Controlled Foreign Corporation Rules and Cross–Border M&A Activity

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Abstract: We investigate the influence of one main anti tax avoidance measure, controlled foreign corporation (CFC) rules, on cross-border merger and acquisition (M&A) activity on a global scale. Using three different statistical methods and a large M&A data set, we find that CFC rules distort ownership patterns due to a competitive advantage of multinational entities whose parents reside in non-CFC rule countries. First, we show that the probability of being the acquirer of a low-tax target decreases if CFC rules may be applicable to this target's income. Second, we show that CFC rules distort the acquirer's location choice of targets. Third, we show that CFC rules negatively affect the probability of being the acquirer in a cross-border M&A. Altogether, this study shows that for affected acquirer countries, CFC rules lead to less M&A activity in low-tax countries because profit shifting seems to be less feasible. This behavior change could result in an increase in global corporate tax revenue.

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1   Introduction

Globalization and its accompanying effects in various business fields such as reallocation of production or new customers all around the world are current challenges that multinational entities (MNEs) are facing globally. Further, in all these various dimensions, MNEs and countries, which are concerned about their tax revenue, compete against each other. In addition, international tax law, once a rather minor concern in corporate tax planning, has become increasingly important and MNEs try to use tax loopholes within international tax law to minimize their overall tax payments. One way to minimize tax payments can be realized by MNE-wide profit shifting, which is intensely discussed in current tax policy debates as the "Base Erosion and Profit Shifting" (BEPS) project (OECD/G20 (2015)) of the Organisation for Economic Co-operation and Development (OECD) or the anti tax avoidance directive of the European Union (EU) (European Council (2016)) show. Further, empirical literature provides extensive evidence of MNE-wide profit shifting strategies (e.g., Huizinga and Laeven (2008), Weichenrieder (2009), Grubert (2012), Dharmapala and Riedel (2013)). The basic idea of such profit shifting strategies is to reduce taxable income in high-tax countries by, e.g., royalty or interest payments from high-tax to low-tax subsidiaries.[1]

Several countries, however, have implemented anti tax avoidance measures to counteract this profit shifting behavior. The three major measures are transfer pricing rules, thin capitalization or interest stripping rules and controlled foreign corporation (CFC) rules. This study tries to shine some light on CFC rules, which aim at MNE-wide profit shifting strategies by immediately taxing profits of low-tax subsidiaries, redistributed or not, in the MNE's parent country if certain conditions are fulfilled. Hence, CFC rules make typical profit shifting strategies unattractive for an MNE (e.g., Altshuler and Hubbard (2003), Ruf and Weichenrieder (2012)), since these strategies do no longer reduce the MNE's tax burden.

If a company decides to engage in tax avoidance or to extend its existing tax avoidance strategies, it could try to establish a foreign subsidiary in a low-tax country as a profit shifting vehicle, where profits are taxed at a low rate. There are two common ways to establish a foreign subsidiary: greenfield investment in a new firm or buying an existing company. Our study focuses on the latter one, cross-border mergers and acquisitions (M&As), which is considered an important form of foreign direct investment (FDI) (UNCTAD (2017)). Additionally, even more profit shifting opportunities may be given by acquiring a foreign firm, such as using existing loss carry forwards. Based on the argumentation above, one can easily imagine that the existence and strength of CFC rules that try to counteract such

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[1] A typical profit shifting strategy looks as follows: An MNE equips a subsidiary in a low-tax country with intellectual property (IP) and equity. This subsidiary then may license IP to the parent or subsidiaries in high-tax countries that pay transfer prices (royalties) in exchange for using IP. Further, the low-tax subsidiary may provide debt to the parent or subsidiaries in high-tax countries that pay interest in exchange for the internal loan. Taken together, the royalty and interest expenses reduce taxable income in high-tax countries and increase income in low-tax countries.

behavior could have an impact on cross-border M&As and, thereby, on ownership structures of MNEs.

We investigate whether CFC rules influence ownership patterns on a global scale by analyzing the effect of CFC rules on cross-border M&As. In our different econometrical analyses, we investigate a large data set of worldwide M&A deals with around 14,000 observations and a hand-collected detailed CFC rule data set of 29 countries, extended by countries that do not have CFC rules, for the period 2002 to 2014. We find that CFC rules impact cross-border M&A activity in two ways.

First, we detect that CFC rules distort the acquisition of low-tax targets. In particular, we observe that the probability of acquiring a low-tax target is negatively influenced by potential CFC rule application on the low-tax target's income. Our explanation for this finding is that MNEs with parents in non-CFC rule countries (non-CFC rule MNEs) calculate higher reservation prices for low-tax targets than MNEs with parents in CFC rule countries (CFC rule MNEs), because these targets may be used as valuable profit shifting vehicles within non-CFC rule MNEs. CFC rule MNEs, on the other side, fear the application of CFC rules on low-tax targets' income, which decreases after-tax cash flows. Hence, they calculate lower reservation prices for cross-border M&As than non-CFC rule MNEs.

Second, we detect that CFC rules distort the direction of cross-border M&As between firms. In particular, we observe that if a firm acquires another non-domestic firm, CFC rules negatively affect the M&A direction, i.e., which firm becomes the acquirer and, thereby, the parent of the newly formed MNE. This finding is in line with previous research by Voget (2011), who detects that the presence of CFC rules increases the number of headquarters relocation. However, our approach differs from Voget (2011) by using a different identification strategy and analyzing M&A observations from a different database.

Our paper contributes to tax research and policy considerations in three ways. First, we contribute to empirical tax research on the effects of CFC rules on firm behavior, where little research has been undertaken so far (see Section 2). As Egger and Wamser (2015) point out, this may be due to the difficulty of isolating the effect of anti tax avoidance measures on MNEs who operate in multiple jurisdictions and avail complex group interrelations with respect to, e.g., financing decisions. In addition, the effect of CFC rules is difficult to identify as the applicability of CFC rules depends on the foreign subsidiary's characteristics as well as its host-country's characteristics. To overcome these identification difficulties, we do not only follow a mere dummy variable approach on the presence or non-presence of CFC rules; moreover, we go into the details of each country's CFC rules by considering individual components of CFC rules.

Second, we contribute to empirical tax research in the field of M&As and their tax-related determinants. Indeed, there are many empirical studies on the effect of taxes on M&As from various perspectives, e.g., repatriation taxes (Voget (2011), Hanlon et al. (2015), Edwards et al. (2016), Feld et al. (2016a)), international double taxation (Huizinga and Voget (2009),

Huizinga et al. (2012)) or capital gains taxes (Ayers et al. (2003), Ayers et al. (2007), Feld et al. (2016b), Huizinga et al. (2017)). However, besides Voget (2011), there are to our knowledge no published empirical studies that compare the effect of anti tax avoidance measures on M&A activity over various countries. In particular, there is no such study about the increasingly important CFC rules. However, since anti tax avoidance measures are expanding as shown in Figure 1, the strand of literature dealing with location choices of MNEs and their tax-related elements becomes as important.

Figure 1. Changes in anti profit shifting measures over time for 49 countries (OECD, G20 and EU member countries).
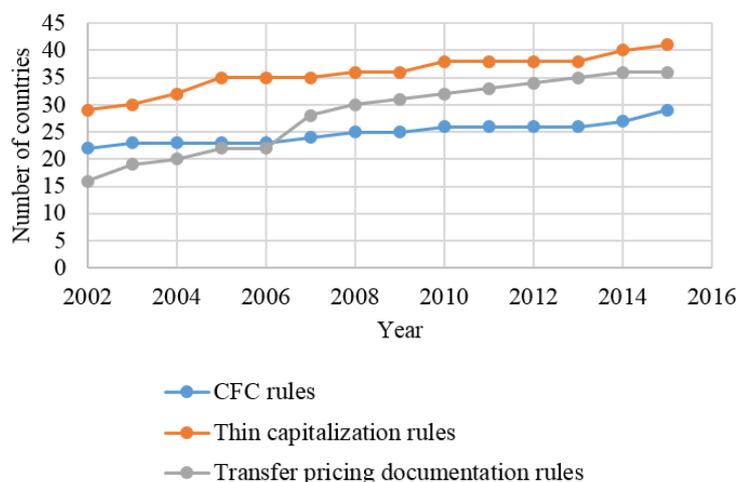
Source: Own data collection.

Third, understanding how CFC rules influence M&A activity on a global scale is also of economic interest, as cross-border M&As are an important form of FDI: In 2016, the value of cross-border M&As accounted globally for 869 billion USD, which slightly exceeded the value of announced greenfield projects (828 billion USD, UNCTAD (2017)). Hence, our analysis on distortionary tax effects on cross-border M&As is also of interest from a global economic and not only from countries' tax policy perspective.

The remainder of this paper proceeds as follows. Section 2 gives a brief review of empirical literature on CFC rules. Section 3 provides our analysis of the effect of CFC rules on the acquisition of low-tax targets. Section 4 analyzes the effect of CFC rules on the direction of cross-border M&As. Finally, Section 5 sets forth our conclusions.

2   Empirical literature on CFC rules

CFC rules are applicable at an MNE's parent level and usually work as follows: If an MNE's foreign subsidiary fulfills certain requirements, at least a part of its income is taxed in the MNE's parent country where the CFC rule is enacted, even if no repatriation takes place. Thereby, MNE-wide profit shifting strategies become mostly ineffective. Typically, three

requirements are crucial for CFC rule application: Low taxation of the foreign subsidiary, passive income of the subsidiary, and minimum ownership in the subsidiary. There is a high degree of variation in how CFC rules are specified, e.g., regarding what is considered low taxation or regarding a passive-to-active-income ratio that may trigger CFC rule application.

Despite the far-reaching consequences of CFC rules on MNEs' tax burdens, empirical studies on the effects of CFC rules on firm behavior are scarce. Altshuler and Hubbard (2003) find that tightening US CFC rules in 1986 has substantially reduced tax planning opportunities with financial services firms in low-tax countries; three years later, Altshuler and Grubert (2006) show that the so-called check-the-box rule, which may allow for an escape from CFC rules for US MNEs, abolished these effects. For a panel of German MNEs, Ruf and Weichenrieder (2012) detect that German CFC rules are effective in reducing passive investments in low-tax countries. These studies show that CFC rules reach the intended goal of reducing profit shifting opportunities with low-tax subsidiaries. However, Egger and Wamser (2015) find that German MNEs, whose subsidiaries are subject to CFC rules, also show significantly lower fixed assets in these subsidiaries. They conclude that CFC rules lead to an increase in cost of capital if subsidiaries are treated by CFC rules. Hence, by influencing real activity abroad, the application of CFC rules can also have non-intended "real" effects. These findings contradict the theoretical thoughts from Weichenrieder (1996) who shows that certain characteristics of CFC rules, such as an accepted passive-to active-income ratio, can lower the cost of capital in foreign subsidiaries under certain circumstances.

We aim to contribute to the scarce literature on CFC rules by investigating the effects of CFC rules on an important form of FDI—cross-border M&A activity—that accounts for almost 1 trillion USD in 2016 (UNCTAD (2017)). In particular, in Section 3, we investigate whether CFC rules influence the acquisition of low-tax targets that potentially fall under the scope of CFC rules. In Section 4, we investigate whether CFC rules influence the direction of cross-border M&As between firms, i.e., which firm becomes the acquirer and, thereby, the parent of the newly formed MNE.

3   CFC rules and the acquisition of low-tax targets

3.1   Hypothesis development

Non-CFC rule MNEs face fewer constraints in implementing profit shifting strategies within their group than CFC rule MNEs.[2] That is because CFC rules aim at profits shifted to low-tax subsidiaries within the MNE and, thereby, make typical profit shifting strategies less

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[2] In our analysis on the effects of CFC rules on cross-border M&A activity, we consider CFC rules in the country of the MNE's parent to be relevant. The reason is straightforward: On the one side, a non-CFC rule MNE gets into a worse tax position if the acquisition is done via a CFC rule subsidiary; hence, the MNE would not acquire through this subsidiary. In support of this reasoning, Lewellen and Robinson (2014) find that the likelihood of choosing a subsidiary as a holding firm within an MNE is significantly lower if that subsidiary resides in a CFC rule country. On the other side, a CFC rule MNE does not get into a better tax position if the acquisition is done via a non-CFC rule subsidiary, because the parent's CFC rule would overall still be applicable in the MNE.

attractive for an MNE. Following the argumentation and findings of Egger and Wamser (2015), CFC rules even increase the cost of capital of subsidiaries that fall under the scope of CFC rules. Consequently, it is less attractive for a CFC rule MNE to acquire a low-tax target that may fall under the scope of CFC rules compared to a non-CFC rule MNE. Put differently, for a non-CFC rule MNE, a low-tax target could function—in addition to other synergies—as a profit shifting vehicle within the MNE. This additional function could make a candidate target more valuable for this MNE compared to a CFC rule MNE without such profit shifting opportunities. Due to this competitive advantage, non-CFC rule MNEs may calculate higher reservation prices for foreign low-tax targets compared to CFC rule MNEs. We, therefore, hypothesize the following, stated in alternative form:

Hypothesis 1a: The probability of being the acquirer of a given low-tax target in a cross-border M&A is higher for non-CFC rule MNEs compared to MNEs that potentially have to apply CFC rules on this target's income.

