Economic Effects of Simplified Procedures for Claiming Cross-Border Tax Reliefs

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Abstract

We examine the effect of compliance frictions in reclaiming foreign withholding taxes on Foreign Portfolio Investments (FPI) using a comprehensive panel of FPI stocks of 83 countries, including EU Member States, between 2005 and 2019 and country-pair-specific withholding tax rates. We find a negative and statistically significant elasticity of the FPI stock of equity and debt holdings to non-refundable withholding taxes. The estimated elasticities imply that a 10 percentage point reduction in non-refundable withholding taxes increases the FPI stock of equity holdings by 8.2%. In a second step, we employ a general equilibrium model to quantify the macroeconomic implications of compliance frictions. In absence of costs in the withholding tax reclaim process, average GDP in the EU27 countries would increase by 0.10%, capital and wages would rise by 0.21% and 0.06%, respectively, suggesting noticeable macroeconomic costs arising from such compliance frictions.

Executive Summary

Policy context

The return to portfolio investment in equity or debt securities made by a non-resident investor is typically subject to a withholding tax in the country of the investment (source country). To avoid double taxation, whenever the source withholding tax rate is higher than the reduced rate applicable according to the relevant double tax treaty, the non-resident investor can claim ex-post the refund of the excess tax withheld by the source country. However, the current system for withholding tax refund in place in the EU proves cumbersome and costly, and prone to fraud. It considered an important barrier to the free movement of capital that discourage cross-border investment and hinder the efficient allocation of capital via international financial markets.

Lengthy and inefficient withholding tax relief procedures can give rise to three different sources of costs that can divert and/or discourage cross-border investment. First, claiming the refund entails direct financial costs arising from processing fees paid to the custodian or to an external service provider, paperwork, and diversity of source country requirements. Second, the delays – often years – in refunding investors bring about implicit financial losses for the investors and liquidity constraints, compared to the ideal scenario with immediate refund. Finally, the fact that some investors, particularly smaller ones, may decide to forego the relief for a number of reasons, makes the current system costly from a macroeconomic perspective, as it holds back cross-border investment. Overall, European Commission (2023) estimates these costs at EUR 6.62bn in 2022. By frustrating full integration of securities markets, these costs impede their functioning as the main channel of cross-border private risk sharing for firms and households.

Main analysis

We add to the quantification of the economic implications of lengthy and inefficient withholding tax relief procedures in two important ways. First, we investigate the sensitivity of FPI stocks to non-refundable withholding taxes in the EU, separately for equity and debt holdings, and by type of holding investor (financial corporations, non-financial corporations, households). The analysis is based on a comprehensive panel of FPI stocks of 83 countries, including all EU Member States, between 2005 and 2019 and country-pair-specific withholding tax rates. Extending the analysis to different types of investors and vehicles of investment allows to uncover important margins of heterogeneity in the sensitivity to compliance frictions that has previously been untouched. Second, based on the econometric analysis in the first step, we are the first ones to quantify the macroeconomic impact of reducing the cost of withholding tax relief procedures making use of a general equilibrium model CORTAX. Computable general equilibrium (CGE) models have proven to be a useful instrument to simulate the consequences of counterfactual scenarios taking behavioural responses as well as the complex interactions and interdependencies between economic agents and sectors into account.

Key conclusions

In line with previous findings, we document a negative and statistically significant elasticity of the FPI stock of equity and debt holdings to non-refundable withholding taxes. Concretely, the estimated elasticities imply that a 10 percentage point reduction in non-refundable withholding taxes increases the FPI stock of equity holdings by between 5.2% and 9.3% (point estimate 8.2%). The corresponding effect on FPI stock of debt holdings is slightly lower and less precise, estimated between 2.2% and 8.1% (point estimate 6.2%). At the sectoral level, we find particularly strong effects among non-financial corporations' debt holdings. With regards to the general equilibrium effects, our results suggest that removing WHT overpayments would lead to noticeable macroeconomic impact. On average across the EU27 countries, GDP is projected to increase by 0.10%, capital and wages would rise by 0.21% and 0.06%, respectively, and employment would increase marginally. The results illustrate the economic gains to be expected from a simplification of withholding tax relief procedures and give rise to respective policy action.

