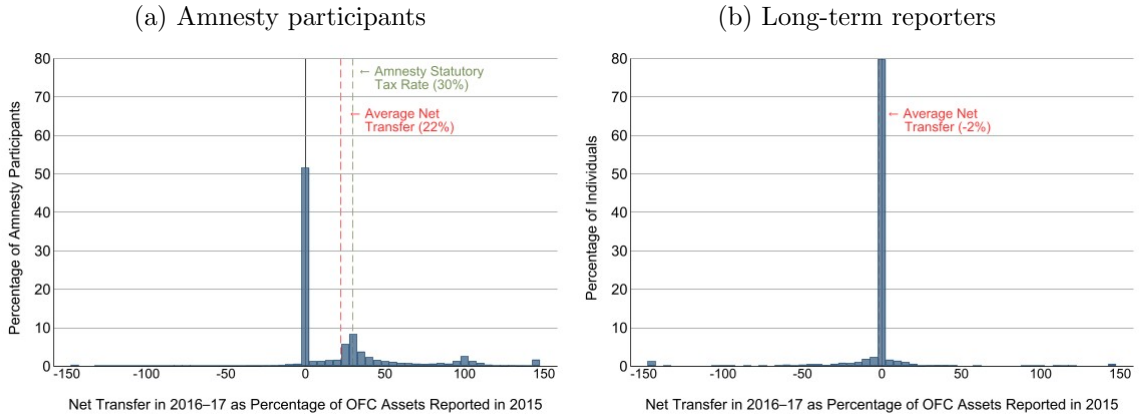
(a) Repatriation share (same country)

(b) Share of inflows from the country of the reported assets



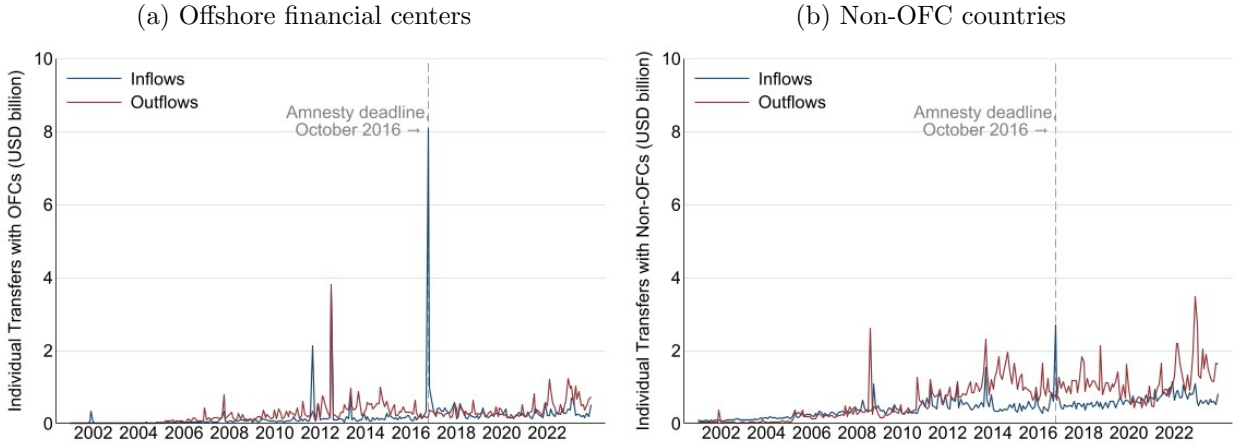
Note: This figure matches the country in which amnesty participants reported assets at the end of 2015 with the counterpart country of their international transfers in 2016–2017. Panel A presents, across participant–country pairs, the distribution of net transfers from a country as a share of the assets reported in that country. Bins are 5 percentage points wide and centered on the labeled value. Negative values indicate net outflows, and values are winsorized at −150 and 150. Dashed lines mark the statutory amnesty rate of 30% and the average share. Panel B presents, across participants with inflows in 2016–2017, the distribution of the share of their inflows originating from countries in which they reported assets, and the dashed line marks the average share. This figure is discussed in Section 5.

Figure A.22: Repatriation matching assets and transfers across offshore financial centers, 2016–2017



Note: This figure presents the distribution of net international transfers received from offshore financial centers in 2016–2017 as a share of the assets reported in offshore financial centers at the end of 2015. Matching assets and transfers at the level of offshore financial centers rather than country by country allows for transfers routed through a jurisdiction other than the one in which the asset is reported. Bins are 5 percentage points wide and centered on the labeled value. Negative values indicate net outflows, and values are winsorized at −150 and 150. Panel A covers amnesty participants, and Panel B covers long-term reporters (non-participants who reported foreign assets in every year 2003–2014). Dashed lines mark the statutory amnesty rate of 30% and the average share. This figure is discussed in Section 5.

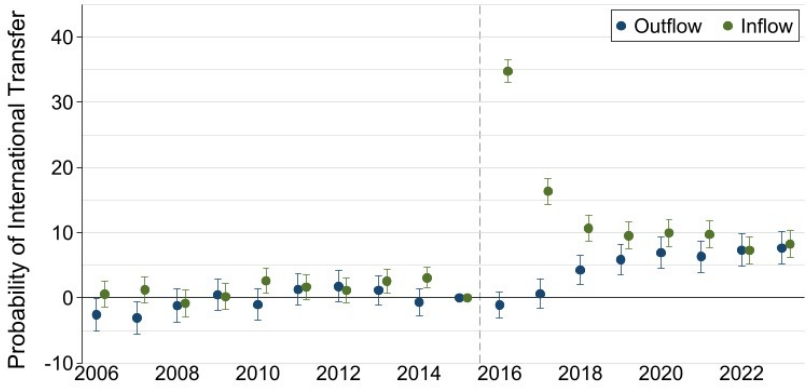
Figure A.23: Monthly international transfers of individuals, by counterpart jurisdiction, 2001–2023



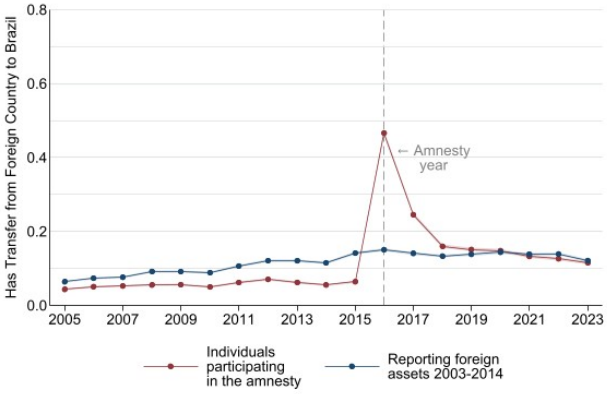
Note: This figure presents the monthly total of international transfers received (inflows) and sent (outflows) by all Brazilian individuals, in USD billion, with counterparts in offshore financial centers (Panel A) and in other countries (Panel B). The vertical dashed line marks the amnesty deadline of October 2016. This figure is discussed in Section 5.