Hypothesis 1a investigates the influence of CFC rules on the likelihood of acquiring a given target that acquirers from various countries bid for. We also take the "opposite" perspective that a given acquirer has the choice to buy a target out of a pool of targets from various countries. Based on the reasoning above—it is less attractive for a CFC rule MNE to acquire a low-tax target that may fall under the scope of CFC rules compared to a target that does not fall under the scope of CFC rule—we hypothesize the following, stated in alternative form:

Hypothesis 1b: The probability of being the target of a given acquirer in a cross-border M&A is lower for targets that potentially fall under the scope of CFC rules of this acquirer compared to targets that do not fall under the scope of CFC rules of this acquirer.

Almost all observed CFC rules include a so-called "minimum low tax rate threshold" requirement, which determines whether the foreign subsidiary's country is considered a low-tax country. This requirement varies over countries and time. We use these low tax rate thresholds to determine whether the target is located in a low-tax country so that CFC rules are potentially applicable. Acquirers from countries with CFC rules and a low tax rate threshold could especially aim for targets that are located in countries with a statutory corporate tax rate (STR) below their own one but above the low tax rate threshold to achieve tax rate advantages. If, however, the target is located in a country with a higher STR than the acquirer's country STR, we argue that non-CFC rule acquirers may be more prone to buy these targets. This argument is motivated by the following consideration: These acquirers—other than CFC rule acquirers—could shift profits out of the high-tax target country. We, therefore, hypothesize the following, stated in alternative form:

Hypothesis 1c: The probability of being the acquirer (medium-tax target[3]) of a given medium-tax target (given acquirer) in a cross-border M&A is higher for CFC rule MNEs

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[3] A "medium-tax target" is a target, which is located in a country with an STR above the minimum low tax rate threshold but below the STR of the specific acquirer country.

compared to non-CFC rule MNEs. Additionally, the probability of being the acquirer of a target in a country with a higher STR than in the acquirer's country is lower for CFC rule acquirers than for non-CFC rule acquirers.

3.2 Empirical approach

Our empirical approach to analyze the probability of being the actual acquirer country among several candidate acquirer countries follows the common assumption in M&A literature that M&As reflect synergies from combining two firms with all assets being priced at their fair value (e.g., Mitchell and Mulherin (1996), Becker and Fuest (2010), Feld et al. (2016a)) where

$$V_{ijk} = \alpha CFC_{ij} + \beta bx_{ijk} + \varepsilon_{ijk} \tag{1}$$

is the value of target k in country j if it was owned by an acquirer from country i.[4] The term CFC_{ij} reflects the higher burden of potential taxation of target income due to CFC rules in the acquirer country i if the target is located in country j. The variable vector x_{ijk} contains various country control variables to capture owner-country-specific synergies realized through a potential M&A. ε_{ijk} is the residual. Coefficients α and β are the estimated parameters. In this approach, the target is the same for every concerned M&A; therefore, we automatically account for target firm, target country and time fixed effects. Hence, these fixed effects do not need to be included. We control for acquirer country fixed effects. In robustness checks, we also include specific target and acquirer firm controls.

We use the fact that a foreign firm from country i will acquire a target if the value for this target is higher than for any other candidate acquirer from country h, i.e.,

$$V_{ijk} \geq V_{hjk}, \ \forall \ h \ \in (1, \dots, I), \tag{2}$$

where I indicates the number of candidate acquirer countries. We analyze the probability that a particular acquirer buys a target, depending on potential application of CFC rules in the country of that particular acquirer and given that we know that the transaction takes place, which is given by:

$$P(V_{ijk} > V_{hjk}|X) = \frac{exp(\alpha CFC_{ij}+\beta X_{ijk})}{\sum_{l=1}^{I} exp(\alpha CFC_{lj}+\beta X_{ljk})} \qquad \forall \ h \ \in (1, \dots, I). \tag{3}$$

Expression (3) considers a choice model assuming that M&As reflect synergies from combining two firms and that acquirers value the individual firms and the M&A correctly at their fair value. Using conditional logit and mixed logit regression models, we aim to calculate $P(V_{ijk} > V_{hjk}|X)$.[5]

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[4] We suppress a time subscript t in the interest of readability of the model.
[5] The presented multinomial choice model is based on Feld et al. (2016a), p. 15.

In our first approach, the difference between CFC rules is shown by a treatment effect using a simple dummy variable if a CFC rule is enacted in the acquirer country i and is potentially applicable on target income, i.e., the STR in target country j is below the minimum low tax rate threshold of the CFC rule of the candidate acquirer country i. Hence, the first variable of interest is constructed as

$$CFC^{dummy} = \begin{cases} 1, & if\ t_{i_{threshold}} > t_j\ or\ country\ i\ applies\ CFC \\ & rules\ without\ a\ tax\ rate\ threshold \\ 0, & otherwise, \end{cases} \quad (4)$$

where $t_{i_{threshold}}$ is the tax rate threshold of the CFC rule of the candidate acquirer country i and t_j is the STR in the target country j.

In our first approach, the treatment effect is assumed to be homogenous. In our second approach, we consider heterogeneity by using the tax rate differential between the home and host countries as a finer metering of the treatment. In particular, we consider the additional taxes payable due to CFC rule application if the target is used as a profit shifting vehicle[6]:

$$CFC^{diff} = \begin{cases} \tau_i - \tau_j, & if\ t_{i_{threshold}} > t_j\ or\ country\ i\ applies\ CFC \\ & rules\ without\ a\ tax\ rate\ threshold \\ 0, & otherwise. \end{cases} \quad (5)$$

For both approaches, we expect a negative sign of the regression coefficients α according to Hypothesis 1a and 1b derived in Section 3.1.

In a third step, to address Hypothesis 1c, we take a different approach and split up the targets into three groups: Group (1) contains targets with STRs *below* the low tax rate threshold of the CFC rule; group (2) contains targets with STRs below the acquirer STRs but *above* the tax rate threshold of the CFC rule; group (3) contains targets with STRs *higher* than the acquirer STRs if the acquirer country applies CFC rules. Figure 2 illustrates this target grouping.

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[6] $\tau_i - \tau_j$ (and not τ_i) are the additional taxes because the observed CFC rules grant a credit for the taxes paid by the foreign subsidiary in its host country.

Figure 2. Target location among the three groups.
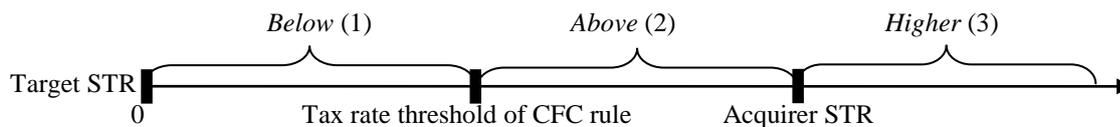
$$Below = \begin{cases} \tau_i - \tau_j, & if\ t_{i_{threshold}} > t_j\ or\ country\ i\ applies\ CFC \\ & rules\ without\ a\ tax\ rate\ threshold\ AND\ t_i > t_j \\ 0, & otherwise, \end{cases} \quad (6)$$

$$Above = \begin{cases} \tau_i - \tau_j, & if\ t_{i_{threshold}} < t_j\ AND\ t_i > t_j \\ 0, & otherwise, \end{cases} \quad (7)$$

$$Higher = \begin{cases} \tau_j - \tau_i, & if\ t_i < t_j\ and\ country\ i\ applies\ CFC\ rules \\ 0, & otherwise, \end{cases} \quad (8)$$

If the target STR (τ_j) is *below* the tax rate threshold of the CFC rule, there is additional taxation in the acquirer country at the acquirer STR (τ_i) as already shown in (5). We expect a negative coefficient of *Below* since these targets are unattractive to acquire from a CFC rule perspective.

If τ_j is *above* the tax rate threshold of the CFC rule but below τ_i, the acquirer could shift profits to the target and reduce his effective tax burden by $\tau_i - \tau_j$. We expect a positive coefficient of *Above* as profits could be shifted—without CFC rule application—to the target, which may be particularly attractive for CFC rule acquirers.

If τ_j is *higher* than τ_i, profit shifting in the here observed way to the target does not make sense as the target resides in a higher taxed country. We expect a negative coefficient of *Higher* since the high-tax target is unattractive for CFC rule acquirers from a tax perspective. Moreover, non-CFC rule acquirers could be more prone to acquire such targets as these acquirers may shift profits out of the high-tax target.

In our robustness test, we check whether our results are robust to considering effective average tax rates (EATRs) as CFC rules usually take into account the effective tax burden of the foreign low-tax subsidiary. Since we do not observe the effective tax burden of the targets, we use country-level EATRs from the Oxford University Centre for Business Taxation to determine whether a target may fall under the scope of CFC rules:

$$CFC^{diffEATR} = \begin{cases} \tau_i - \tau_j, & if\ t_{i_{threshold}} > t_{j_{EATR}}\ or\ country\ i\ applies\ CFC \\ & rules\ without\ a\ tax\ rate\ threshold \\ 0, & otherwise. \end{cases} \quad (9)$$

In a further robustness test, we consider the scope of income included by the CFC rule. While some CFC rules only include passive income of the subsidiary, some CFC rules include passive and active income. Therefore, we let the treatment effect differ in this regard:

$$CFC^{taxbase} = \begin{cases} \tau_i, & \text{if } t_{i_{thresh}} > t_j \text{ or country } i \text{ applies CFC} \\ & \text{rules without a tax rate threshold} \\ & \text{and has a full income tax base} \\ \frac{(\tau_i + \tau_j)}{2}, & \text{if } t_{i_{thresh}} > t_j \text{ or country } i \text{ applies CFC} \\ & \text{rules without a tax rate threshold} \\ & \text{and has a passive income tax base} \\ \tau_j, & \text{otherwise.} \end{cases} \tag{10}$$

According to this differentiation, all targets are taxed at their STR. Further, this differentiation takes into account the additional CFC rule tax burden—assuming that active and passive income in the target are at the same height—in the following way: If CFC rules include the full target income once triggered, the total tax burden is set to the acquirer STR. If CFC rules include only target's passive income once triggered, the total tax burden is set to the average between target and acquirer STR.

The approach presented above takes an *acquirer perspective* by analyzing why a given target is bought by an acquirer from a specific country (Hypothesis 1a). In a second analysis, we follow the same logic but take a *target perspective* by analyzing why a given acquirer chooses to buy a target from a specific country (Hypothesis 1b).[7]

Following Feld et al. (2016a) and Arulampalam et al. (2017), we include several control variables in both perspectives. We control for STR and economic indicators, such as GDP per capita, GDP growth, stock market capitalization per GDP and credits granted to private sector per GDP in the country of the candidate acquirer (or target), depending on whether the acquirer (or target) perspective is taken. Further, we control for several distance variables, such as the distance between the acquirer and target country, whether the acquirer and target have a common language, whether the acquirer and target were ever in a colonial relationship and whether the legal system of the acquirer and target country have common legal origins. In the target perspective, we additionally include variables to control for the institutional framework of the candidate target country, such as corruption control, business start-up costs, unemployment rate and number of listed domestic firms.

3.3 Data

Data for the empirical analysis is taken from the Thomson Financial SDC database, which contains worldwide M&A transactions. We have selected all completed M&As for the period 2002 to 2014 through which majority control (>50%) of the targets has been attained.[8]

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[7] Such a target perspective is also taken by Arulampalam et al. (2017).
[8] All observed CFC rules have a participation threshold below or equal to 50% so that the majority control requirement of CFC rules is always fulfilled.

Further, for each M&A, country of the acquirer ultimate parent, direct acquirer, target ultimate parent and direct target must be given.[9] In addition, we require that the acquirer ultimate parent and the target reside in different countries and that the acquirer ultimate parent and direct acquirer reside in the same country to reduce the possibility of a subsidiary in a third country involved in the M&A. To keep the mixed logit regressions computationally feasible, the set of considered candidate acquirer countries (Hypothesis 1a) or candidate target countries (Hypothesis 1b) is restricted to the 30 most frequent acquirer or target locations.[10] These restrictions leave a sample of 14,421 cross-border M&As involving 55 countries to investigate Hypothesis 1a and a sample of 13,447 cross-border M&As involving 54 countries to investigate Hypothesis 1b. Table 2 and Table 8 give an overview over the number of acquirer ultimate parents and targets in the respective cross-border M&A sample per country. In line with di Giovanni (2005), we observe that countries with the largest financial markets have most observations in both samples. Further, these tables provide information on whether CFC rules are implemented in those countries.

Data on CFC rules is based on IBFD European Tax Handbook (2002-2016), various corporate tax guides (Ernst & Young (2004-2016), Deloitte (2015), KPMG (2016)) and the specific tax law of each country. We have sampled various dimensions of CFC rules for the period 2002 to 2014, such as:

- tax rate threshold that triggers CFC rule,
- country lists that trigger (blacklists) or do not trigger (whitelists) CFC rule,
- threshold for passive-to-active-income ratio that triggers CFC rule,
- whether active or only passive income of CFCs is included at the parent level, or
- significant exemptions to CFC rule.