1 Introduction

We examine the effects of compliance frictions in reclaiming foreign withholding taxes on Foreign Portfolio Investments (FPI) and quantify their macroeconomic implications. Procedures for granting withholding tax relief on cross-border investment are considered an important barrier to the free movement of capital that discourage cross-border investment and hinder the efficient allocation of capital via international financial markets. The return to portfolio investment in equity or debt securities made by a non-resident investor is typically subject to a withholding tax in the country of the investment (source country). To avoid double taxation, whenever the source withholding tax rate is higher than the reduced rate applicable according to the relevant double tax treaty, the non-resident investor can claim ex-post the refund of the excess tax withheld by the source country. However, the current system for withholding tax refund in place in the EU proves cumbersome and costly, and prone to fraud. ([1])

Lengthy and inefficient withholding tax relief procedures can give rise to three different sources of costs that can divert and/or discourage cross-border investment. First, claiming the refund entails direct financial costs arising from processing fees paid to the custodian or to an external service provider, paperwork, and diversity of source country requirements. Second, the delays – often years – in refunding investors bring about implicit financial losses for the investors and liquidity constraints, compared to the ideal scenario with immediate refund. Finally, the fact that some investors, particularly smaller ones, may decide to forego the relief for a number of reasons, makes the current system costly from a macroeconomic perspective, as it holds back cross-border investment. Overall, European Commission (2023) estimates these costs at EUR 6.62bn in 2022. By frustrating full integration of securities markets, these costs impede their functioning as the main channel of cross-border private risk sharing for firms and households.

Adding to the empirical literature on the effect of compliance costs (e.g. Pitt and Slemrod, 1989, and Benzarti, 2020), Jacob and Todtenhaupt (2023) estimate that FPI levels could be by about 7.6% larger in the presence of a relief at source mechanism that eliminates most of the compliance costs in the reclaim process. Beyond the initial macroeconomic stimulus from the actual investment, enhanced FPI flows will impact the overall macroeconomic environment by raising total factor productivity and, more generally, the efficiency of resource allocation in the recipient economy. In turn, this will have consequences for the main macroeconomic outcomes, such as GDP, the capital stock, and labour usage.

Beyond this background, we add to the quantification of the economic implications of lengthy and inefficient withholding tax relief procedures in two important ways. First, we investigate the sensitivity of FPI stocks to non-refundable withholding taxes in the EU, separately for equity and debt holdings, and by type of holding investor (financial corporations, non-financial corporations, households). Extending the analysis to different types of investors and vehicles of investment allows to uncover important margins of heterogeneity in the sensitivity to compliance frictions that has previously been untouched. The analysis is based on a comprehensive panel of FPI stocks of 83 countries, including all EU Member States, between 2005 and 2019 and country-pair-specific withholding tax rates.

In line with Jacob and Todtenhaupt (2023), we find a negative and statistically significant elasticity of the FPI stock of equity and debt holdings to non-refundable withholding taxes. Concretely, the estimated elasticities imply that a 10 percentage point reduction in non-refundable withholding taxes increases the FPI stock of equity holdings by between 5.2% and 9.3% (point estimate 8.2%). The corresponding effect on FPI stock of debt holdings is slightly lower and less precise, estimated between 2.2% and 8.1% (point estimate 6.2%). At the sectoral level, we find particularly strong effects among non-financial corporations' debt holdings.

Second, based on the econometric analysis, we are the first ones to quantify the macroeconomic impact of reducing the cost of withholding tax relief procedures making use of a general equilibrium model CORTAX (Bratta et al., 2023). The CORTAX model has been designed to simulate the economic impact of national and international tax policy reforms, as well as the international harmonisation of national tax policies, taking into account the complex and multi-faceted interactions between firms (including MNEs), households and governments. Given that capital is an important input factor in the production process, the economic effects of compliance frictions, and the reduction of those, are complex in nature and include more obvious first-order effects, but also less obvious second-order and feedback effects that can be substantial in size. Computable general equilibrium (CGE) models have proven to be a useful instrument to simulate the

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([1])   Evidence for this from targeted consultations is reported in European Commission (2023).

consequences of counterfactual scenarios taking behavioural responses as well as the interactions and interdependencies between economic agents and sectors into account.

The model results suggest that removing WHT overpayments would lead to noticeable macroeconomic effects. On average across the EU27 countries, GDP is projected to increase by 0.10%, capital and wages would rise by 0.21% and 0.06%, respectively, and employment would increase marginally. The results illustrate the economic gains to be expected from a simplification of withholding tax relief procedures and give rise to respective policy action.