Figure A.24: International transfers: amnesty participants vs. long-term reporters, 2005–2023

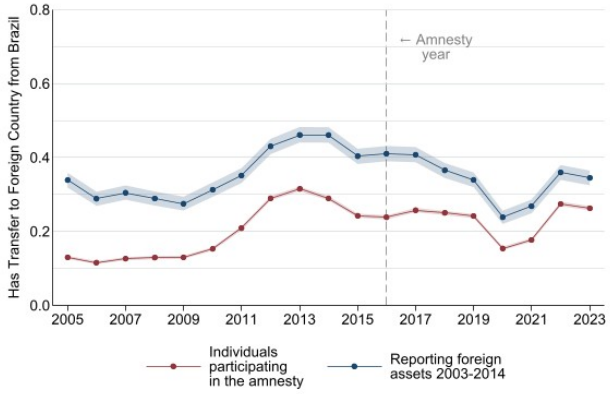
(a) Event study



(b) Inflows



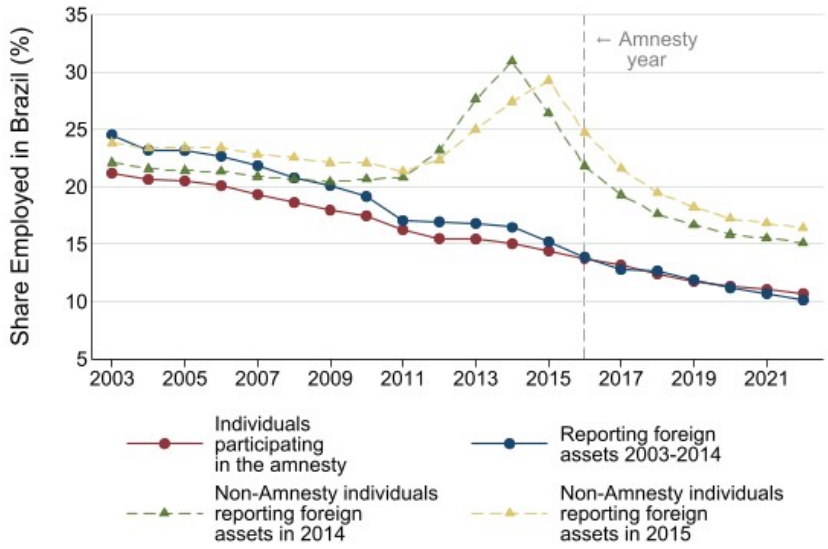
(c) Outflows



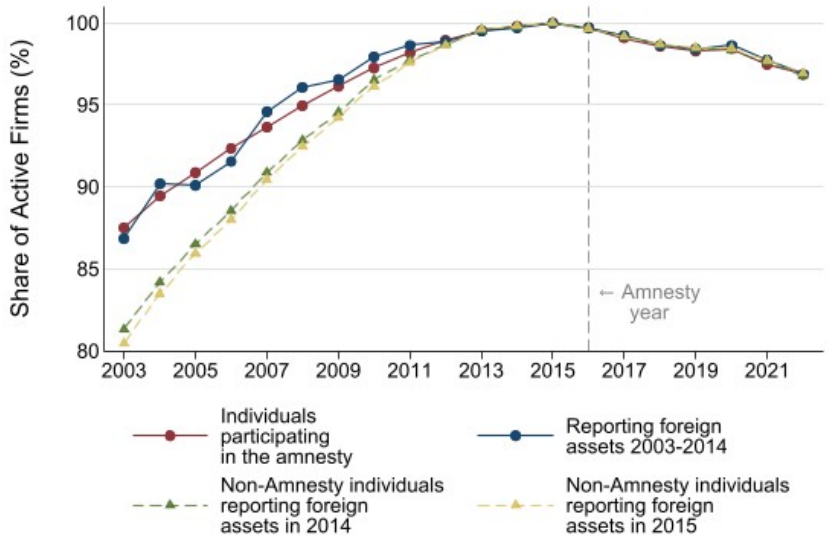
Note: Panel A presents event-study coefficients from equation (1) for the probability of receiving an international transfer (inflow) and of sending one (outflow) in a given year, in percentage points, for amnesty participants relative to long-term reporters (non-participants who reported foreign assets in every year 2003–2014), with 2015 as the base year. Bars are 95% confidence intervals with standard errors clustered by individual. Panels B and C present the share of individuals with an inflow and with an outflow in each group. Shaded areas are 95% confidence intervals of the group mean. The vertical dashed line marks the amnesty year. This figure is discussed in Section 5.

Figure A.25: Probability of employment and firm activity, 2003–2022

(a) Share of individuals employed

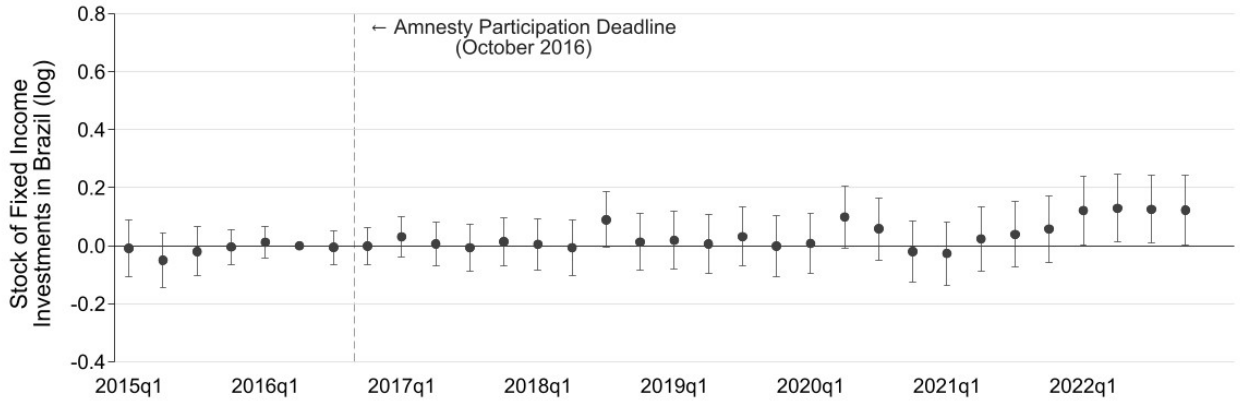


(b) Share of active firms



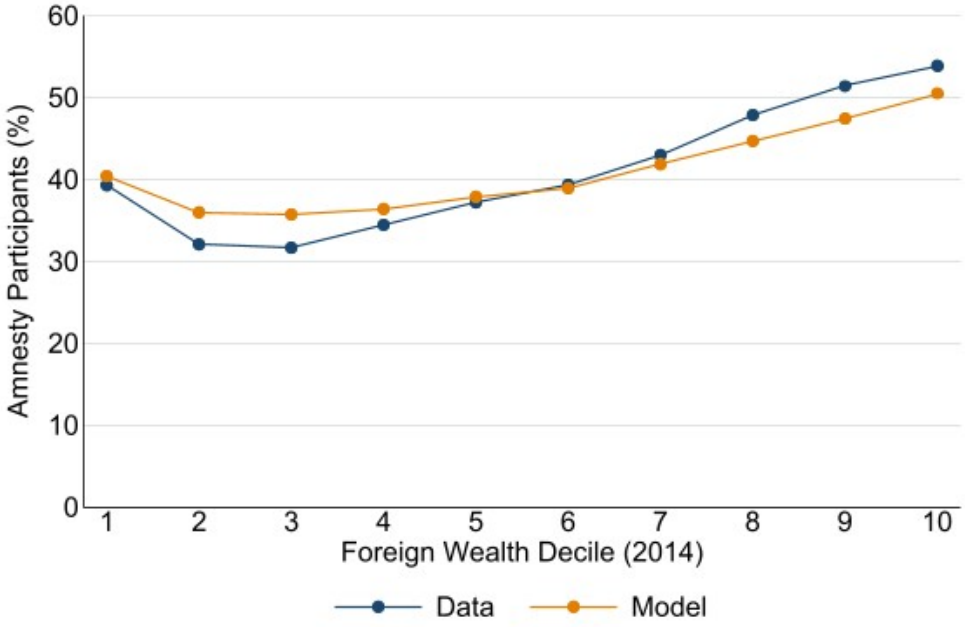
Note: Panel A presents the share of individuals with a formal job in Brazil in each year for amnesty participants, long-term reporters (non-participants who reported foreign assets in every year 2003–2014), 2014 reporters, and 2015 reporters (non-participants who reported in 2014 or in 2015). Panel B restricts each group to individuals owning a firm with employees in 2015 and presents the share whose firms are active, defined as having employees, bank credit, bank transactions, or international transfers in the year, so that the share equals 100% for all groups in 2015 by construction. The vertical dashed line marks the amnesty year. This figure is discussed in Section 6.1.