3.4 Results

3.4.1 Acquirer perspective

Table 4 presents the baseline results of different multinomial choice models to test Hypothesis 1a on the influence of CFC rules on the likelihood of being the acquirer country of a given target (acquirer perspective). For each deal, the dependent variable equals one for the actual acquirer country of origin and zero for all other counterfactual acquirer countries. For definitions, data sources and summary statistics of all variables see Table 3.

In the conditional logit regression (1), CFC^{dummy} from expression (4) is the variable of interest, which indicates potential taxation via CFC rules in the acquirer country. We observe a negative coefficient, which suggests that potential taxation in the acquirer country due to CFC rule application has a negative influence on the probability of being the acquirer country

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[9] Throughout our paper, we use the terms "ultimate parent" and "parent" synonymously.

[10] To investigate Hypothesis 1a, important control variables are missing for Guernsey, Luxembourg and Taiwan so that we effectively consider 27 candidate acquirer countries. To investigate Hypothesis 1b, important control variables are missing for Indonesia and Sweden so that we effectively consider 28 candidate target countries.

for a given target. To be more specific, we consider CFC^{diff} from expression (5) in regression (2). CFC^{diff} measures the magnitude of a potential additional tax burden due to CFC rule application and the coefficient is significantly negative. The substantially lower *p*-value of CFC^{diff} (*p*<0.000%) compared to CFC^{dummy} (*p*=19.9%) is probably due to introducing heterogeneity to the treatment effect by considering the specific tax rate differential between the acquirer and target country in case CFC rules apply. The coefficient of -1.4569 implies that if the target is potentially treated by CFC rules and the difference between acquirer STR and target STR increases by 1%, the likelihood of acquiring this targets decreases by 0.05%. Taken together, we provide evidence that potential CFC rule application on a target's income reduces the probability of acquiring this target; this finding supports Hypothesis 1a. However, the calculated economic effect seems to be very low for small STR differences.

As argued in Feld et al. (2016a), a violation of the assumption of the independence of irrelevant alternatives (IIA) in the conditional logit model could be problematic because estimates may be biased. Consequently, we randomize our variables of interest by using a mixed logit estimator. This randomization follows a normal distribution with mean *g* and covariance *W*; the parameters are estimated by simulated maximum likelihood with 50 Halton draws.[11] In our mixed logit regressions, we observe that the estimated standard deviations of the normal distribution are highly significant; therefore, we prefer this approach and apply mixed logit regressions in the remaining regressions.

In regression (3), we observe that applying the mixed logit model does not change the basic results as CFC^{diff} remains significantly negative at the 1% level and quantitatively stable. In regression (4), we cluster the standard errors at the target-country/year level and observe that CFC^{diff} is significant at the 5% level. In regression (5), we split the targets as described in expressions (6), (7) and (8). Figure 3 shows a kernel density estimate of the simulated coefficients of the variables of interest. The significantly negative coefficient of *Below* confirms the results from previous regressions and also the significantly negative coefficient of *Higher* is as expected. This finding shows that it is less likely that a CFC rule acquirer buys a target, which is located in a country with a higher STR than the CFC rule acquirer. This finding supports Hypothesis 1c. However, the significantly negative coefficient of *Above* is counterintuitive as we hypothesized that firms from CFC rule countries are more likely to be the acquirer if the target is located in a country with an STR below the acquirer STR but above the tax rate threshold of the CFC rule. Hence, we reject Hypothesis 1c in the acquirer perspective.

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[11] In untabulated regression results, we find that using 100 Halton draws produces very similar results in both the acquirer and target perspective; these results are available upon request.

Figure 3. Distribution of coefficients of *Below*, *Above* and *Higher* (acquirer perspective).
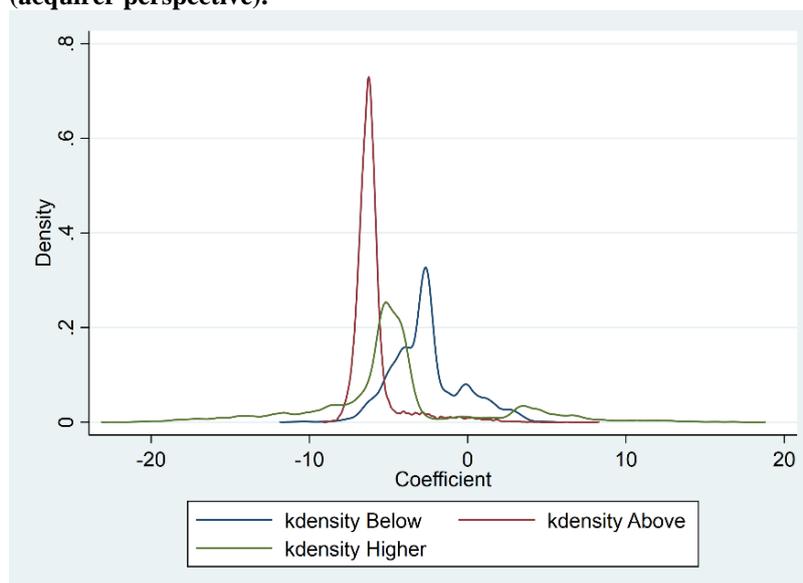
This figure provides a graph of the Epanechnikov kernel density function of the simulated coefficients of *Below*, *Above* and *Higher* in regression (5) of Table 4 using simulated maximum likelihood with 50 Halton draws. The mean (standard deviation) of the simulated coefficients is -2.59 (0.40) for *Below*, -5.83 (1.20) for *Above* and -4.55 (0.66) for *Higher*. Density is on the *y*-axis and the coefficient is on the *x*-axis.

Most control variables are highly significant and show the expected signs. Regarding *STR*, we find a negative effect on the likelihood to be the successful bidder if the bidder is located in a high-tax country. This finding is in line with Becker and Riedel (2012), who find a negative effect of parent STR on investment in foreign subsidiaries. Helpman et al. (2004) show that the productivity level of firms influences their investments abroad and firms with the highest productivity engage in FDI. Similar to other studies, we use *lnGDPpercapita* and *GDPgrowth* as proxies for productivity levels in an acquirer country and find that *lnGDPpercapita* has a significantly positive coefficient, while *GDPgrowth* is insignificant. Hence, a high level of GDP per capita has a positive impact on cross-border M&A activity. *StockmarketSize* has the expected positive coefficient, which indicates that well-developed stock markets in the acquirer country offer good financing conditions to raise capital to fund cross-border M&As. The size of the private credit market captured by *PrivateCredit* has an insignificant effect. Cross-border M&A literature finds that lower bilateral transaction costs between the acquirer and target due to less cultural and geographic distance positively affect M&A activity (e.g., di Giovanni (2005)). In line with these findings, we observe that *lnDistance*, *CommonLanguage*, *ColonialRelationship*, *CommonLegalSystem* show the expected signs and are highly significant.

Table 5 provides the results of our check on whether our baseline results are robust to specification variations. In regression (1), we include a dummy variable capturing the unilateral method (i.e., the credit or exemption method on foreign dividends) to avoid double

taxation on foreign dividends. The significantly positive coefficient of *ExemptionMethod* indicates that the likelihood of being the acquirer increases if the acquirer resides in a country that exempts foreign dividends of the target from taxation, which is in line with the result of Feld et al. (2016a). In regressions (2), (3) and (4), we vary the calculation of our variable of interest by considering target effective average tax rates ($CFC^{diffEATR}$), potential non-application of CFC rules within the EEA ($CFC^{diffEEA}$)[12] and the included income by CFC rules ($CFC^{taxbase}$). In regression (5), we additionally randomize *STR* and in regression (6), we exclude acquirers from Australia, Canada and New Zealand because their CFC rules do not explicitly mention a tax rate threshold, where our identification is coming from. Regression (7) excludes the largest acquirer countries (Canada, United Kingdom and United States), which account for around half of our observations. The exclusion of the US further checks for a potential bias due to the so-called check-the-box rule, which was introduced in the US in 1997 and may allow for an escape from CFC rules for US MNEs under specific circumstances by using hybrid entities (e.g., Altshuler and Grubert (2006), Mutti and Grubert (2009)). We observe that all robustness tests validate our baseline results, both quantitatively and qualitatively.

Table 6 provides further robustness tests. In regression (1), we exclude all control variables except for the acquirer country fixed effects to check if there is a bias due to correlation between CFC^{diff} and the control variables. We find that CFC^{diff} decreases substantially and remains significant. Further, we check whether our results are robust to differentiating between profitable and loss-making targets in regression (2). Due to missing firm level variables, the sample decreases substantially. We find that the coefficients of $CFC^{profitable}$ and $CFC^{non\_profitable}$ remain significantly negative. Interestingly, the effect is more pronounced for loss-making targets; the difference between the coefficients is significant at a *p*-value of 1.9% (two-sided). One possible reason could be that non-CFC rule acquirers are more interested in acquiring low-tax loss-making targets than CFC rule acquirers, because non-CFC rule acquirers may shift profits to the loss-making targets and, thereby, net out the losses—or even use existing loss carryforwards if possible—of these targets. Finally, regressions (3), (4) and (5) control for target-specific financial data (total assets, return on assets, sales and earnings before interest, taxes, depreciation and amortization) by interacting these consolidated profit and loss statement and balance sheet items with each candidate acquirer country. While again the sample size decreases substantially, we observe that CFC^{diff} remains significantly negative.

3.4.2 Target perspective

With the same econometric idea as in Section 3.4.1 but with a target perspective, we analyze for each given acquirer the origin of the eventual target country among a choice set of various

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[12] Ruf and Weichenrieder (2013) investigate the Cadbury-Schweppes ruling of the European Court of Justice in 2007, which triggered a substantial mitigation of the application of CFC rules within the European Economic Area (EEA). In line with this argumentation, the authors find evidence for a relative increase in passive investments in low-tax EEA subsidiaries and a parallel decrease in passive investments in non-EEA subsidiaries.

target countries (target perspective). Table 10 presents the baseline results of different multinomial choice models to test Hypothesis 1b on the influence of CFC rules on the likelihood of being chosen as the target country of a given acquirer. For each deal, the dependent variable equals one for the actual target country of origin and zero for all other counterfactual target countries. For definitions, data sources and summary statistics of all variables see Table 9. Due to a different perspective and additional control variables, the data set differs from the former data set in Section 3.4.1.

In the conditional logit regression (1), CFC^{dummy} has a significantly negative coefficient, which indicates that potential CFC rule application on a candidate target's income has a negative effect on actually choosing the target country as a location. CFC^{diff} measures in more detail the magnitude of a potential additional tax burden due to CFC rule application and—similar to the result in Section 3.4.1—the significance level increases compared to the mere dummy variable approach (CFC^{dummy}). In line with Hypothesis 1b, this finding indicates that potential CFC rule application on target's income negatively influences the target location choice of a given acquirer. From a global perspective and with an increasing number of countries introducing or strengthening CFC rules, this finding may further indicate higher overall tax revenue due to less profit shifting opportunities.

To cope with a possible violation of the IIA (see Section 3.4.1), we use again a mixed logit estimator and randomize our variables of interest in the remaining regressions. Again, we observe that the estimated standard deviations of the normal distribution are highly significant; therefore, we prefer this approach and apply mixed logit regressions in the remaining regressions. We observe a further decrease of CFC^{diff} and the significance level remains stable in regression (3) and regression (4), where we cluster the standard errors at the acquirer-country/year level. In regression (5), we observe a similar pattern as in Section 3.4.1 and Figure 4 shows a kernel density estimate of the simulated coefficients of the variables of interest. Again, the coefficients of *Below* and *Higher* are significantly negative, which is in line with Hypothesis 1c and suggests that the likelihood of target location choice decreases if the target potentially falls under the scope of CFC rule or has a higher STR than the acquirer. However, we again observe that *Above* is significantly negative, which is counterintuitive, because we would expect that targets are more likely to be acquired if they are located in a country with an STR below the acquirer STR but above the tax rate threshold of the acquirer's CFC rule. Hence, also in the target perspective, we reject Hypothesis 1c.