2 Measuring the effects of non-refundable withholding taxes on FPI

2.1 Empirical Strategy

In order to evaluate the potential impact of the policy reform on FPI, the sensitivity of FPI to non-refundable withholding taxes is estimated empirically. The available panel data covers 83 countries, including all EU Member States, between 2005 and 2019. Following an established practice in the research literature, a gravity-style model is adopted with fixed effects to infer withholding tax elasticities. In particular, the following baseline specification is estimated:

$$FPI_{im,t} = \exp\left(\alpha_0 + \beta_1 NonRefundableWHT_{mi,t} + \beta_2 DTT_{im,t} + \mu_{it} + \theta_{mt} + \gamma_{im}\right) + \varepsilon_{im,t},$$

where $FPI_{im,t}$ is the stock of FPI from home (investor) country i in Member State (source) m in year t; $NonRefundableWHT_{mi,t}$ is a time-variant vector of non-refundable withholding taxes in Member State m towards an investor from country i; $DTT_{im,t}$ is a dummy indicator taking the value of unity if there is a tax treaty between investor country i and Member State m in year t; and μ_{it}, θ_{mt} and γ_{im} are respectively vectors of home-year, source-year and time-invariant country-pair fixed effects. A unit increase in a covariate will lead to a $100^*(e^\beta - 1)$ percentage increase in the FPI stock.

The baseline model is estimated using the Poisson Pseudo Maximum Likelihood (PPML) estimator. ([2]) The PPML estimator is chosen as it allows to account for zero FPI stocks and heteroscedasticity in FPI data. ([3])

The rich structure of fixed effects allows to infer the effects of non-refundable withholding taxes on FPI from within country-pair variation over time. Specifically home-year and source-year fixed effects control for any country-year specific covariates that may affect cross-border investment, such as GDP, GDP per capita, (financial) market attractiveness, or access to financial markets. Time-invariant country-pair fixed effects account for any covariates that are specific (and constant) for a given pair of countries over time, including geographical distance, common language and past colonial relationship. Therefore, it is only needed to control for covariates that change within a given country-pair over time, for example, the signature of a tax treaty and our main variable of interest, the non-refundable withholding taxes.

2.2 Data

The main source of data on FPI is the "Coordinated Portfolio Investment Survey" (CPIS), conducted by the International Monetary Fund (IMF). Portfolio investment statistics report the international investment position of participating countries, that is their holdings of portfolio investment assets in the form of equity and investment fund shares, long-term debt securities (i.e., debt securities with an original maturity over one year), and short-term debt securities (i.e., debt securities with an original maturity of one year or less). The statistics are reported on an annual basis and are broken down by counterpart economies (those whose residents have issued the securities).

Separate reporting of debt and equity holding allows one to analyse the behaviour of the two series separately. Likewise, the breakdown by holding sector (financial corporations, non-financial corporations, households) potentially allows one to detect differences in the cross-border investment behaviour of these agents.

Data on withholding taxes and tax treaties comes primarily from country-specific withholding tax tables sourced from the IBFD. The data has been extensively cleaned in order to identify the applicable withholding tax rates. In particular, considerable efforts have been made to identify the withholding tax rate applicable to negotiable (i.e. tradeable) debt securities owned by the sector of non-financial corporations, households and non-profit institutions serving households (NPISHs).

([2])   For an extensive discussion on estimating gravity models using the PPML estimator, see Yotov et al. (2016).
([3])   Note that a simple log-linear specification is problematic due to the presence of zero FPI stocks. In particular, taking a log of zero FPI stocks is not possible, so that these observations would be excluded from the sample leading to sample-selection bias. To circumvent this problem, early literature proposed to add a small, arbitrary, value to zero FPI stocks. However, such an approach yields biased estimates.

2.3 Main Results

The main results on the effects of non-refundable withholding taxes on the total stock of equity and debt holdings are presented in Table 1.[4]

Table 1: *Effects of non-refundable withholding taxes*

	(A) Equity holdings (total stock)	(B) Debt holdings (total stock)
NonRefundableWHT	-1.6983***	-0.9624***
	(0.4938)	(0.3637)
DTT	0.0192	-0.0004
	(0.1176)	(0.1434)
No. of obs	19,739	21,240
Pseudo R2	0.9937	0.9859
Home-year FE	YES	YES
Source-year FE	YES	YES
Country-pair FE	YES	YES

Notes: Dependent variable: FPI stock of equity holdings (Panel A) and debt holdings (Panel B). ***, ** and * indicate significance at the 1%, 5% and 10% level respectively. Standard errors clustered by country-pair.