Figure A.26: Event study: bank fixed-income investments in Brazil, 2015–2022



Note: This figure presents event-study coefficients from equation (1) for the log stock of fixed income held in Brazilian banks by amnesty participants relative to long-term reporters (non-participants who reported foreign assets in every year 2003–2014), estimated monthly over 2015–2022 with June 2016 as the base period, and shown for the last month of each quarter. Holdings above the 99.9th percentile of each month are excluded. The vertical dashed line marks the amnesty deadline of October 2016. Bars are 95% confidence intervals with standard errors clustered by individual. This figure is discussed in Section 6.3.

Figure A.27: Amnesty participation by foreign wealth decile, data and model, 2014



Note: This figure presents the share of amnesty participants among individuals reporting foreign assets, by decile of foreign wealth reported for 2014, in the data and as predicted by the model. The sample is all individuals reporting foreign assets for 2014, including participants' rectified reports, with total reported foreign wealth of at least USD 100,000. Foreign wealth excludes trusts and other rights. The model series is the average within each decile of the predicted probability of participation, $1 - \pi^i(t_{\text{pre}}, p_{\text{pre}})/\pi^i(t, p_{\text{post}})$, under the baseline estimation. The baseline uses individual controls (domestic wealth, employment, firm ownership, and foreign nationality) and sets $p_{\text{post}} - p_{\text{pre}} = 1$, $t = 0.30$, and $P = t_{\text{pre}} = 0.481$. The share of the population that reports, s, is obtained by applying the leak share only to holders of assets in offshore financial centers. This figure is discussed in Section 7.

Table A.1: Counterfactual total tax burden by initial and final tax rate

Initial Tax \ Final Tax	**15**	**27.5**
0	7.0	12.9
15	21.0	25.9
27.5	32.6	36.8
34	38.6	42.5

Note: This table presents the effective tax burden, in percent, on an investment held for 20 years with a 3.2% annual return, the average reported offshore return, under alternative combinations of the tax rate due when the income was earned (rows) and the rate due at realization (columns). The burden is the share of terminal wealth lost to taxes relative to an untaxed investment, so initial taxes reduce both the amount invested and its compounded returns, while taxes at realization apply only to the accumulated gain. Row rates correspond to dividends (0%), capital income and gains (15%), labor income (27.5%), and corporate profits (34%, the 25% corporate income tax plus the 9% social contribution on net profits, taxed at the firm level instead of as exempt dividends). Column rates correspond to capital gains (15%) and foreign income (27.5%). This table is discussed in Section 2.2.

Table A.2: Foreign assets by asset type and country, 2014

	Total (%)	Equity FDI	Trusts and Other	Equity Portfolio	Deposits	Fixed Income	Real Estate
Panel A: Amnesty participants							
British Virgin Islands	26.8	92.0	3.3	1.3	0.5	2.8	0.0
Bahamas	16.3	84.0	10.1	1.4	1.5	3.0	0.1
Cayman Islands	11.5	79.7	11.8	5.5	1.6	1.3	0.1
Panama	11.1	89.0	4.7	2.1	0.6	3.5	0.0
Switzerland	11.4	2.2	12.9	25.7	36.5	22.2	0.5
United States	6.2	18.9	12.2	17.2	35.7	11.3	4.6
Others	16.9	56.6	16.6	5.6	11.2	6.9	3.0
Panel B: Non-participants							
British Virgin Islands	25.8	94.8	0.9	1.9	0.2	2.1	0.0
Bahamas	15.1	92.4	1.3	3.7	1.6	1.0	0.0
Cayman Islands	8.7	87.8	6.8	3.9	0.9	0.7	0.0
Panama	2.1	88.2	2.1	3.3	1.6	4.2	0.5
Switzerland	3.2	10.0	6.6	22.8	47.9	7.2	5.4
United States	18.7	23.2	8.2	18.3	30.9	5.2	14.2
Others	26.4	51.4	5.0	10.6	12.6	2.9	17.4

Note: This table presents the country breakdown of foreign assets reported in 2014 by amnesty participants (Panel A) and non-participants (Panel B). The Total column reports each country's share of the group's foreign assets, so the country rows and Others sum to 100 within each panel. The remaining columns report the asset-type composition of each row, in percent, summing to 100 across asset types. Trusts and Other includes trusts and other rights and investments. The six countries listed are those with the largest assets reported by amnesty participants in 2015 and are used in both panels. This table is discussed in Sections 4.1 and 4.5.

Table A.3: ICIJ-matched individuals, CBE reporters and non-reporters, 2014

	Non-reporters	Reporters
Individuals	1,317	1,599
Age	48 (17) [48]	54 (14) [54]
Brazilian Nationality	0.93 (0.26)	0.94 (0.24)
Reports Foreign Assets	0.00 (0.00)	0.72 (0.45)
Foreign Wealth Reported	0 (0) [0]	8,281 (50,900) [756]
Share in OFCs	– – –	0.77 (0.46) [1.00]
Share in FDI	– – –	0.62 (0.45) [0.92]
Share Capital of Firms in Brazil	321 (1,845) [6]	1,901 (8,395) [34]
Fixed Income in Brazil (2015)	114 (1,051) [0]	884 (2,715) [48]
Is Employee	0.15 (0.36)	0.13 (0.34)
Bank Transfer Outward	6 (79) [0]	846 (4,217) [20]
Net International Transfers Inward in 2016	-23 (705) [0]	515 (4,246) [0]
Share Repatriated in 2016	– – –	-0.01 (1.49) [0.00]

Note: This table reports means, standard deviations (in parentheses), and medians (in brackets) in 2014 for individuals named in the offshore leaks and matched by name to administrative records, split by whether they report foreign assets to the Central Bank in any year (Reporters) or never (Non-reporters). Reports Foreign Assets is the share reporting in 2014 itself. Shares of foreign wealth and the share repatriated (net international transfers received in 2016 over the foreign assets reported at the end of 2015) are undefined for non-reporters and shown as –. Bank Transfer Outward is the value of domestic bank transfers sent to third parties. Fixed income in Brazil is observed from 2015 and is reported for that year. Wealth and transfers are in USD thousand at the end-of-year exchange rate. Continuous variables are winsorized at the 99.9th percentile by year, and net transfers and the share repatriated at the 0.1st and 99.9th percentiles. This table is discussed in Section 4.5.