Figure 4. Distribution of coefficients of *Below*, *Above* and *Higher* (target perspective).
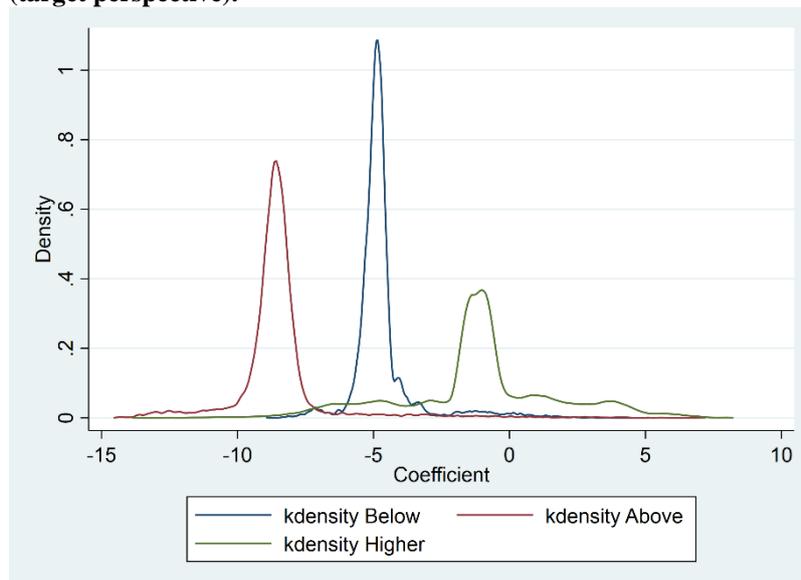
This figure provides a graph of the Epanechnikov kernel density function of the simulated coefficients of *Below*, *Above* and *Higher* in regression (5) of Table 10 using simulated maximum likelihood with 50 Halton draws. The mean (standard deviation) of the simulated coefficients is -4.71 (0.60) for *Below*, -8.61 (1.00) for *Above* and -1.15 (0.54) for *Higher*. Density is on the *y*-axis and the coefficient is on the *x*-axis.

Regarding significant control variables, we observe that STR has a positive effect on target location choice, which is an unexpected result as FDI literature generally suggests a negative effect of host country STR on host country investment (e.g., Feld and Heckemeyer (2011)). An explanation for this result could be that cross-border M&As are less sensitive to host country STRs (e.g., Hebous et al. (2011), Herger et al. (2016)) or that profit shifting structures within the acquiring MNE mitigate this effect (e.g., Arulampalam et al. (2017)). Additionally, variation of STR is also used to compose our variable of interest, which may lead to interdependencies. Finally, the significantly positive effect of STR does not prove to be robust.

Regarding control variables, *lnGDPpercapita* and *StockmarketSize* have insignificant coefficients, whereas *GDPgrowth* has a significantly positive effect in some regressions, i.e., targets located in growing economies are more likely to be acquired. Further, *PrivateCredit* has a significantly negative effect on target location choice. The explanation for this finding may be the following: If a target is located in a country with a low ratio of private credits granted to the private sector, the supply of credits may be limited. Consequently, credit supply for internal expansion is limited, which makes targets in these countries more likely to be acquired (Arulampalam et al. (2017)). Similar to the findings in Section 3.4.1, we observe that lower bilateral transaction costs between the acquirer and target positively affect target location choice: *lnDistance*, *CommonLanguage* and *ColonialRelationship* have the expected significant coefficient; *CommonLegalSystem* has an expected positive though insignificant

estimate. Finally, the control variables for the institutional framework in the candidate target country have significant explanatory power. A high degree of corruption control, a large number of listed firms and low business start-up costs increase the chances to be chosen as target location; unemployment rate has an insignificant effect.

In Table 11, we provide similar robustness tests as in Table 5 and yield similar results. Regressions (1), (2), and (3) take into account target effective average tax rates ($CFC^{diffEATR}$), potential non-application of CFC rules within the EEA ($CFC^{diffEEA}$) and the included income by CFC rules ($CFC^{taxbase}$). In regression (4), we additionally randomize STR and in regression (5), we exclude acquirers from Australia, Canada and New Zealand because their CFC rules do not explicitly mention a tax rate threshold. Regression (6) excludes the largest target countries (Germany, United Kingdom and United States), which account for almost half of our observations. In regression (7), we include *BusinessDisclosure* as a further variable for the institutional framework in the candidate target country. This variable is not included in our baseline results since its inclusion significantly drops the observation number. We observe that all robustness tests resemble our baseline results, both quantitatively and qualitatively.

Table 12 provides further robustness tests yielding similar results as presented in Table 6. In regression (1), we exclude all control variables except for the target country fixed effects to check if there is a bias due to correlation between CFC^{diff} and the control variables. Again, we find that CFC^{diff} decreases substantially and remains significant. Further, we check whether our results are robust to differentiating between profitable and loss-making targets in regression (2). We find that the coefficients of $CFC^{profitable}$ and $CFC^{non\_profitable}$ remain significantly negative; however, in this robustness test, there is no significant difference between the coefficients of $CFC^{profitable}$ and $CFC^{non\_profitable}$. Finally, in regressions (3), (4) and (5), we include acquirer-specific financial data (total assets, return on assets, sales and earnings before interest, taxes, depreciation and amortization) by interacting these consolidated profit and loss statement and balance sheet items with each candidate target country. We again observe a substantial sample decrease due missing firm level variables, but the results prove to be robust.

4 CFC rules and the direction of cross-border M&As

4.1 Hypothesis development

In this section, we consider the direction of cross-border M&As. In particular, we investigate whether CFC rules affect the decision which firm becomes the parent firm of a newly created MNE through a cross-border M&A. Following the finding of Voget (2011) that CFC rules trigger the relocation of headquarters, we argue that CFC rules negatively influence the direction of a cross-border M&A between two firms from different countries, i.e., we expect that it is more probable that the non-CFC rule firm acquires the CFC rule firm. The reasoning is as follows: If the non-CFC rule firm becomes the new MNE's parent, potential (new) profit

shifting strategies may arise by setting up or using an already existing tax haven subsidiary within the MNE, which potentially decreases the overall tax burden. These (new) profit shifting strategies would not exist if the CFC rule firm became the acquirer due to potential CFC rule application on low-tax subsidiaries' income. We, therefore, hypothesize the following, stated in alternative form:

Hypothesis 2: The probability of being the acquiring firm in cross-border M&As is higher for firms in non-CFC rule countries compared to firms in CFC rule countries.

This analysis is different to the analysis presented in Section 3, where we investigate whether CFC rules affect the decision to acquire a target if CFC rules are potentially applied to this target's income. By analyzing the effect of CFC rules on the direction of cross-border M&As, we consider whether CFC rules negatively affect the choice of who becomes the parent of the newly created MNE.

4.2 Empirical approach

To analyze the direction of observed cross-border M&As, we assume that firm *a* acquires firm *b* and that *a* and *b* do not reside in the same country. Under the assumption that M&As reflect synergies from combining these two firms and that investors value the individual firms and the M&A correctly, it follows that the value when *a* acquires *b* (V_{ab}) is higher than the value when *b* acquires *a* (V_{ba}), i.e., $V_{ab} - V_{ba} > 0$. Based on Hypothesis 2 derived under 4.1, we argue that CFC rules have an impact on this valuation. In particular, CFC rules lead to a competitive disadvantage for parent firms as those firms have less profit shifting opportunities within their group and have to fear potential CFC rule application on low-tax subsidiaries' income, at which these laws are aiming. We consider the following expression to analyze the direction in cross-border M&As, depending on the CFC rules of the two involved firms and given that we know that the transaction takes place:

$$P(V_{ab} > V_{ba}|X) = E(Y|\Delta CFC + \Delta X) = \frac{exp(\beta(\Delta CFC + \Delta X))}{1 + exp(\beta(\Delta CFC + \Delta X))} \tag{11}$$

$$Y \begin{cases} 1 \ if \ V_{ab} - V_{ba} > 0 \\ 0 \ if \ V_{ab} - V_{ba} \leq 0 \end{cases}$$

Using logit regression models, we aim to calculate $P(V_{ab} > V_{ba}|X)$, i.e., we always consider the setting that *a* acquires *b* ($V_{ab} - V_{ba} > 0$ in expression (11)). This consideration implies that y, our dependent variable, always takes the value 1.[13] The variable of interest is ΔCFC, which measures the difference in CFC rules between *a* and *b*. We consider two approaches in calculating ΔCFC.

First, we construct a CFC dummy variable (ΔCFC_dummy) that measures whether CFC rules are present in the residence countries of *a* and *b*. If, for example, the country of *a* does not

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[13] The presented binary choice model is based on Huizinga and Voget (2009), pp. 1229ff.

apply CFC rules (0) and the country of *b* applies CFC rules (1) in the M&A year, ΔCFC_dummy takes the value 0-1 = -1.

Second, we consider individual characteristics of CFC rules to allow for more heterogeneity among CFC rules. We construct a CFC variable (ΔCFC_value), which is zero for non-CFC rule countries and one for CFC rule countries. In addition to that, we consider the CFC rule countries in more detail and group them regarding their CFC rule harshness among the two main CFC rule features, which can be derived from all observed CFC rules: The lowest possible tax haven STR and the passive-to-active-income ratio accepted by CFC rules. This approach can increase ΔCFC_value up to the value 3. Among the CFC rule countries, the lowest possible tax haven STR is set to the tax rate threshold of the CFC rule.[14] For CFC rule countries with a tax haven STR equal or above its median value of 15%, we add 1 to ΔCFC_value. Similarly, we consider the passive-to-active-income ratio, which determines the amount of passive income that is allowed so that CFC rules are not triggered. The median value of the passive-to-active-income ratio is 10%; for CFC rule countries with a passive-to-active-income ratio below 10%, we add 1 to ΔCFC_value.[15] Table 1 provides one country example for each of the four categories of ΔCFC_value.

Table 1. Country examples for the four categories of ΔCFC_value.

ΔCFC_value of country	Exemplary country	CFC rules?	Tax rate threshold > 15%?	Passive-to-active-income ratio < 10%?
0	Netherlands	no	n/a	n/a
1	China (from 2008)	yes (since 2008)	no (12.5%)	no (50%)
2	Korea, Rep.	yes	yes (15%)	no (50%)
3	Japan	yes	yes (20%)	yes (no ratio)

If, for example, a firm residing in the Netherlands acquires a firm residing in the Republic of Korea, ΔCFC_value takes the value 0-2 = -2. We expect a negative coefficient for both ΔCFC_dummy and ΔCFC_value, indicating that it is more likely that the firm without CFC rules or with less harsh CFC rules becomes the acquiring firm.

Following Huizinga and Voget (2009), we control for firm characteristics and macroeconomic conditions in the two countries captured by ΔX. On the firm level, we include the firms' consolidated financial data. We control for relative size of the two firms ($\Delta Size$) and expect a positive coefficient, as larger firms are considered more likely to acquire smaller firms. $\Delta Leverage$ considers the difference in leverage ratio between the two firms. Following Desai and Hines (2002), we argue that firms with higher leverage have lower borrowing costs. Thus, these firms have higher borrowing capacity, which makes them more likely to be the acquirer.

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[14] For EEA Member States in the years after the decision of the European Court of Justice in the case "Cadbury-Schweppes" (C-194/04) in 2006, we set the tax haven tax rate equal to the lowest STR within the EU, because since this decision, CFC rules are de facto not applicable within the EU. In support of this reasoning, Ruf and Weichenrieder (2013) provide evidence for an increase of profit shifting within the EEA after this decision (see footnote 12).

[15] These thresholds are subjective; however, they split the CFC rule countries into two equal halves and allow a grouping of the CFC rule countries according to their relative CFC rule harshness.

ΔPTI measures the relative difference between pre-tax income of the two firms. Similar to our expectation of $\Delta Size$, we expect that firms with higher profits are more likely to acquire firms with lower profits.

On the country-level, we control for the difference in STRs (ΔSTR). We have no expectation on its coefficient as high-tax countries may have a better investment environment whereas low-tax country may attract firms due to tax savings. Based on the finding of Huizinga and Voget (2009) that taxation of dividend repatriation affects M&A direction, we include the difference in both countries' double taxation avoidance method on foreign dividends (ΔDTM), where 0 (1) stands for the credit (exemption) method. We expect a positive coefficient for this variable. We also include the two countries' relative stock market size ($\Delta StockMrk$), which proxies for the relative ease to raise capital at stock markets and we expect a positive coefficient. In addition, we include the two countries' relative difference between domestic credits granted to the private sector ($\Delta CreditMrk$). Similar to the argumentation in Section 3.4.2, we argue that if a company is located in a country with a low ratio of credits granted to the private market, the supply of credit may be limited and, hence, the possibility to finance an acquisition via credit is limited. Thus, we expect a positive coefficient. Finally, to control for the price level in an economy, we include the difference in the inflation rate ($\Delta Inflation$) between both countries. We have a negative expectation on its coefficient.

Further, we include country fixed effects that reflect whether the country is the acquirer or the target country: For each M&A, the acquirer country gets the value of 1 and the target country gets the value of -1; all other countries get the value of 0 for the respective M&A.

Following Huizinga and Voget (2009), our logit regression is estimated using maximum likelihood estimation without a constant. The reason is straightforward: Since we always consider the setting that firm a acquires firm b ($V_{ab} - V_{ba} > 0$ in expression (11)), the dependent variable is always one and, consequently, there is no variation in the dependent variable and the constant would be a perfect fit.