Source: CPIS Data and own computations.

The estimation results indicate a negative and statistically significant elasticity of the FPI stock of equity and debt holdings to non-refundable withholding taxes. Concretely, the estimated elasticities imply that a 10 percentage point reduction in non-refundable withholding taxes increases the FPI stock of equity holdings by between 5.2% and 9.3% (point estimate 8.2%). The corresponding effect on FPI stock of debt holdings is slightly lower and less precise, estimated between 2.2% and 8.1% (point estimate 6.2%). No additional effect from two countries having a tax treaty on FPI can be found.

The analysis is continued at the sectoral level, focusing on the sector of Non-financial corporations, Households and NPISHs (NHN) and the sub-sectors of Non-financial corporations (NFCs) and Households (HHs). Tables 2 and 3 present the results for the FPI stock of equity and debt holdings.

Table 2: *Sectoral effects of non-refundable withholding taxes: Equity Holdings*

	(A) NHN (NFC + HH + NPISH)	(B) NFC	(C) HH
NonRefundableWHT	-1.9218*	-1.3112	3.2288
	(1.1621)	(2.2525)	(1.9934)

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[4] The high pseudo R[2] is not surprising given the large number of fixed effects which is used. Both the dependent and independent variables feature a high degree of variability. For example, in the case of equity and debt holdings, the coefficient of variation exceeds values of 400%, indicating a high dispersion around the mean. Similarly, the coefficient of variation is around 156% for the explanatory variable, i.e. non-refundable withholding taxes.

DTT	0.5628*	0.1736	0.2435
	(0.3401)	(0.3724)	(0.3569)
No. of obs	10,302	6,595	6,613
Pseudo R2	0.9943	0.9814	0.9975
Home-year FE	YES	YES	YES
Source-year FE	YES	YES	YES
Country-pair FE	YES	YES	YES

Notes: Dependent variable: FPI stock of equity holdings held by Non-financial corporations, Households and Non-profit institutions serving households (Column A), held by Non-financial corporations (Column B), and held by Households (Column C). ***, ** and * indicate significance at the 1%, 5% and 10% level respectively. Standard errors clustered by country-pair.

Source: CPIS Data and own computations.

In the same vein as before, the results suggest that non-refundable withholding taxes decrease the FPI stock of equity holdings held by the NHN sector. The effect is similar to the baseline estimate with a point estimate of 8.5% increase in FPI stock for a 10 percentage point decrease in non-refundable withholding taxes. However, the effect is only marginally significant at the 10% level. Looking at the NFC and HH sub-sectors, no statistically significant effect of non-refundable withholding taxes on the FPI stock of equity holdings is found. However, the much smaller sample size needs to be taken into account here, which may in fact preclude sufficient within country-pair variation over time to infer the impact of non-refundable withholding taxes on FPI stock.

Turning to the sectoral effects of non-refundable withholding taxes on the FPI stock of debt holdings, no statistically significant effect for the NHN and HH sectors can be detected. In contrast, the results point toward a highly significant effect of non-refundable withholding taxes on the FPI stock of debt holdings held by NFCs. The effect appears larger than in the baseline estimates and varies between 5.5% and 9.8% (point estimate 9.2%) increase in FPI for a 10 percentage point decrease in non-refundable withholding taxes.

Table 3*: Sectoral effects of non-refundable withholding taxes: Debt Holdings*

	(A)	(B)	(C)
	NHN (NFC + HH + NPISH)	NFC	HH
NonRefundableWHT	-0.0496	-2.4683***	0.6712
	(0.6461)	(0.8476)	(1.1875)
DTT	-0.5672	0.0048	-1.0303**
	(0.6156)	(0.8481)	(0.5092)
No. of obs	10,329	6,568	6,473
Pseudo R2	0.9707	0.9600	0.9841
Home-year FE	YES	YES	YES
Source-year FE	YES	YES	YES
Country-pair FE	YES	YES	YES

2.4   Robustness Tests

The results are corroborated by several robustness test. First, a bias correction procedure for PPML models with two- and three-way fixed effects is applied. [5] The results confirm the baseline estimates. Specifically, the effect of non-refundable withholding taxes on the FPI stock of equity holdings (point estimate 8.3%) and debt holdings (point estimate 6.5%) is marginally larger than before. However, the latter is now significant at the 5% level. At the sector level, the effect of non-refundable withholding taxes on the FPI stock of equity holdings held by NHN sector is no longer statistically significant, whereas the effect remains significant at the 5% level in the case of debt holdings held by NFCs.