Table A.4: Firms owned by amnesty participants and non-participants, 2015

	Amnesty			Non-participants
	All	Main Owner	Repat. >40%	Long-term reporters
Firms	14,005	3,989	2,080	1,509
Owners per Firm	2.1 (1.9) [2.0]	1.7 (1.1) [1.0]	2.5 (2.2) [2.0]	2.4 (2.4) [2.0]
Ownership Share	0.41 (0.33) [0.34]	0.84 (0.16) [0.90]	0.35 (0.31) [0.27]	0.38 (0.34) [0.33]
Number of Employees	105.1 (383.0) [12.0]	84.9 (345.6) [9.0]	122.0 (388.2) [12.0]	107.7 (399.6) [10.0]
Wage Bill	745 (2,872) [77]	563 (2,328) [63]	870 (3,028) [76]	955 (3,484) [79]
Revenue	1,503 (10,884) [3]	970 (7,888) [1]	1,413 (9,066) [3]	2,219 (14,316) [8]
Loan Outstanding	772 (4,098) [0]	496 (2,894) [0]	887 (4,046) [0]	960 (4,866) [0]
Has Loan	0.41 (0.49)	0.37 (0.48)	0.46 (0.50)	0.39 (0.49)

Note: This table reports means, standard deviations (in parentheses), and medians (in brackets) in 2015 for firms with employees in 2015 owned by individuals reporting foreign assets to the Central Bank, with ownership measured in 2013. The unit is the firm. Firms with owners in more than one group are excluded, and a firm with several owners in the same group enters once, through the largest stake. The Amnesty columns cover all firms owned by amnesty participants, those whose owner holds more than 50% of the firm, and those whose owner received net international transfers in 2016 above 40% of the foreign assets reported in 2015 (Section 5). The Non-participants column covers firms owned by long-term reporters (non-participants who reported foreign assets in every year 2003–2014). Revenue is proxied by bank transfers received from third parties, and Has Loan indicates outstanding bank credit. Wage bill, revenue, and loans are in USD thousand at the end-of-year exchange rate, winsorized at the 99.9th percentile by year. This table is discussed in Section 6.1.

Table A.5: Firm outcomes of amnesty participants, pooled post-amnesty effect, 2009–2019

	Owner-level regressions					Firm-level regressions		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Main	Main owner	All ownership stakes	Repatriated > 40%	Balanced panel	All firms	High repatriation to capital	Capital-intensive sector
Employees	-0.01	0.02	-0.01	-0.07	0.00	0.00	0.02	0.00
95% CI	[-0.09, 0.06]	[-0.07, 0.10]	[-0.07, 0.05]	[-0.15, 0.02]	[-0.08, 0.08]	[-0.05, 0.05]	[-0.03, 0.07]	[-0.05, 0.04]
Pre-trend p	0.35	0.05$^{\times}$	0.22	0.44	0.46	0.26	0.02$^{\times}$	0.74
Observations	108,417	30,382	108,417	19,146	103,751	153,753	53,766	86,183
Wage Bill	0.00	-0.01	0.00	-0.08	0.02	0.03	0.02	0.01
95% CI	[-0.08, 0.08]	[-0.10, 0.08]	[-0.06, 0.07]	[-0.17, 0.01]	[-0.06, 0.10]	[-0.03, 0.08]	[-0.04, 0.08]	[-0.05, 0.06]
Pre-trend p	0.40	0.20	0.13	0.38	0.60	0.13	0.00$^{\times}$	0.32
Observations	107,702	30,139	107,702	19,003	102,317	151,280	52,946	84,563
Revenue (TED proxy)	0.05	0.01	-0.01	0.08	0.08	0.16	-0.07	0.04
95% CI	[-0.12, 0.22]	[-0.27, 0.30]	[-0.17, 0.14]	[-0.12, 0.28]	[-0.11, 0.28]	[0.03, 0.30]	[-0.24, 0.09]	[-0.10, 0.18]
Pre-trend p	0.35	0.04$^{\times}$	0.45	0.12	0.60	0.24	0.56	0.27
Observations	78,247	17,732	78,247	13,370	56,604	92,362	32,806	57,859
Loan Outstanding	0.03	0.05	-0.04	-0.01	0.06	0.08	0.03	-0.09
95% CI	[-0.20, 0.25]	[-0.26, 0.36]	[-0.22, 0.15]	[-0.26, 0.24]	[-0.23, 0.35]	[-0.08, 0.24]	[-0.13, 0.20]	[-0.25, 0.07]
Pre-trend p	0.87	0.81	0.77	0.57	0.25	0.98	0.81	0.96
Observations	59,211	12,481	59,211	10,311	41,827	63,654	23,232	36,742

Note: Each cell reports the estimate from a separate regression of the log outcome in the row on the interaction between an indicator for the years from 2016 onward and amnesty participation, with unit and year fixed effects, over 2009–2019, for the sample and unit of observation in the column header. The 95% confidence intervals are in brackets. The control group is long-term reporters (non-participants who reported foreign assets in every year 2003–2014). Pre-trend p is the p-value of a joint test that the 2009–2014 coefficients of the corresponding event study, with 2015 as the base year, are zero, and a cross marks rejection at the 10% level. In the owner-level columns, firm outcomes are summed over the firms owned, weighted by the ownership share measured in 2013, and standard errors are clustered by owner. Column (2) keeps majority-owned firms at full value, column (3) uses all stakes unweighted, column (4) keeps participants who repatriated more than 40% of their 2015 foreign assets in 2016, and column (5) keeps owners with a positive outcome in every year 2011–2015. In the firm-level columns, the firm is the unit and standard errors are clustered by the participant or long-term reporter with the largest stake in the firm. Column (7) keeps firms whose owner repatriated more than the participant median relative to firm capital, and column (8) keeps firms in capital-intensive two-digit sectors of Brazil's official economic activity classification. All columns are restricted to firms with employees in 2015. Revenue is proxied by bank transfers received from third parties. This table is discussed in Section 6.2.

B Origins of Offshore Capital

A natural question for understanding individuals' global capital allocation is how they accumulated their offshore wealth in the first place. We use the long series of international transfers to investigate whether recorded capital outflows can account for the offshore wealth disclosed in the amnesty. For each individual, we divide cumulative net international transfers to Brazil between 2001 and 2015 by foreign wealth reported in 2015. A ratio close to −100% indicates that recorded net outflows can account for most of the reported offshore stock. Figure B.1 plots the distribution of this ratio. Among amnesty participants, more than 70% have cumulative net transfers close to zero relative to their offshore wealth, and the average ratio is only −8%. The average ratio is −15% when individuals are weighted by foreign wealth reported in 2015.