4.3 Data

The M&A data analyzed in this section are the same as described in Section 3.3 with two exceptions. First, we relax the restriction to the 30 most frequent acquirer or target locations. Second, we require that the direct acquirer and the direct target reside in the same country as their respective ultimate parent to reduce the possibility of a subsidiary in a third country being involved in the M&A. In addition, as outlined above, we need consolidated financial data of both firms as control variables, which reduces our sample to 1,199 cross-border M&As involving 30 countries.[16] Table 14 gives an overview over the number of acquirer

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[16] We experience this sharp decrease in cross-border M&A observation due to the lack of important financial control variables. However, this decrease is not due to specific countries or a specific financial control variable. Hence, we assume that the smaller sub-sample is a representative subset of the larger one and that focusing on this subset does not bias our subsequent empirical work. This argumentation follows Huizinga and Voget (2009), p. 1228, who face the same problem using firm level data in an SDC data set and who observe a similar decrease

ultimate parents and target ultimate parents in this cross-border M&A sample per country. Further, this table provides information on whether CFC rules are implemented in those countries.

4.4   Results

Table 16 shows the results of the binary choice model to test Hypothesis 2 on the influence of CFC rules on the direction of cross-border M&As between two firms, i.e., which firm becomes the acquirer. For definitions, data sources and summary statistics of all variables see Table 15.

In regressions (1) and (2), we find that CFC rules negatively affect the probability which firm becomes the acquirer. In particular, we find a significant coefficient at the 5% level for ΔCFC_value. This finding suggests that when two firms perform a cross-border M&A, it is less likely that the firm with the harsher CFC rule becomes the acquiring firm. For the dummy variable approach (ΔCFC_dummy), we observe a significantly negative coefficient at the 10% level. Hence, also the mere presence of CFC rules seems to affect cross-border M&A direction. These results prove to be robust in regressions (3) and (4), where we analyze a slightly smaller sample by considering only cross-border M&As directly between the ultimate parents, i.e., the acquirer is the acquirer ultimate parent and the target is the target ultimate parent. In regressions (5) and (6), we consider the same setting as in regressions (3) and (4), but exclude M&As that involve the United States. We do this to check that the results are not biased by potential check-the-box rule application in the US, which may allow for an escape from CFC rules for US MNEs under specific circumstances by using hybrid entities (e.g., Altshuler and Grubert (2006), Mutti and Grubert (2009)). Although this exclusion decreases the sample by more than half, we still observe a significantly negative estimate for ΔCFC_dummy. The coefficient of ΔCFC_value remains also negative; however, its p-value drops to 19.4%.

Taken together, we provide evidence for Hypothesis 2 that the direction of cross-border M&As between firms is negatively affected by the presence and harshness of CFC rules. This finding contributes to previous research documenting that headquarters relocation is influenced by CFC rules (Voget (2011)). Our interpretation of this finding is that if the non-CFC rule firm acquirers the CFC rule firm, new profit shifting opportunities may potentially come up within the newly formed MNE, which may decrease the tax burden in the future. If the CFC rule firm acquires the non-CFC rule firm, these profit shifting opportunities are rather unattractive due to CFC rules in the new parent country. In addition, the CFC rule firm has to fear potential CFC rule application on low-tax subsidiaries' income if such subsidiaries are already present in the acquired firm. The firms involved in the M&As are quite large with

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in sample size. To expand our sub-sample, we follow Huizinga and Voget (2009) and use Compustat North America and Compustat Global databases that are together global in coverage to fill-up firm level control variables. We use CUSIP and SEDOL firm identification codes to link the Compustat databases with the SDC database.

an average value of total assets of the acquirers (targets) of 38.3 (2.4) bio. USD. Hence, it is reasonable to assume that at least some of the involved firms are already MNEs with implemented profit shifting strategies within their group if no CFC rules are present in the ultimate parent country.

Regarding control variables, we find, as expected, that firm size has a significantly positive impact on the likelihood of being the acquiring firm and, in most regressions, firm profitability, firm leverage, STR and stock market size have a significantly positive effect on M&A direction. Credit market size has an unexpected negative effect in most regressions. We observe non-significant estimates for inflation rate and the method to avoid double taxation.

5   Conclusion

In this study, we investigate the impact of an increasingly important anti tax avoidance measure on cross-border M&A activity of corporations on a global scale. In particular, we consider important characteristics of CFC rules from a variety of countries and apply different logit regression models on a large worldwide cross-border M&A data set. Considering individual M&As, we find that the probability of being the acquirer of low-tax targets decreases if CFC rules may be applicable on this target's income. This finding implies that acquirers from non-CFC rule countries have a competitive advantage in bidding for targets in low-tax countries. This is explained by a higher reservation price of these non-CFC rules acquirers due to potential firm value increasing profit shifting opportunities after the M&A. Further, we show that the acquirer's location choice of a target is negatively affected if the target may fall under the scope of CFC rules of an acquirer. The reasoning behind this result is the same as before but the underlying perspective is different. Thereby, we find evidence that CFC rules affect M&A activity on the bidding side, i.e., non-CFC rule acquirers have competitive advantages in bidding for a given target, and on the target side, i.e., low-tax targets are rather acquired by non-CFC rule acquirers. These two findings provide robust evidence that CFC rules distort ownership of low-tax targets. Finally, we show that CFC rules negatively affect the direction of cross-border M&A, i.e., countries with CFC rules are less likely to attract parent firms in a newly created MNE after M&As.

However, our results should not necessarily be interpreted as suggesting that countries should get rid of CFC rules. Moreover, our findings suggest that CFC rules seem to reach the intended goal of reducing profit shifting opportunities with low-tax subsidiaries in our cross border M&A context. In other words, our results suggest that the specific way of investing in foreign low-tax countries to shift profits afterwards is limited by existing CFC rules in the acquirer country. Therefore, CFC rules can be used by countries to counteract tax avoidance behavior of their MNEs, which could result in an increase in tax revenue on an overall scale.

Nevertheless, the parallel presence and non-presence of CFC rules across countries is problematic from an economic perspective due to competitive disadvantages on the cross-border M&A market and potentially tax-biased ownership structures on a global scale.

Thereby, we contribute to a strand of literature where little research has been undertaken so far. Further, our findings are particularly interesting in light of current tax policy developments. While the BEPS project of the OECD suggests an implementation of effective CFC rules in the OECD and G20 countries (OECD/G20 (2015)), the European Council even issued a legally binding directive requiring EU member states to implement CFC rules by 2019 (European Council (2016)). In other words, at the latest from 2019 onwards, firms residing in the EU may face competitive disadvantages in M&A activities due to tax legislation, compared to firms residing in OECD and G20 member states, which do not follow the BEPS project's suggestion to implement effective CFC rules and lower their MNEs' tax avoidance opportunities. This finding indicates that more coordination regarding countries' international tax law seems to be necessary if tax avoidance behavior of MNEs is considered unfavorable on a global scale and intended measures to counteract this behavior are supposed to be fruitful.

Appendix

Table 2. Cross-border M&A sample (2002-2014) for analyzing effect of acquirer CFC rules on probability of being acquirer country (Section 3.4.1).

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Australia	1	923	663	Japan	1	529	166
Austria	0	125	73	Korea, Rep.	1	187	147
Belarus	n/a	n/a	6	Latvia	n/a	n/a	2
Belgium	0	154	186	Lithuania	n/a	n/a	14
Bermuda	n/a	n/a	29	Malaysia	0	212	157
Brazil	n/a	n/a	251	Malta	n/a	n/a	4
British Virgin Islands	n/a	n/a	70	Mexico	n/a	n/a	197
Bulgaria	n/a	n/a	30	Netherlands	0	421	355
Canada	1	1,124	1,074	New Zealand	1	68	196
Cayman Islands	n/a	n/a	17	Norway	1	296	144
Chile	n/a	n/a	95	Panama	n/a	n/a	10
China	1	338	846	Poland	n/a	n/a	140
Croatia	n/a	n/a	20	Portugal	n/a	n/a	69
Cyprus	n/a	n/a	16	Russian Federation	0	39	112
Czech Republic	n/a	n/a	81	Seychelles	n/a	n/a	2
Denmark	1	42	158	Singapore	0	490	271
Estonia	n/a	n/a	12	Slovak Republic	n/a	n/a	16
Finland	1	62	142	Slovenia	n/a	n/a	15
France	1	644	667	South Africa	n/a	n/a	119
Germany	1	622	842	Spain	1	324	360
Greece	n/a	n/a	25	Sweden	1	71	369
Hong Kong SAR, China	0	560	343	Switzerland	0	344	209
Hungary	n/a	n/a	45	Taiwan, China	n/a	n/a	105
Iceland	n/a	n/a	3	Turkey	n/a	n/a	79
India	0	337	214	Ukraine	n/a	n/a	31
Ireland	0	342	152	United Kingdom	1	1,670	1,772
Israel	1	206	129	United States	1	4,020	2,857
Italy	1	271	314	**Total**		**14,421**	**14,421**

Table shows number of acquirer ultimate parents and targets per country in our cross-border M&A sample to investigate Hypothesis 1a. In this context, cross-border M&As are defined as acquirer ultimate parent and target residing in different countries; the direct acquirer and acquirer ultimate parent reside in the same country. CFC rule takes the value one, if the country has implemented CFC rules in 2014.

Table 3. Definition, data sources and summary statistics of variables for analyzing effect of acquirer CFC rules on probability of being acquirer country (Section 3.4.1).

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
CFC^{dummy}	Binary dummy variable coded one if target country STR is smaller than acquirer country's tax rate threshold of CFC rule or acquirer country applies CFC rules without a tax rate threshold, and 0 otherwise	Tax guides	317,835	0.111	0.315	0	1
CFC^{diff}	Difference between acquirer country STR and target country STR if target country STR is smaller than acquirer country's tax rate threshold of CFC rule or acquirer country applies CFC rules without a tax rate threshold, and 0 otherwise	Tax guides	317,835	0.012	0.043	0.000	0.409
$CFC^{diffEATR}$	Difference between acquirer country STR and target country STR if target country EATR is smaller than acquirer country's tax rate threshold of the CFC rule or acquirer country applies CFC rules without a tax rate threshold, and 0 otherwise	Tax guides; Oxford University Centre for Business Taxation	317,835	0.011	0.039	-0.011	0.409
$CFC^{diffEEA}$	Same as CFC^{diff}; however, set to zero if acquirer and target country are both EEA Member States and M&A year is after 2006	Tax guides	317,835	0.012	0.042	0.000	0.409
$Below$	See expression (6)	Tax guides	317,835	0.012	0.043	0.000	0.409
$Above$	See expression (7)	Tax guides	317,835	0.010	0.029	0.000	0.273
$Higher$	See expression (8)	Tax guides	317,835	0.015	0.031	0.000	0.155
$CFC^{taxbase}$	See expression (10)	Tax guides	317,835	0.318	0.066	0.000	0.409
$CFC^{profitable}$	Same as CFC^{diff}; however, for non-profitable targets set to zero	Tax guides; SDC; Compustat North America; Compustat Global	55,715	0.007	0.034	0.000	0.395
$CFC^{non\_profitable}$	Same as CFC^{diff}; however, for profitable targets set to zero	Tax guides; SDC; Compustat North America; Compustat Global	55,715	0.003	0.021	0.000	0.409
STR	STR in candidate acquirer country, including typical local taxes	Tax guides	317,835	0.291	0.071	0.125	0.409
$ExemptionMethod$	Binary dummy variable coded one if candidate acquirer country unilaterally applies the exemption method to avoid double taxation of foreign dividends, and 0 if it unilaterally applies the credit method	Tax guides	294,697	0.606	0.489	0	1
$lnGDPpercapita$	GDP per capita in candidate acquirer country (natural logarithm)	World Bank	317,835	10.416	0.620	7.942	11.284
$GDPgrowth$	Growth of GDP in candidate acquirer country (in %)	World Bank	317,835	3.095	3.168	-7.821	15.240
$StockmarketSize$	Stock market capitalization of listed domestic companies in candidate acquirer country (in % of GDP)	World Bank	317,835	121.5	175.6	15.767	1,254.5
$PrivateCredit$	Domestic credit to private sector in candidate acquirer country (in % of GDP)	World Bank	317,835	115.3	39.525	31.081	233.4
$lnDistance$	Simple distance (in km) between most populated cities of candidate acquirer and target country (natural logarithm)	Mayer and Zignago (2011)	317,835	8.498	1.100	4.088	9.883
$CommonLanguage$	Common language index between candidate acquirer and target country (0 (low similarity) to 1 (high similarity))	Melitz and Toubal (2014)	317,835	0.242	0.217	0.000	0.983
$ColonialRelationship$	Binary dummy variable coded one if candidate acquirer and target country were ever in a colonial relationship, and 0 otherwise	Mayer and Zignago (2011)	317,835	0.095	0.294	0	1
$CommonLegalSystem$	Binary dummy variable coded one if legal system of candidate acquirer and target country have common legal origins, and 0 otherwise	Head et al. (2010)	317,835	0.319	0.466	0	1
$TargetAssets$	Pre-deal consolidated target total assets in the last year before the effective M&A date (natural logarithm)	SDC; Compustat North America; Compustat Global	52,809	18.118	2.297	11.513	28.060
$TargetROA$	Pre-deal consolidated target pre-tax income in the last year before the effective M&A date divided by pre-deal consolidated target total assets in the last year before the effective M&A date	SDC; Compustat North America; Compustat Global	52,809	-0.036	0.844	-11.800	18.000
$TargetSales$	Pre-deal consolidated target net sales in the last year before the effective M&A date (natural logarithm)	SDC; Compustat North America; Compustat Global	78,495	17.667	2.320	6.908	26.216
$TargetEBITDA$	Pre-deal consolidated target EBITDA (earnings before interest, taxes, depreciation and amortization) in the last year before the effective M&A date (natural logarithm)	SDC; Compustat North America; Compustat Global	34,405	16.369	2.093	7.601	24.300

Data on country fixed effects are not reported but are available upon request.