Next, the baseline model is estimated on interval data, keeping only every third or every fourth year from our panel in order to rule out time-period-specific effects. [6] The main results on the total FPI stock of equity and debt holdings remain unchanged, while the results at the sectoral level appear slightly more erratic.

Finally, the baseline model is re-estimated using the EK Tobit estimator instead of PPML. [7] Once again, the main results for the total FPI stock of equity and debt holdings are confirmed. The sectoral effects of non-refundable withholding taxes on the FPI stock of equity holdings remain statistically insignificant. In contrast, statistically significant sectoral effects of non-refundable withholding taxes on the FPI stock of debt securities held by NHN, NFC and HH sectors are not found. However, it needs to be taken into account that the model could not be estimated with the full set of fixed effects. Instead, the model includes a reduced set of home and source-year fixed effects and additional covariates capturing the time-invariant country-pair characteristics. Nonetheless, these robustness tests should not be interpreted as inferring a causal relationship.

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[5]   See Weidner and Zylkin (2021). Results available upon request.
[6]   For more details, see in particular pages 22-24 in Yotov et al. (2016). Results available on request.
[7]   For details, see Head and Mayer (2014). Results available on request.

3 The Macroeconomic Impact of Reducing the Cost of Withholding Tax Relief Procedures

3.1 Background

The second part of the analysis is concerned with the macroeconomic impact of reducing the cost of withholding tax relief procedures, based on the computable general equilibrium model CORTAX. The CORTAX model has been designed to simulate the economic impact of national and international tax policy reforms, as well as the international harmonisation of national tax policies.

CORTAX allows simulations of the effects of tax changes within a framework that takes into account the complex and multi-faceted interactions between firms (including MNEs), households and governments. In the model, each country is assumed to have the same structure in terms of consumption, savings, production, and public finances (though the data and parameters are country-specific). Countries are linked to each other via international trade in goods markets, investment by MNEs, international capital flows and intermediate inputs within multinationals.

Domestic firms produce and pay taxes only in their country of residence, whereas multinationals optimise profits globally and engage in profit shifting activities across borders. The model solves to the long-run steady state equilibrium (the transition paths between states are not modelled). The effects of reforms can then be expressed as changes in GDP, household consumption, business investment and fiscal revenue. ([8])

3.2 Modelling the Cost of Withholding Tax Relief Procedures

While withholding taxes and administrative costs from reclaiming overpayments are not explicitly modelled in CORTAX, they are reflected by adjusting the tax-deductibility of the administrative cost related to investments abroad, thereby ultimately reducing the effective costs of foreign investments. Concretely, the model includes a cost of financial distress, which may be different across multinational firms in each of the country where their subsidiaries are present. This cost may be deductible from each of the CIT base paid by every subsidiary. For example, the relevant parameter, which is denoted by β_c, will be zero or one if either no or full deductibility is allowed, respectively. In principle, it can also take larger values than one. While in the baseline of the model the deductibility of this cost is set to zero, the reform is simulated by allowing a positive value of the deductibility parameter, thereby effectively decreasing the costs related to investments abroad.

Following established methods in the empirical trade literature, so-called tax-equivalents are computed. In this case, the equivalent deductibility that could rationalize the change in FPI, taking the semi-elasticity of foreign investments with respect to the deductibility within CORTAX (η_{CorTax}) from the empirical part of the analysis as given, is computed as follows:

$$\beta_c = \frac{\% \, \Delta \, FPI}{\eta_{CorTax}} \tag{1}$$

The numerator of Eq. (1), the percentage change in FPI, requires two ingredients: the actual level of FPI and the hypothetical level of FPI in the absence of any costs from withholding tax relief procedures. While the former can be directly observed in the data (e.g., how much do investors from Italy invest in the United States in a given year under the status quo), the latter must be inferred from estimated regressions by using predicted values of FPI levels with no costs from overpayment.

The semi-elasticity of -0.82 is directly obtained from the empirical analysis above in order to compute hypothetical levels of foreign portfolio investments in the absence of any WHT complexities, $\widehat{FPI}_{im,t}$. For example, if a country pair *im* in year *t* has a level of FPI equal to EUR 4,250 million with a WHT overpayment gap of ten percentage points, it would have had an investment level of 4,250/(1-0.82*0.1) = EUR 4,630 million in the hypothetical case with no costs from reclaiming overpayments, ceteris paribus. Or, to put it differently, the change from the overpayment-free state to the actual investment level would be equivalent to 4,250/4,630-1 = -8.2%, equivalent to -0.82*10%.