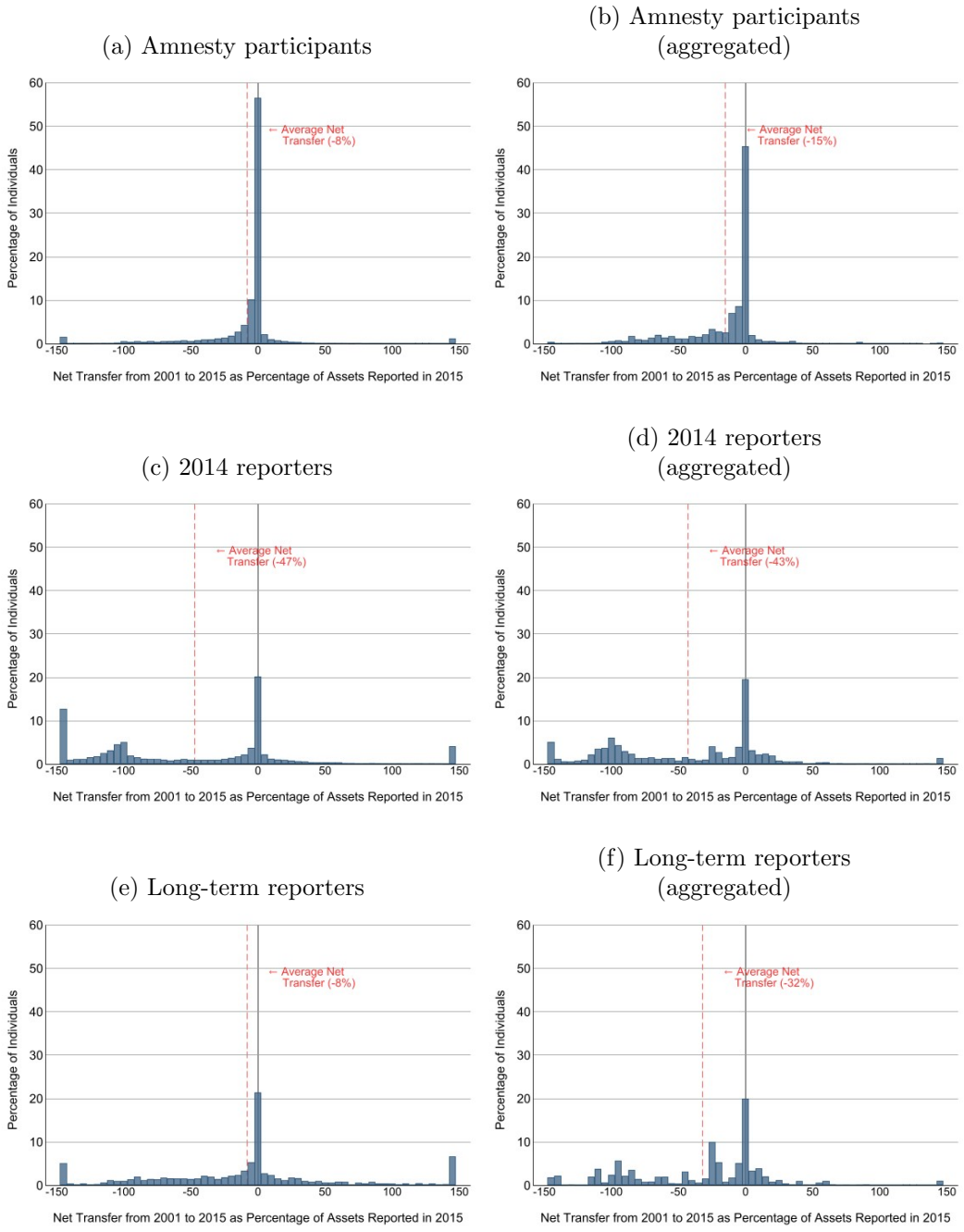
To assess this measure, we apply it to non-participants. Among those reporting foreign assets in 2014, the distribution shows a clear mass around −100%, with an average ratio of −47%, and −43% when weighted by foreign wealth reported in 2015. This pattern indicates that recorded transfers capture a substantial share of legally accumulated foreign wealth. For long-term reporters (non-participants who reported foreign assets in every year between 2003 and 2014), the distribution is more dispersed and includes substantial net inflows, consistent with wealth already being held abroad at the start of the period. Their average ratio is −8% unweighted and −32% when weighted by 2015 foreign wealth.

The results indicate that recorded legal transfers can account for part of the foreign wealth of compliant individuals but little of the offshore wealth disclosed through the amnesty. This finding suggests that amnesty participants accumulated this wealth before the period analyzed, transferred funds through illegal channels, or earned and accumulated wealth directly abroad.

Historical evidence The 1980s and 1990s were marked by extremely high inflation and episodes of savings confiscation, alongside tight capital controls that restricted legal access to foreign currency. Historical and quantitative evidence points to the relevance of this period, especially the 1990s, for offshore capital accumulation by Brazilian individuals. Marchesi and Marcolongo (2025) provide quantitative evidence of offshore capital accumulation following Brazil's banking and exchange-rate crisis in 1998. Kar and Freitas (2014) use the Net Errors

and Omissions method and similarly document large gross capital outflows in 1998. Garcia and Barcinski (1998) describe the capital controls in place during the 1990s, on both inflows and outflows, and the mechanisms used to circumvent them, showing that these restrictions were at best partially effective. In the 1980s and 1990s, special foreign-exchange mechanisms were created to facilitate foreign investment and trade operations. The most notable were the so-called CC5 accounts (named after the Central Bank's Circular Letter No. 5), which allowed non-resident entities to transact freely in foreign currency. Subsequent investigations documented that residents used these accounts to move capital abroad, circumventing capital controls. A 2003 parliamentary inquiry, supported by prosecutorial investigations, estimated that at least USD 30 billion had been transferred abroad through these channels between 1996 and 2002 (Congresso Nacional do Brasil 2004). While the evidence suggests that offshore wealth was accumulated before the period observed in our data, we cannot quantify the relative importance of this mechanism.

Figure B.1: Share of individuals' 2015 foreign assets explained by net outward transfers, 2001–2015



Note: This figure presents the distribution of cumulative net international transfers between 2001 and 2015 as a share of the foreign assets reported at the end of 2015. Negative values indicate net outflows, so that −100 means that recorded outflows equal the reported stock. The left column weights individuals equally, and the right column weights them by foreign assets reported in 2015. Rows cover amnesty participants, 2014 reporters (non-participants who reported foreign assets in 2014), and long-term reporters (non-participants who reported foreign assets in every year 2003–2014). Bins are 5 percentage points wide, values are winsorized at −150 and 150, and dashed lines mark the average. This figure is discussed in Appendix B.

C Offshore Returns

The low levels of repatriation raise the question of why individuals kept most of the disclosed assets offshore. Once the tax-evasion motive was removed, one explanation is access to foreign markets and diversification opportunities, particularly because domestic access to foreign investments remained limited during this period. Brazilian investment funds faced regulatory limits on foreign investments, which were only partially relaxed in the early 2020s. Local access to foreign-listed equities was restricted to a few stocks, and foreign-currency bank accounts were not available domestically.

To examine this question, we use unique information on individuals' offshore returns. Figure C.1 displays the yearly offshore return over 2012–2024, weighted by individuals' foreign assets, and compares it with two benchmarks: a 60/40 portfolio (a standard U.S. benchmark that allocates 60% to the S&P 500 and 40% to 10-year Treasury bonds) and Brazilian fixed-income returns based on the Selic rate (the domestic risk-free rate), expressed in U.S. dollars.