Table 4. Effect of acquirer CFC rules on probability of being acquirer country (Section 3.4.1).

Explanatory variables	(1) Conditional logit	(2) Conditional logit	(3) Mixed logit	(4) Mixed logit	(5) Mixed logit
CFC^{dummy}	-0.0523[a] (0.0407)				
CFC^{diff}		-1.4569*** (0.3277)	-1.2387*** (0.3482)	-1.2387** (0.5606)	
Below					-2.5882*** (0.4015)
Above					-5.8277*** (1.1959)
Higher					-4.5472*** (0.6634)
STR	-2.0538*** (0.6319)	-1.7568*** (0.6330)	-2.0903*** (0.6442)	-2.0903** (0.8423)	-1.9648*** (0.7104)
lnGDPpercapita	1.0541*** (0.1619)	1.0452*** (0.1625)	1.1104*** (0.1652)	1.1104*** (0.2118)	1.1838*** (0.1710)
GDPgrowth	-0.0034 (0.0076)	-0.0032 (0.0075)	-0.0041 (0.0076)	-0.0041 (0.0099)	-0.0041 (0.0078)
StockmarketSize	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0005*** (0.0002)	0.0005 (0.0003)	0.0005*** (0.0002)
PrivateCredit	0.0007 (0.0006)	0.0006 (0.0006)	0.0007 (0.0006)	0.0007 (0.0011)	0.0005 (0.0007)
lnDistance	-0.5852*** (0.0114)	-0.5789*** (0.0115)	-0.5906*** (0.0119)	-0.5906*** (0.0217)	-0.6185*** (0.0128)
CommonLanguage	1.8148*** (0.0620)	1.8112*** (0.0620)	1.8494*** (0.0629)	1.8494*** (0.1289)	1.9616*** (0.0653)
ColonialRelationship	0.3020*** (0.0360)	0.2868*** (0.0359)	0.2994*** (0.0364)	0.2994*** (0.0569)	0.3168*** (0.0378)
CommonLegalSystem	0.1029*** (0.0251)	0.1145*** (0.0252)	0.1117*** (0.0254)	0.1117** (0.0470)	0.1107*** (0.0259)
Acquirer country fixed effects	YES	YES	YES	YES	YES
Observations	317,835	317,835	317,835	317,835	317,835
Log-likelihood	-32,188	-32,178	-32,165	-32,165	-32,091

Regressions of probability of being the acquirer country on (potential) CFC rule application; see expression (3). For each deal, the dependent variable equals one if country *i* is the actual acquirer's country of origin, and zero if country *i* is a counterfactual acquirer country. For variable definitions and data sources, see Table 3. Only cross-border M&As where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request. The variables of interest follow a random distribution in the mixed logit regressions. Regressions (1) and (2) are estimated by a conditional logit model and regressions (3), (4) and (5) are estimated by a mixed logit model. Regression (4) is identical to regression (3) except for standard errors, which are robust to clustering on the target-country-year level. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

[a] The level of statistical significance is 19.9%.

Table 5. Robustness tests of effect of acquirer CFC rules on probability of being acquirer country (Section 3.4.1).

Explanatory variables	(1) Controlling for double taxation avoidance method	(2) Using target effective average tax rate	(3) Considering EAA exemption (post 2006)	(4) Considering included income of CFC rule	(5) Randomizing STR	(6) Excl. acquirers from AU&CA&NZ	(7) Excl. acquirers from CA&UK&US
CFC^{diff}	-0.6035*				-1.2130***	-1.6977***	-1.0453*
	(0.3472)				(0.3507)	(0.3588)	(0.5643)
$CFC^{diffEATR}$		-1.2961***					
		(0.3162)					
$CFC^{diffEEA}$			-1.5406***				
			(0.3491)				
$CFC^{taxbase}$				-1.7810***			
				(0.3993)			
STR	-2.3967***	-1.9075***	-1.9575***	-2.0217***	-2.1346***	-1.6298**	-1.9436***
	(0.6431)	(0.6363)	(0.6440)	(0.6433)	(0.6472)	(0.6774)	(0.7260)
ExemptionMethod	0.8440***						
	(0.0859)						
lnGDPpercapita	1.2497***	1.0501***	1.1225***	1.1152***	1.0906***	1.1571***	1.0672***
	(0.1661)	(0.1621)	(0.1655)	(0.1653)	(0.1666)	(0.1680)	(0.1805)
GDPgrowth	-0.0071	-0.0034	-0.0040	-0.0046	-0.0046	0.0051	-0.0106
	(0.0077)	(0.0076)	(0.0076)	(0.0076)	(0.0077)	(0.0085)	(0.0086)
StockmarketSize	0.0006***	0.0005***	0.0005***	0.0005***	0.0005***	0.0004***	0.0003**
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
PrivateCredit	0.0012*	0.0006	0.0007	0.0007	0.0007	0.0006	0.0010
	(0.0007)	(0.0006)	(0.0006)	(0.0006)	(0.0007)	(0.0008)	(0.0010)
lnDistance	-0.5657***	-0.5890***	-0.5884***	-0.5948***	-0.5919***	-0.5696***	-0.6515***
	(0.0121)	(0.0115)	(0.0119)	(0.0119)	(0.0119)	(0.0143)	(0.0175)
CommonLanguage	1.9151***	1.8596***	1.8491***	1.8603***	1.8598***	1.9419***	2.2097***
	(0.0641)	(0.0625)	(0.0630)	(0.0631)	(0.0627)	(0.0676)	(0.0770)
ColonialRelationship	0.2454***	0.3005***	0.2971***	0.3004***	0.2937***	0.2334***	0.4303***
	(0.0370)	(0.0360)	(0.0364)	(0.0365)	(0.0371)	(0.0388)	(0.0475)
CommonLegalSystem	0.0946***	0.1030***	0.1139***	0.1136***	0.1122***	0.1244***	0.1925***
	(0.0258)	(0.0251)	(0.0254)	(0.0254)	(0.0256)	(0.0258)	(0.0277)
Acquirer country fixed effects	YES	YES	YES	YES	YES	YES	YES
Observations	294,697	317,835	317,835	317,835	317,835	243,136	151,651
Log-likelihood	-30,936	-32,175	-32,164	-32,161	-32,164	-25,945	-19,203

Regressions of probability of being the acquirer country on (potential) CFC rule application; see expression (3). For each deal, the dependent variable equals one if country *i* is the actual acquirer's country of origin, and zero if country *i* is a counterfactual acquirer country. For variable definitions and data sources, see Table 3. Only cross-border M&As where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follows a random distribution. Regression (1) additionally controls for double taxation avoidance method, regression (2), (3) and (4) check whether our variable of interest is robust to using effective average tax rates, considering potential non-application of CFC rules within the EEA and considering the included income by CFC rules. In regression (5), also *STR* follows a random distribution. Regressions (6) and (7) exclude certain countries. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

Table 6. Further robustness tests of effect of acquirer CFC rules on probability of being acquirer country (Section 3.4.1).

Explanatory variables	(1) Excl. control variables	(2) Profitable vs. non-profitable targets	(3) Incl. target assets & target return on assets	(4) Incl. target sales	(5) Incl. target EBITDA
CFC^{diff}	-4.1258***		-3.1934***	-2.8136***	-2.1391*
	(0.3294)		(1.1995)	(0.7548)	(1.2086)
$CFC^{profitable}$		-1.9250**			
		(0.9653)			
$CFC^{non\_profitable}$		-5.5943***			
		(1.7488)			
STR		0.8489	0.4872	-0.6872	-0.5640
		(1.5131)	(1.5582)	(1.2818)	(1.8920)
lnGDPpercapita		1.6639***	1.8388***	1.2574***	1.1308**
		(0.3762)	(0.3851)	(0.3246)	(0.5062)
GDPgrowth		0.0383**	0.0455**	0.0166	0.0272
		(0.0195)	(0.0202)	(0.0176)	(0.0258)
StockmarketSize		0.0003	-0.0002	-0.0000	-0.0007
		(0.0004)	(0.0005)	(0.0004)	(0.0006)
PrivateCredit		0.0001	0.0003	-0.0010	-0.0008
		(0.0017)	(0.0018)	(0.0014)	(0.0023)
lnDistance		-0.5018***	-0.4904***	-0.4932***	-0.5148***
		(0.0313)	(0.0338)	(0.0266)	(0.0422)
CommonLanguage		1.7924***	1.6550***	1.5999***	1.4257***
		(0.1765)	(0.1951)	(0.1562)	(0.2360)
ColonialRelationship		0.2783***	0.2070**	0.1570**	0.1919*
		(0.0862)	(0.0921)	(0.0731)	(0.1080)
CommonLegalSystem		0.2239***	0.3270***	0.3013***	0.3555***
		(0.0654)	(0.0713)	(0.0560)	(0.0860)
Acquirer country fixed effects	YES	YES	YES	YES	YES
Observations	317,835	55,715	52,809	78,495	34,405
Log-likelihood	-35,450	-5,495	-5,157	-7,715	-3,287

Regressions of probability of being the acquirer country on (potential) CFC rule application; see expression (3). For each deal, the dependent variable equals one if country *i* is the actual acquirer's country of origin, and zero if country *i* is a counterfactual acquirer country. For variable definitions and data sources, see Table 3. Only cross-border M&As where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for acquirer country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution. Regression (1) drops all control variables and regression (2) distinguishes between profitable and non-profitable targets. Regression (3) includes the interaction between acquirer country fixed effects and *TargetAssets* and the interaction between acquirer country fixed effects and *TargetROA*. Regression (4) includes the interaction between acquirer country fixed effects and *TargetSales*. Regression (5) includes the interaction between acquirer country fixed effects and *TargetEBITDA*. The coefficients and standard errors of these interactions are shown in Table 7. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

Table 7. Supplemental regression results for candidate acquirer country fixed effects interacted with target-specific financial data.