([8]) See Bratta et al. (2023) and the references therein for details on the model characteristics and its parametrization.

The denominator of Eq. (1), the tax semi-elasticity within CORTAX, η_{CorTax}, can be easily obtained from "within" the model by increasing the deductibility by one unit and observe the resulting change in foreign investments. The average semi-elasticity of investments is found to be 2.79.

As a final step, the corresponding values for the deductibility-equivalent are easily derived by applying Eq. (1) from above: by how much would the deductibility need to increase in CORTAX in order to replicate a change in foreign investments of the same magnitude that the first part of the analysis has suggested, taking as given the elasticity of foreign investments with respect to the deductibility. We use observations from the most recent year in the sample, 2019, and those countries, which are present in CORTAX, which are the member states of the EU27, the USA, Japan, and the United Kingdom. When computing the median value across all remaining observations a value of approximately 0.82 is obtained to be used as the change in deductibility, β_c. [9]

3.3 Macroeconomic Results

The model results indicate that the impact from removing WHT overpayments, on average across the EU27 countries, would lead to an increase in all main economic aggregates. In the baseline scenario, EU27 GDP is projected to increase by 0.10%, capital and wages would rise by 0.21% and 0.06%, respectively, and employment would increase marginally, too, by 0.05% as compared to the current status quo.

In the baseline results, it is assumed that foregone governmental revenues are accounted for by adjusting government expenditures downward. The projected impacts are slightly larger in magnitude – especially with respect to GDP – when the government budget is balanced by reducing government transfers to the old generation instead of reducing consumptive government expenditures. The robustness checks, in which different parameter calibrations for the newly granted deductibility of costs related to foreign investments are employed, point to marginally larger impacts. Overall, the macroeconomic results are relatively small in magnitude, yet they are noticeable.

Given that FPI is not explicitly modelled in CORTAX, in this exercise it is assumed that FPI and FDI (foreign direct investment) are of comparable size in each source country and feature the same responsiveness to changes in the deductibility. This allows one to use FDI instead of FPI in order to model the effect. In practice, however, FPI levels are typically smaller than FDI, but reflect large cross-country heterogeneity. Beyond this background, no assumption is made concerning the average for the EU27 as a whole. Nonetheless, to the extent that countries receive less FPI than FDI, the national effects could potentially be smaller in magnitude than obtained here. Conversely, the effects would be larger in those cases where FPI is greater than FDI, therefore unfolding a larger stimulus effect.

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[9] We have performed a range of robustness checks in which alternative parameter choices are used by alternating either the year(s) considered or by using the (investment-weighted) averages instead. The results obtained are almost identical to the baseline results reported here. All results are available upon request.

4 Conclusions

This study examines the economic implications of compliance frictions with respect to reclaiming foreign WHT overpayments on Foreign Portfolio Investments (FPI), which has shown to be a lengthy and burdensome process for international investors. In line with previous results, we find that these costs discourage investors from investing abroad. We find a negative and statistically significant elasticity of the FPI stock of equity and debt holdings to non-refundable withholding taxes. Concretely, the estimated elasticities imply that a 10 percentage point reduction in non-refundable withholding taxes increases the FPI stock of equity holdings by 8.2%, while the estimated effect for debt holdings is slightly smaller in magnitude at 6.2%. At the sectoral level, we find particularly strong effects among non-financial corporations' debt holdings.

The macroeconomic effects of such frictions are non-negligible. Based on a comprehensive general equilibrium model, we find that eliminating compliance costs could increase GDP by 0.10%, capital and wages could rise by 0.21% and 0.06%, respectively, and employment would increase marginally, too, as compared to the current status quo.

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List of abbreviations and definitions

CPIS	Coordinated Portfolio Investment Survey
FDI	Foreign Direct Investments
FPI	Foreign Portfolio Investments
GDP	Gross Domestic Product
HH	Households
IBFD	International Bureau of Fiscal Documentation
IMF	International Monetary Fund
MNE	Multinational Enterprise
NFC	Non-financial Corporation
NHN	Non-financial corporations, Households and NPISHs
NPISH	Non-profit institutions serving households
PPML	Poisson Pseudo Maximum Likelihood
WHT	Withholding Tax

List of tables

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