Reported returns follow the Balance of Payments definitions in International Monetary Fund (2009). Equity FDI returns capture the foreign entity's earnings, whether distributed or retained, while returns on other assets capture income flows such as dividends, interest, and rents. This measure may understate total returns on portfolio investments and real estate, as it excludes capital appreciation. We calculate individual returns as reported income divided by average wealth between $t-1$ and t: $r_{it} = \frac{R_{it}}{(W_{it}+W_{i,t-1})/2}$. Aggregate returns are weighted by this average wealth. Table C.2 shows that the results are robust to alternative return measures.

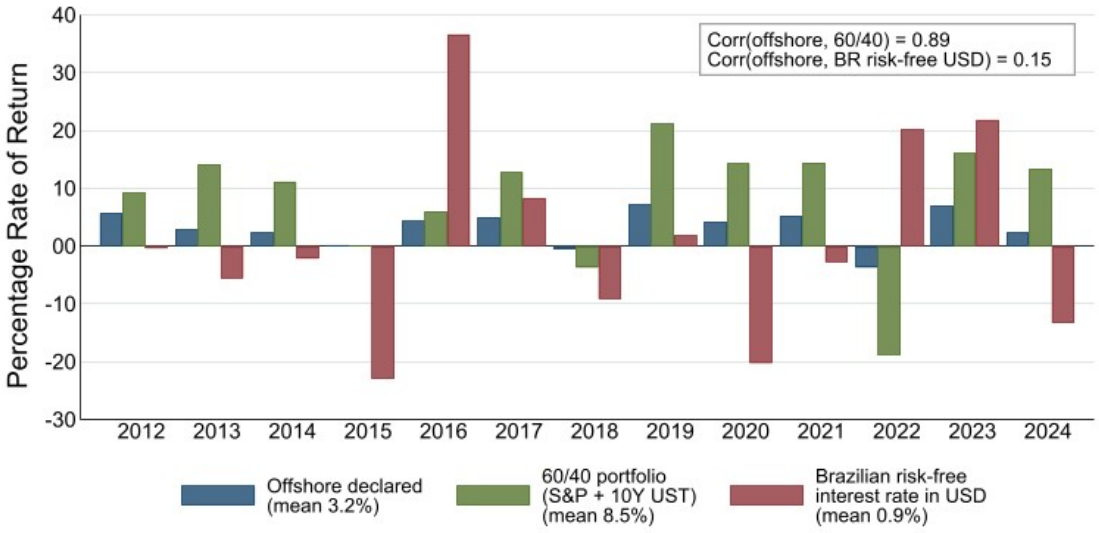
The average reported offshore return for this period is 3.2%, compared with 8.5% for the 60/40 portfolio and 0.9% for Brazilian fixed income in dollars. Returns are higher in OFCs and among amnesty participants (Table C.2). Returns are also highest for equity FDI, at 3.6%, followed by fixed-income assets, deposits, real estate, and portfolio equity, at 1.0%, 0.8%, 0.3%, and 0.3%, respectively (Table C.1, Baseline row).

Offshore returns are highly correlated with the 60/40 benchmark ($\rho = 0.89$), providing suggestive evidence that assets held through offshore entities were largely invested in global

financial markets. By contrast, their correlation with Brazilian fixed-income returns is low ($\rho = 0.15$), pointing to diversification gains relative to domestic investments. Figure C.2 shows that the weak correlation between Brazilian fixed-income and 60/40 benchmark returns also holds over 1995–2024 ($\rho = 0.24$), despite similar average returns in BRL (15.2% and 17.0%, respectively). This weak correlation partly reflects the negative correlation between BRL depreciation and U.S. asset returns ($\rho = -0.21$), reinforcing the diversification benefits of offshore investment.

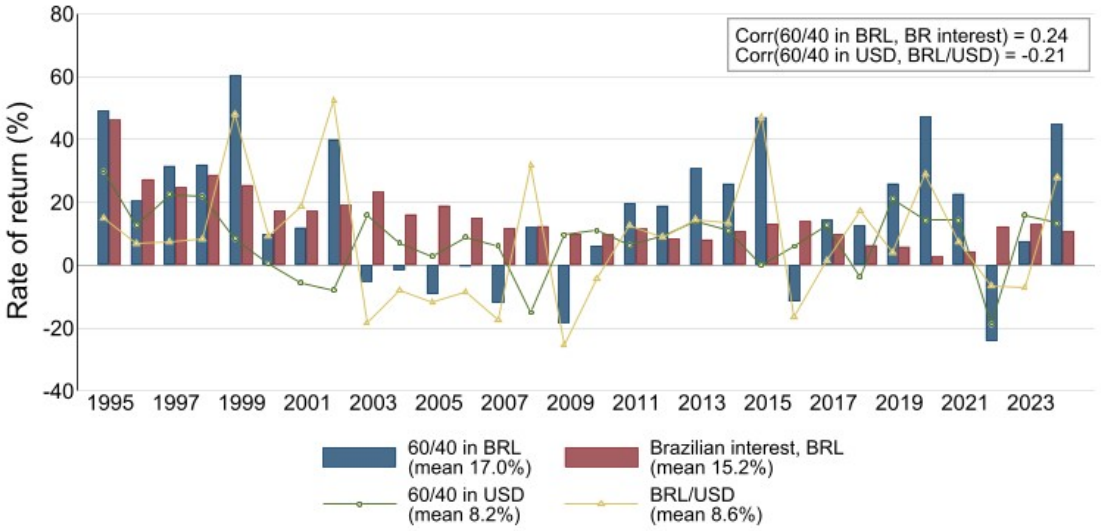
While these patterns do not directly explain why individuals kept most of the disclosed assets offshore, they indicate that offshore investments provided access to global markets and diversification benefits. Other motives may also have played a role, such as protection from political crises, expropriation, and litigation, as well as estate planning (Andersen et al. 2017; Bayer et al. 2020; Andersen et al. 2022; Marchesi and Marcolongo 2025).

Figure C.1: Reported annual rate of return on offshore assets, 2012–2024



Note: This figure presents, for each year 2012–2024, the average return reported by Brazilian individuals on assets held in offshore financial centers, computed as reported income divided by the average of the stock at the end of the previous and the current year and weighted by that average stock. It also presents the return on a benchmark portfolio invested 60% in the S&P 500 and 40% in 10-year U.S. Treasury bonds, and the U.S. dollar return on the Brazilian risk-free rate (Selic), which combines the domestic interest rate and the exchange-rate change. Returns of 100% or more in absolute value are excluded. The box reports the correlation across years between the offshore return and each benchmark. This figure is discussed in Appendix C.

Figure C.2: Returns on the 60/40 portfolio and on Brazilian fixed income in reais, 1995–2024



Note: This figure presents, for 1995–2024, the annual return in Brazilian reais on a benchmark portfolio invested 60% in the S&P 500 and 40% in 10-year U.S. Treasury bonds, and on the Brazilian risk-free rate (Selic), both as bars. The lines show the U.S. dollar return on the same portfolio and the change in the BRL/USD exchange rate, with positive values indicating a depreciation of the real. The box reports correlations across years. This figure is discussed in Appendix C.