Regression (3) of Table 6		Regression (4) of Table 6		Regression (5) of Table 6	
Australia*TargetAssets	-0.1275**	Australia*TargetSales	-0.1167***	Australia*TargetEBITDA	-0.1229*
	(0.0526)		(0.0417)		(0.0696)
Austria*TargetAssets	0.0927	Austria*TargetSales	0.0242	Austria*TargetEBITDA	0.2592**
	(0.0960)		(0.0851)		(0.1150)
Belgium*TargetAssets	0.0394	Belgium*TargetSales	-0.0256	Belgium*TargetEBITDA	0.0561
	(0.0890)		(0.0693)		(0.1021)
Canada*TargetAssets	-0.1606***	Canada*TargetSales	-0.1735***	Canada*TargetEBITDA	-0.1486**
	(0.0541)		(0.0380)		(0.0643)
China*TargetAssets	0.0502	China*TargetSales	-0.0781	China*TargetEBITDA	-0.0301
	(0.0579)		(0.0507)		(0.1096)
Denmark*TargetAssets	0.0591	Denmark*TargetSales	0.0749	Denmark*TargetEBITDA	0.0275
	(0.1467)		(0.1215)		(0.1813)
Finland*TargetAssets	-0.0130	Finland*TargetSales	-0.1980***	Finland*TargetEBITDA	0.0561
	(0.1863)		(0.0728)		(0.0490)
France*TargetAssets	0.1841***	France*TargetSales	0.1561***	France*TargetEBITDA	0.1999***
	(0.0477)		(0.0420)		(0.0603)
Germany*TargetAssets	0.1779***	Germany*TargetSales	0.1239***	Germany*TargetEBITDA	0.2245***
	(0.0482)		(0.0479)		(0.0636)
HongKongSARChina*TargetAssets	-0.0375	HongKongSARChina*TargetSales	-0.0809*	HongKongSARChina*TargetEBITDA	-0.0597
	(0.0544)		(0.0477)		(0.0725)
India*TargetAssets	-0.1437**	India*TargetSales	-0.0593	India*TargetEBITDA	-0.3182***
	(0.0591)		(0.0369)		(0.0755)
Ireland*TargetAssets	-0.1022**	Ireland*TargetSales	-0.0565	Ireland*TargetEBITDA	-0.1737**
	(0.0504)		(0.0410)		(0.0714)
Israel*TargetAssets	-0.0013	Israel*TargetSales	-0.0859	Israel*TargetEBITDA	0.0781
	(0.0810)		(0.0572)		(0.1288)
Italy*TargetAssets	0.0162	Italy*TargetSales	0.0067	Italy*TargetEBITDA	0.0309
	(0.0585)		(0.0457)		(0.0794)
Japan*TargetAssets	0.1112**	Japan*TargetSales	0.1007**	Japan*TargetEBITDA	0.0818
	(0.0461)		(0.0404)		(0.0696)
KoreaRep*TargetAssets	0.0875	KoreaRep*TargetSales	-0.0338	KoreaRep*TargetEBITDA	0.2206
	(0.1026)		(0.0893)		(0.2751)
Malaysia*TargetAssets	-0.1075	Malaysia*TargetSales	-0.1171*	Malaysia*TargetEBITDA	-0.2086
	(0.1090)		(0.0707)		(0.1310)
Netherlands*TargetAssets	0.1765***	Netherlands*TargetSales	0.0893*	Netherlands*TargetEBITDA	0.1696**
	(0.0504)		(0.0458)		(0.0699)
NewZealand*TargetAssets	-0.0111	NewZealand*TargetSales	0.2038**	NewZealand*TargetEBITDA	-0.1343
	(0.1395)		(0.0951)		(0.1243)
Norway*TargetAssets	-0.2134***	Norway*TargetSales	-0.1773***	Norway*TargetEBITDA	-0.2307**
	(0.0732)		(0.0423)		(0.1167)
RussianFederation*TargetAssets	0.0481	RussianFederation*TargetSales	-0.1325	RussianFederation*TargetEBITDA	0.2715
	(0.2429)		(0.1597)		(0.1787)
Singapore*TargetAssets	-0.0009	Singapore*TargetSales	-0.0877	Singapore*TargetEBITDA	-0.0784
	(0.0640)		(0.0580)		(0.0812)
Spain*TargetAssets	0.2229***	Spain*TargetSales	0.1261**	Spain*TargetEBITDA	0.1338
	(0.0759)		(0.0589)		(0.0972)
Sweden*TargetAssets	0.3177***	Sweden*TargetSales	-0.0665	Sweden*TargetEBITDA	0.0543
	(0.1215)		(0.0901)		(0.1561)
Switzerland*TargetAssets	0.1798***	Switzerland*TargetSales	0.0347	Switzerland*TargetEBITDA	0.1748**
	(0.0563)		(0.0557)		(0.0872)
UnitedKingdom*TargetAssets	-0.0638	UnitedKingdom*TargetSales	-0.1709***	UnitedKingdom*TargetEBITDA	-0.0150
	(0.0475)		(0.0314)		(0.0577)
Australia*TargetROA	0.0451				
	(0.1562)				
Austria*TargetROA	-0.3821**				
	(0.1873)				
Belgium*TargetROA	0.0782				
	(0.3381)				
Canada*TargetROA	0.0885				
	(0.2366)				
China*TargetROA	-0.3323**				
	(0.1653)				
Denmark*TargetROA	0.3034				
	(0.2514)				
Finland*TargetROA	0.4007**				
	(0.1818)				
France*TargetROA	0.1699				
	(0.1596)				
Germany*TargetROA	-0.3493**				
	(0.1597)				
HongKongSARChina*TargetROA	0.0771				
	(0.1329)				
India*TargetROA	0.0564				
	(0.1776)				
Ireland*TargetROA	0.2417*				
	(0.1374)				
Israel*TargetROA	-0.3429**				
	(0.1377)				
Italy*TargetROA	-0.1279				
	(0.1952)				

*Japan*TargetROA*	0.4780***
	(0.1482)
*KoreaRep*TargetROA*	-0.3778**
	(0.1693)
*Malaysia*TargetROA*	0.1243
	(0.1701)
*Netherlands*TargetROA*	0.3409
	(0.2256)
*NewZealand*TargetROA*	0.3107**
	(0.1298)
*Norway*TargetROA*	-0.0062
	(0.1873)
*RussianFederation*TargetROA*	0.1880
	(0.3663)
*Singapore*TargetROA*	-0.2435*
	(0.1407)
*Spain*TargetROA*	0.1719
	(0.2793)
*Sweden*TargetROA*	7.1903**
	(3.2794)
*Switzerland*TargetROA*	-0.2943*
	(0.1715)
*UnitedKingdom*TargetROA*	0.2905**
	(0.1420)

Table reports supplemental results of regressions (3), (4) and (5) of Table 6. In particular, the coefficient of the interaction between candidate acquirer country fixed effects with target-specific consolidated financial data (target total assets, target return on assets, target net sales and target earnings before interest, taxes, depreciation and amortization) are shown. In all regressions, the US represent the base category *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

Table 8. Cross-border M&A sample (2002-2014) for analyzing effect of acquirer CFC rules on probability of being target country (Section 3.4.2).

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Australia	1	712	801	Japan	1	431	170
Austria	0	77	n/a	Korea, Rep.	1	162	153
Belarus	0	1	n/a	Lithuania	1	5	n/a
Belgium	0	123	197	Malaysia	0	178	174
Bermuda	0	56	n/a	Malta	0	5	n/a
Brazil	1	40	320	Mexico	1	54	270
British Virgin Islands	0	28	n/a	Netherlands	0	296	404
Bulgaria	0	1	n/a	New Zealand	1	92	141
Canada	1	1,824	594	Norway	1	130	260
Cayman Islands	0	17	n/a	Panama	0	5	n/a
Chile	0	19	n/a	Poland	0	25	170
China	1	271	897	Portugal	1	35	n/a
Croatia	0	1	n/a	Russian Federation	0	51	82
Cyprus	0	35	n/a	Seychelles	0	7	n/a
Czech Republic	0	7	n/a	Singapore	0	416	290
Denmark	1	118	35	Slovak Republic	0	2	n/a
Estonia	0	1	n/a	Slovenia	0	5	n/a
Finland	1	112	44	South Africa	1	58	156
France	1	490	708	Spain	1	239	369
Germany	1	433	951	Sweden	1	365	n/a
Greece	1	17	n/a	Switzerland	0	268	240
Hong Kong SAR, China	0	487	377	Taiwan, China	0	90	n/a
Hungary	1	7	n/a	Turkey	1	17	n/a
Iceland	1	38	n/a	Ukraine	0	8	n/a
India	0	295	227	United Kingdom	1	2,023	1,084
Ireland	0	253	181	United States	1	2,647	3,818
Israel	1	172	n/a				
Italy	1	198	334	**Total**		**13,447**	**13,447**

Table shows number of acquirer ultimate parents and targets per country in our cross-border M&A sample to investigate Hypothesis 1b. In this context, cross-border M&As are defined as acquirer ultimate parent and target residing in different countries; the direct acquirer and acquirer ultimate parent reside in the same country. CFC rule takes the value one, if the country has implemented CFC rules in 2014.

Table 9. Definition, data sources and summary statistics of variables for analyzing effect of acquirer CFC rules on probability of being target country (Section 3.4.2).

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
CFC^{dummy}	Binary dummy variable coded one if target country STR is smaller than acquirer country's tax rate threshold of CFC rule or acquirer country applies CFC rules without a tax rate threshold, and 0 otherwise	Tax guides	317,444	0.345	0.475	0	1
CFC^{diff}	Difference between acquirer country STR and target country STR if target country STR is smaller than acquirer country's tax rate threshold of CFC rule or acquirer country applies CFC rules without a tax rate threshold, and 0 otherwise	Tax guides	317,444	0.037	0.063	0.000	0.284
$CFC^{diffEATR}$	Difference between acquirer country STR and target country STR if target country EATR is smaller than acquirer country's tax rate threshold of the CFC rule or acquirer country applies CFC rules without a tax rate threshold, and 0 otherwise	Tax guides; Oxford University Centre for Business Taxation	317,444	0.031	0.057	-0.033	0.284
$CFC^{diffEEA}$	Same as CFC^{diff}; however, set to zero if acquirer and target country are both EEA Member States and M&A year is after 2006	Tax guides	317,444	0.035	0.062	0.000	0.284
Below	See expression (6)	Tax guides	317,444	0.037	0.063	0.000	0.284
Above	See expression (7)	Tax guides	317,444	0.008	0.026	0.000	0.258
Higher	See expression (8)	Tax guides	317,444	0.014	0.030	0.000	0.259
$CFC^{taxbase}$	See expression (10)	Tax guides	317,444	0.305	0.058	0.125	0.409
$CFC^{profitable}$	Same as CFC^{diff}; however, for non-profitable targets set to zero	Tax guides; SDC; Compustat North America; Compustat Global	53,270	0.026	0.057	0.000	0.284
$CFC^{non\_profitable}$	Same as CFC^{diff}; however, for profitable targets set to zero	Tax guides; SDC; Compustat North America; Compustat Global	53,270	0.013	0.042	0.000	0.277
STR	STR in candidate target country, including typical local taxes	Tax guides	317,444	0.287	0.071	0.125	0.409
lnGDPpercapita	GDP per capita in candidate target country (natural logarithm)	World Bank	317,444	10.267	0.687	7.942	11.284
GDPgrowth	Growth of GDP in candidate target country (in %)	World Bank	317,444	3.221	3.206	-7.821	15.240
StockmarketSize	Stock market capitalization of listed domestic companies in candidate target country (in % of GDP)	World Bank	317,444	124.1	178.4	17.020	1,254.5
PrivateCredit	Domestic credit to private sector in candidate target country (in % of GDP)	World Bank	317,444	109.5	47.091	13.353	233.4
lnDistance	Simple distance (in km) between most populated cities of acquirer and candidate target country (natural logarithm)	Mayer and Zignago (2011)	317,444	8.609	1.046	5.153	9.883
CommonLanguage	Common language index between acquirer and candidate target country (0 (low similarity) to 1 (high similarity))	Melitz and Toubal (2014)	317,444	0.235	0.212	0.000	0.991
ColonialRelationship	Binary dummy variable coded one if acquirer and candidate target country were ever in a colonial relationship, and 0 otherwise	Mayer and Zignago (2011)	317,444	0.103	0.304	0	1
CommonLegalSystem	Binary dummy variable coded one if legal system of acquirer and candidate target country have common legal origins, and 0 otherwise	Head et al. (2010)	317,444	0.329	0.470	0	1
CorruptionControl	Corruption control index of candidate target country (-3 (low control) to 3 (high control))	World Bank	317,444	1.072	0.976	-1.088	2.527
BusinessStartupCost	Cost of business start-up procedures in candidate target country (in % of GNI per capita)	World Bank	317,444	9.601	12.746	0.000	78.400
UnemploymentRate	Unemployment rate in candidate target country (in % of total labor force)	World Bank	317,444	7.031	5.050	2.493	27.140
lnDomesticFirms	Number of listed domestic companies in candidate target country (natural logarithm)	World Bank	317,444	6.426	1.232	3.714	8.638
BusinessDisclosure	Business extent of disclosure index of in candidate target country (0 (less disclosure) to 10 (more disclosure))	World Bank	264,159	7.188	2.344	0	10
AcquirerAssets	Pre-deal consolidated acquirer total assets in the last year before the effective M&A date (natural logarithm)	SDC; Compustat North America; Compustat Global	215,197	20.280	2.808	11.513	28.710
AcquirerROA	Pre-deal consolidated acquirer pre-tax income in the last year before the effective M&A date divided by pre-deal consolidated acquirer total assets in the last year before the effective M&A date	SDC; Compustat North America; Compustat Global	215,197	0.035	5.999	-191.9	360.5
AcquirerSales	Pre-deal consolidated acquirer net sales in the last year before the effective M&A date (natural logarithm)	SDC; Compustat North America; Compustat Global	206,176	19.979	2.732	8.219	26.834
AcquirerEBITDA	Pre-deal consolidated acquirer EBITDA (earnings before interest, taxes, depreciation and amortization) in the last year before the effective M&A date (natural logarithm)	SDC; Compustat North America; Compustat Global	180,202	18.594	2.365	9.210	24.723

Data on country fixed effects are not reported but are available upon request.

Table 10. Effect of acquirer CFC rules on probability of being target country (Section 3.4.2).