Table C.1: Reported returns on foreign assets by asset type, 2012–2024

Specification	Deposits	Equity (Portfolio)	Real estate	Fixed income	Equity (FDI)
Baseline	0.8	0.3	0.3	1.0	3.6
Weighted, untrimmed, zeros dropped	3.4	2.1	5.5	4.4	4.2
Weighted, trimmed, zeros kept	0.8	0.3	0.3	0.9	3.8
Unweighted, trimmed, zeros kept	0.4	0.3	0.5	1.7	3.0
Unweighted, trimmed, zeros dropped	3.6	2.5	8.1	4.7	4.1
All foreign	0.6	0.6	0.4	1.4	3.5
Non-OFC	0.5	0.9	0.4	2.0	3.0

Note: This table reports the average annual return, in percent, on foreign assets held by Brazilian individuals over 2012–2024, by asset type. Individual returns are reported income divided by the average of the stock at the end of the previous and the current year. Returns of 100% or more in absolute value are excluded. The baseline is weighted by the average stock and untrimmed, keeps observations with zero income, and covers assets in offshore financial centers (OFCs). The second block varies weighting, trimming, and the treatment of zeros, where trimmed specifications drop the top and bottom 2.5% of the non-zero distribution within year and asset type. The third block covers all foreign assets and assets outside OFCs. The Trusts and Other category is excluded. Real estate held in OFCs generates reported income for very few individuals, so the two zeros-dropped estimates for this asset type rest on a handful of observations. This table is discussed in Appendix C.

Table C.2: Reported returns on foreign assets by year, 2012–2024

Specification	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Avg	Corr 60/40	Corr Selic	Corr Ibov
Baseline	5.7	2.9	2.4	0.2	4.3	5.0	-0.5	7.2	4.2	5.2	-3.7	7.0	2.4	3.2	0.89	0.15	0.33
Weighted, untrimmed, zeros dropped	8.2	4.0	3.2	0.2	5.8	5.9	-0.6	8.2	4.6	5.7	-4.0	7.7	2.6	4.0	0.86	0.18	0.35
Weighted, trimmed, zeros kept	5.3	2.7	2.2	-0.2	3.9	5.1	-0.0	6.6	4.7	6.3	-3.9	6.2	3.9	3.3	0.92	0.05	0.23
Unweighted, trimmed, zeros kept	2.9	1.1	0.8	-0.4	2.3	3.3	0.4	4.7	4.2	3.6	-3.3	5.2	3.5	2.2	0.89	-0.00	0.22
Unweighted, trimmed, zeros dropped	7.2	2.6	1.8	-1.0	5.0	6.0	0.6	7.9	5.7	4.9	-4.4	6.9	4.4	3.7	0.87	0.09	0.32
All foreign	5.1	1.7	2.0	0.5	3.5	4.4	-0.3	6.2	4.1	4.5	-3.2	6.3	2.3	2.8	0.88	0.12	0.32
Non-OFC	3.6	-0.6	1.1	1.6	1.1	2.1	0.4	2.3	2.3	1.6	-1.3	3.0	2.1	1.5	0.65	-0.13	0.09
Amnesty participants	6.4	2.7	1.5	0.4	4.1	5.5	0.1	6.3	3.8	5.7	-4.3	7.3	3.7	3.3	0.87	0.10	0.28
Non-participants	4.4	1.2	2.3	0.7	2.9	3.3	-0.6	6.2	4.2	3.7	-2.7	5.7	1.5	2.5	0.86	0.08	0.29

Note: This table reports the average annual return, in percent, on foreign assets held by Brazilian individuals, by year over 2012–2024. Individual returns are reported income divided by the average of the stock at the end of the previous and the current year. Returns of 100% or more in absolute value are excluded. The baseline is weighted by the average stock and untrimmed, keeps observations with zero income, and covers assets in offshore financial centers (OFCs). The second block varies weighting, trimming (top and bottom 2.5% of the non-zero distribution within year), and the treatment of zeros. The third block covers all foreign assets and assets outside OFCs, and the fourth block reports amnesty participants and non-participants separately. Avg is the mean of the annual estimates. The last three columns report the correlation across years with the 60/40 portfolio (60% S&P 500, 40% 10-year U.S. Treasury bonds), the Brazilian risk-free rate (Selic) in U.S. dollars, and the Ibovespa in U.S. dollars. This table is discussed in Appendix C.

D Portfolio Shifts

There is a long-run increasing trend in the use of equity FDI as a vehicle for offshore investment. Figure D.1.A shows that, among all individuals reporting foreign wealth, the share holding equity FDI increases from 21% in 2003 to 31% in 2014. This increase is not purely compositional. Figure D.1.B shows that, among long-term reporters (non-participants who reported foreign assets in every year between 2003 and 2014), the share holding equity FDI increases from 34% to 49%, while the share of their reported foreign wealth held in this form increases from 61% to 84%.

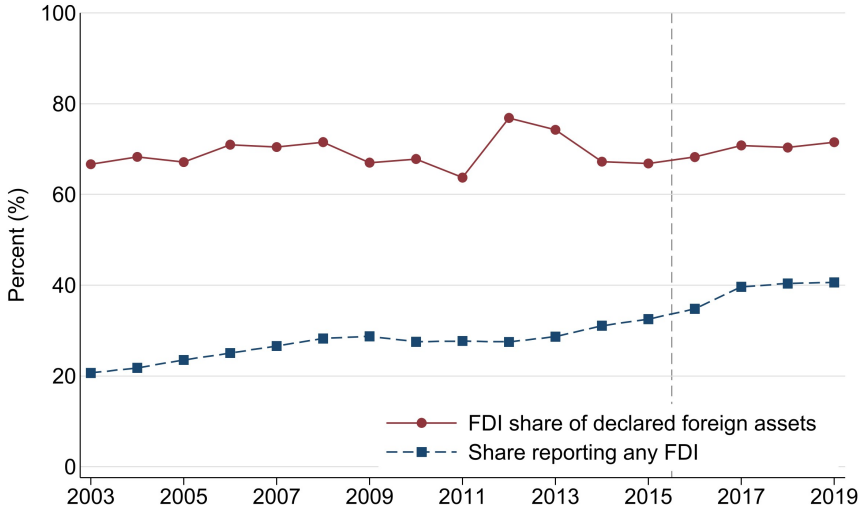
Amnesty participants appear to partially reorganize their portfolios in this direction after disclosure, catching up with the control group of long-term reporters. Figure D.2 shows a steeper increase in the share of participants holding equity FDI in 2017, the year after the amnesty, from 45% in 2016 to 53% in 2017 and 56% by 2019. The corresponding shares for the control group are 52%, 56%, and 57%, respectively, so that the gap between the two groups narrows from 10 percentage points in 2014 to 1 percentage point in 2019. This pattern is not driven by greater repatriation among participants with smaller portfolios and no equity FDI. Among a balanced panel of participants reporting in every year between 2014 and 2019, the share holding equity FDI similarly increases from 47% to 58%.

The same pattern appears on the intensive margin. Figure D.3 shows that the share of equity FDI in participants' foreign wealth increases from 68% in 2014 to 80% in 2019, compared with 69% to 81% in the balanced panel. At the same time, the share held in CRS-covered assets—portfolio equity, deposits, and fixed income—falls from 21% to 12%. By contrast, the composition of the control group remains broadly stable over the same period. Equity FDI accounts for 84% of their reported foreign wealth in 2014 and 83% in 2019, while CRS-covered assets account for 11% and 13%, respectively.

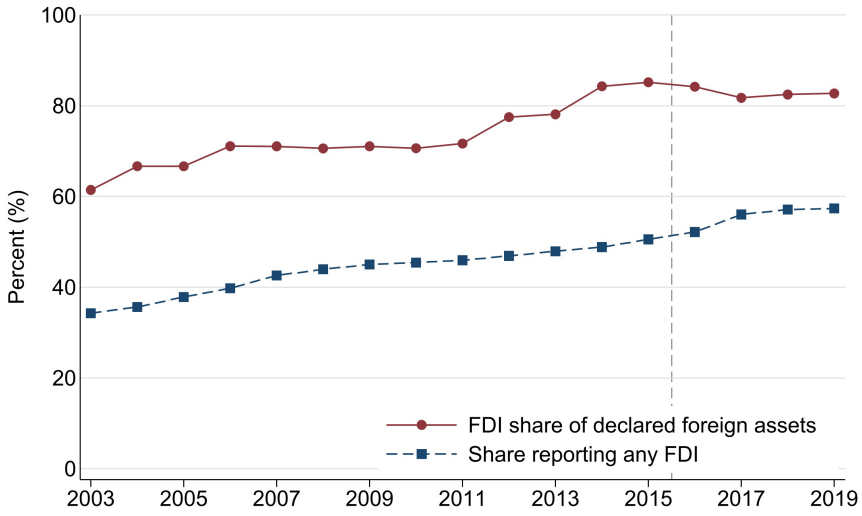
As discussed in Section 4.1, equity FDI has tax-related advantages. Undistributed earnings of the foreign entity are not taxed in Brazil until distribution, allowing tax payments to be deferred. Holding assets through a foreign entity may also provide tax advantages when investing in third countries, such as reduced exposure to U.S. estate tax.

Figure D.1: Equity FDI in reported foreign wealth, 2003–2019

(a) All reporters

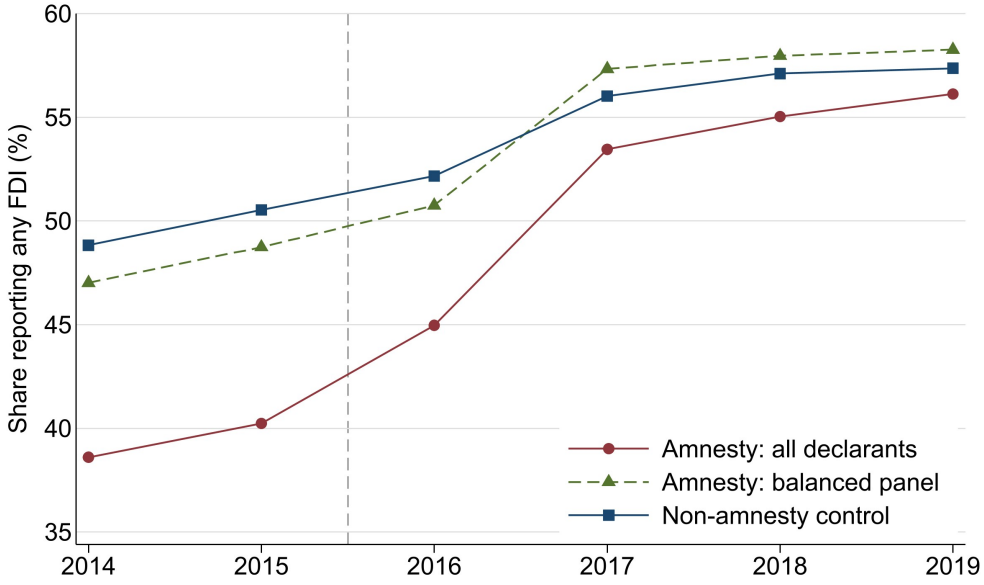


(b) Long-term reporters



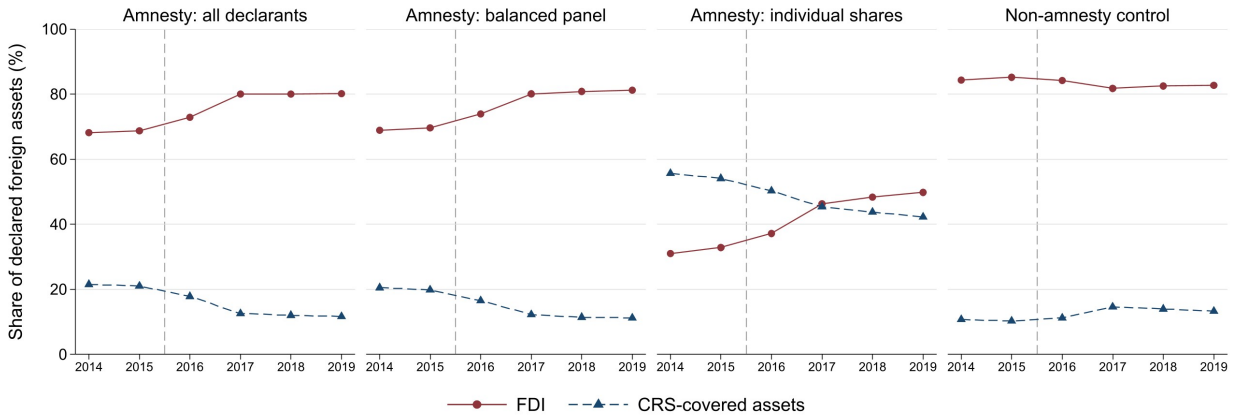
Note: Panel A presents, for all individuals reporting foreign assets in each year, the share of individuals holding equity classified as foreign direct investment (FDI) and the share of total reported foreign wealth held as equity FDI, 2003–2019. Panel B presents the same two series for long-term reporters (non-participants who reported foreign assets in every year 2003–2014). The share of individuals is the number reporting equity FDI divided by the number reporting any foreign asset in that year. The wealth share is the total value of equity FDI divided by the total value of all foreign assets reported in that year. The vertical dashed line separates 2015, the last year before the amnesty, from 2016, the amnesty year. This figure is discussed in Appendix D.

Figure D.2: Share of individuals holding equity FDI, amnesty participants and long-term reporters, 2014–2019



Note: This figure presents the share of individuals holding equity classified as foreign direct investment (FDI) among those reporting foreign assets in each year, 2014–2019, for amnesty participants, for a balanced panel of amnesty participants who reported foreign assets in every year 2014–2019, and for long-term reporters (non-participants who reported foreign assets in every year 2003–2014). The vertical dashed line separates 2015, the last year before the amnesty, from 2016, the amnesty year. This figure is discussed in Appendix D.

Figure D.3: Shares of equity FDI and CRS-covered assets in reported foreign wealth, 2014–2019



Note: This figure presents the share of reported foreign wealth held in equity classified as foreign direct investment (FDI) and in assets covered by the Common Reporting Standard (CRS) (deposits, portfolio equity, and fixed income), 2014–2019. Panel A presents value-weighted shares for all amnesty participants reporting in each year, computed as the total value in each asset type divided by the total value of all foreign assets. Panel B presents the same value-weighted shares for a balanced panel of amnesty participants who reported foreign assets in every year 2014–2019. Panel C presents the unweighted average across amnesty participants of each individual's asset-class shares. Panel D presents value-weighted shares for long-term reporters (non-participants who reported foreign assets in every year 2003–2014). The vertical dashed line separates 2015, the last year before the amnesty, from 2016, the amnesty year. This figure is discussed in Appendix D.