Explanatory variables	(1) Conditional logit	(2) Conditional logit	(3) Mixed logit	(4) Mixed logit	(5) Mixed logit
CFC^{dummy}	-0.1078**				
	(0.0450)				
CFC^{diff}		-1.7115***	-2.8880***	-2.8880***	
		(0.3921)	(0.5306)	(0.8075)	
Below					-4.7124***
					(0.5975)
Above					-8.6127***
					(1.0042)
Higher					-1.1460**
					(0.5413)
STR	2.6019***	2.4139***	2.0753***	2.0753**	1.6429**
	(0.6293)	(0.6309)	(0.6398)	(0.8535)	(0.6891)
lnGDPpercapita	-0.0639	-0.0388	-0.0848	-0.0848	-0.1192
	(0.1740)	(0.1739)	(0.1744)	(0.3059)	(0.1788)
GDPgrowth	0.0142*	0.0143*	0.0134*	0.0134	0.0128
	(0.0081)	(0.0081)	(0.0081)	(0.0112)	(0.0082)
StockmarketSize	-0.0003	-0.0003	-0.0003	-0.0003	-0.0003
	(0.0002)	(0.0002)	(0.0002)	(0.0003)	(0.0002)
PrivateCredit	-0.0019**	-0.0019**	-0.0021***	-0.0021**	-0.0022***
	(0.0008)	(0.0008)	(0.0008)	(0.0011)	(0.0008)
lnDistance	-0.5799***	-0.5740***	-0.5736***	-0.5736***	-0.5934***
	(0.0112)	(0.0114)	(0.0114)	(0.0188)	(0.0123)
CommonLanguage	1.9043***	1.9006***	1.9162***	1.9162***	1.9734***
	(0.0639)	(0.0638)	(0.0641)	(0.1225)	(0.0671)
ColonialRelationship	0.2992***	0.2777***	0.2712***	0.2712***	0.2252***
	(0.0375)	(0.0377)	(0.0378)	(0.0489)	(0.0387)
CommonLegalSystem	0.0172	0.0311	0.0345	0.0345	0.0672**
	(0.0269)	(0.0271)	(0.0272)	(0.0483)	(0.0278)
CorruptionControl	0.1651*	0.1644*	0.1600*	0.1600	0.1542*
	(0.0859)	(0.0860)	(0.0863)	(0.1337)	(0.0884)
BusinessStartupCost	-0.0073**	-0.0072**	-0.0075**	-0.0075*	-0.0069**
	(0.0033)	(0.0033)	(0.0033)	(0.0044)	(0.0033)
UnemploymentRate	-0.0004	0.0001	0.0004	0.0004	-0.0002
	(0.0064)	(0.0064)	(0.0064)	(0.0085)	(0.0065)
lnDomesticFirms	0.1775**	0.1651*	0.1834**	0.1834	0.2095**
	(0.0848)	(0.0846)	(0.0848)	(0.1338)	(0.0853)
Target country fixed effects	YES	YES	YES	YES	YES
Observations	317,444	317,444	317,444	317,444	317,444
Log-likelihood	-31,158	-31,151	-31,144	-31,144	-31,064

Regressions of probability of being the target country on (potential) CFC rule application in acquirer country; see expression (3). For each deal, the dependent variable equals one if country i is the actual target's country of origin, and zero if country i is a counterfactual target country. For variable definitions and data sources, see Table 9. Only cross-border M&As where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target country fixed effects, which are available upon request. The variables of interest follow a random distribution in the mixed logit regressions. Regressions (1) and (2) are estimated by a conditional logit model and regressions (3), (4) and (5) are estimated by a mixed logit model. Regression (4) is identical to regression (3) except for standard errors, which are robust to clustering on the acquirer-country-year level. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

Table 11. Robustness tests of effect of acquirer CFC rules on probability of being target country (Section 3.4.2).

Explanatory variables	(1) Using target effective average tax rate	(2) Considering EAA exemption (post 2006)	(3) Considering included income of CFC rule	(4) Randomizing STR	(5) Excl. acquirers from AU&CA&NZ	(6) Excl. targets from DE&UK&US	(7) Incl. business disclosure index
CFC^{diff}				-2.9635***	-3.0176***	-1.9885***	-2.1462***
				(0.5612)	(0.5315)	(0.6091)	(0.5646)
$CFC^{diffEATR}$	-1.6836***						
	(0.4775)						
$CFC^{diffEEA}$		-3.2489***					
		(0.5360)					
$CFC^{taxbase}$			-1.3819[a]				
			(0.9350)				
STR	2.3923***	1.9682***	3.8860***	1.8021***	2.2549***	-0.7337	1.8860**
	(0.6354)	(0.6407)	(1.0668)	(0.6577)	(0.6744)	(0.9266)	(0.7650)
lnGDPpercapita	-0.0710	-0.0803	-0.1884	-0.3431*	0.0169	-0.5203***	0.3354
	(0.1744)	(0.1749)	(0.1798)	(0.1848)	(0.1825)	(0.1978)	(0.2291)
GDPgrowth	0.0139*	0.0137*	0.0140*	0.0119	0.0109	0.0186**	0.0204**
	(0.0081)	(0.0081)	(0.0082)	(0.0083)	(0.0087)	(0.0093)	(0.0087)
StockmarketSize	-0.0003	-0.0003	-0.0002	-0.0001	-0.0003	-0.0002	-0.0002
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0003)
PrivateCredit	-0.0020**	-0.0022***	-0.0018**	-0.0022***	-0.0029***	-0.0034***	-0.0025***
	(0.0008)	(0.0008)	(0.0008)	(0.0008)	(0.0009)	(0.0011)	(0.0009)
lnDistance	-0.5834***	-0.5712***	-0.5919***	-0.5985***	-0.5562***	-0.6799***	-0.5717***
	(0.0113)	(0.0115)	(0.0122)	(0.0125)	(0.0145)	(0.0166)	(0.0123)
CommonLanguage	1.9332***	1.9217***	1.9710***	2.0260***	1.9892***	2.0413***	1.9405***
	(0.0639)	(0.0640)	(0.0670)	(0.0684)	(0.0685)	(0.0805)	(0.0687)
ColonialRelationship	0.2986***	0.2636***	0.2760***	0.2637***	0.2214***	0.3984***	0.2497***
	(0.0377)	(0.0378)	(0.0384)	(0.0387)	(0.0403)	(0.0485)	(0.0413)
CommonLegalSystem	0.0139	0.0364	0.0282	0.0315	0.0482*	0.0919***	0.0162
	(0.0269)	(0.0272)	(0.0278)	(0.0280)	(0.0278)	(0.0341)	(0.0291)
CorruptionControl	0.1784**	0.1504*	0.1641*	0.1525*	0.1277	0.0777	0.3170***
	(0.0860)	(0.0865)	(0.0875)	(0.0889)	(0.0922)	(0.1113)	(0.1135)
BusinessStartupCost	-0.0074**	-0.0074**	-0.0076**	-0.0081**	-0.0052	-0.0071*	-0.0064*
	(0.0033)	(0.0033)	(0.0033)	(0.0034)	(0.0035)	(0.0037)	(0.0036)
UnemploymentRate	0.0003	0.0002	-0.0026	-0.0032	0.0033	-0.0134*	0.0055
	(0.0064)	(0.0064)	(0.0065)	(0.0065)	(0.0067)	(0.0081)	(0.0071)
lnDomesticFirms	0.1715**	0.1794**	0.2252***	0.2844***	0.2078**	0.2547***	0.0623
	(0.0848)	(0.0849)	(0.0861)	(0.0876)	(0.0883)	(0.0907)	(0.1015)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
BusinessDisclosure							0.0820
							(0.0686)
Target country fixed effects	YES	YES	YES	YES	YES	YES	YES
Observations	317,444	317,444	317,444	317,444	255,172	161,910	264,159
Log-likelihood	-31,155	-31,140	-31,136	-31,119	-26,594	-19,327	-26,172

Regressions of probability of being the target country on (potential) CFC rule application in acquirer country; see expression (3). For each deal, the dependent variable equals one if country i is the actual target's country of origin, and zero if country i is a counterfactual target country. For variable definitions and data sources, see Table 9. Only cross-border M&As where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution in the mixed logit regressions. Regression (1), (2) and (3) check whether our variable of interest is robust to using effective average tax rates, considering potential non-application of CFC rules within the EEA and considering the included income by CFC rules. In regression (4), also STR follows a random distribution. Regressions (5) and (6) exclude certain countries and regression (7) considers a further control variable (*BusinessDisclosure*). *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.
[a] The level of statistical significance is 13.9%.

Table 12. Further robustness tests of effect of acquirer CFC rules on probability of being target country (Section 3.4.2).

Explanatory variables	(1) Excl. control variables	(2) Profitable vs. non-profitable targets	(3) Incl. acquirer assets & acquirer return on assets	(4) Incl. acquirer sales	(5) Incl. acquirer EBITDA
CFC^{diff}	-6.4155***		-3.5409***	-3.4268***	-3.2957***
	(0.4292)		(0.6830)	(0.6655)	(0.7050)
$CFC^{profitable}$		-6.4673***			
		(1.6700)			
$CFC^{non\_profitable}$		-7.2323***			
		(1.9287)			
STR		-1.8795	2.4216***	2.7097***	2.7031***
		(1.7514)	(0.7889)	(0.7979)	(0.8450)
lnGDPpercapita		0.2851	-0.1952	-0.0804	-0.3150
		(0.5944)	(0.2289)	(0.2319)	(0.2494)
GDPgrowth		-0.0329	0.0119	0.0107	0.0096
		(0.0227)	(0.0101)	(0.0104)	(0.0111)
StockmarketSize		-0.0003	0.0000	-0.0002	-0.0000
		(0.0007)	(0.0003)	(0.0003)	(0.0003)
PrivateCredit		-0.0050***	-0.0027***	-0.0029***	-0.0026**
		(0.0018)	(0.0010)	(0.0010)	(0.0011)
lnDistance		-0.4524***	-0.5450***	-0.5504***	-0.5388***
		(0.0303)	(0.0145)	(0.0152)	(0.0162)
CommonLanguage		2.0888***	1.6471***	1.5955***	1.4247***
		(0.1776)	(0.0896)	(0.0895)	(0.1006)
ColonialRelationship		0.2331***	0.2761***	0.2821***	0.2991***
		(0.0901)	(0.0462)	(0.0468)	(0.0489)
CommonLegalSystem		0.1076	0.1376***	0.1668***	0.2000***
		(0.0681)	(0.0363)	(0.0363)	(0.0388)
CorruptionControl		0.0070	0.1240	0.0248	0.0192
		(0.2145)	(0.1076)	(0.1088)	(0.1168)
BusinessStartupCost		-0.0087	-0.0122***	-0.0110***	-0.0091**
		(0.0089)	(0.0041)	(0.0042)	(0.0046)
UnemploymentRate		-0.0252	-0.0091	-0.0124	-0.0128
		(0.0160)	(0.0081)	(0.0082)	(0.0087)
lnDomesticFirms		0.4353*	0.1074	0.0945	0.1462
		(0.2224)	(0.1060)	(0.1069)	(0.1119)
Target country fixed effects	YES	YES	YES	YES	YES
Observations	317,444	53,270	215,197	206,176	180,202
Log-likelihood	-34,219	-5,028	-20,617	-19,818	-17,463

Regressions of probability of being the target country on (potential) CFC rule application in acquirer country; see expression (3). For each deal, the dependent variable equals one if country i is the actual target's country of origin, and zero if country i is a counterfactual target country. For variable definitions and data sources, see Table 9. Only cross-border M&As where the direct acquirer country is equal to the acquirer ultimate parent country are considered. All regressions control for target country fixed effects, which are available upon request, and are estimated by a mixed logit model. The variables of interest follow a random distribution in the mixed logit regressions. Regression (1) drops all control variables and regression (2) distinguishes between profitable and non-profitable targets. Regression (3) includes the interaction between target country fixed effects and *AcquirerAssets* and the interaction between target country fixed effects and *AcquirerROA*. Regression (4) includes the interaction between target country fixed effects and *AcquirerSales*. Regression (5) includes the interaction between target country fixed effects and *AcquirerEBITDA*. The coefficients and standard errors of these interactions are shown in Table 13. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

Table 13. Supplemental regression results for candidate target country fixed effects interacted with acquirer-specific financial data.

Regression (3) of Table 12		Regression (4) of Table 12		Regression (5) of Table 12	
Australia*AcquirerAssets	-0.0867***	Australia*AcquirerSales	-0.0542***	Australia*AcquirerEBITDA	-0.0819***
	(0.0194)		(0.0199)		(0.0230)
Belgium*AcquirerAssets	-0.0737**	Belgium*AcquirerSales	-0.0633**	Belgium*AcquirerEBITDA	-0.1133***
	(0.0302)		(0.0301)		(0.0389)
Brazil*AcquirerAssets	0.0321	Brazil*AcquirerSales	0.1174***	Brazil*AcquirerEBITDA	0.1288***
	(0.0301)		(0.0373)		(0.0361)
Canada*AcquirerAssets	-0.1900***	Canada*AcquirerSales	-0.1707***	Canada*AcquirerEBITDA	-0.1391***
	(0.0244)		(0.0245)		(0.0298)
China*AcquirerAssets	-0.1894***	China*AcquirerSales	-0.1697***	China*AcquirerEBITDA	-0.1784***
	(0.0212)		(0.0201)		(0.0279)
Denmark*AcquirerAssets	-0.0393	Denmark*AcquirerSales	-0.0148	Denmark*AcquirerEBITDA	-0.0599
	(0.0754)		(0.0855)		(0.0968)
Finland*AcquirerAssets	-0.0406	Finland*AcquirerSales	0.0486	Finland*AcquirerEBITDA	-0.1441
	(0.0725)		(0.0660)		(0.1023)
France*AcquirerAssets	-0.0699***	France*AcquirerSales	-0.0638***	France*AcquirerEBITDA	-0.1531***
	(0.0168)		(0.0174)		(0.0216)
Germany*AcquirerAssets	-0.0929***	Germany*AcquirerSales	-0.0944***	Germany*AcquirerEBITDA	-0.1481***
	(0.0156)		(0.0160)		(0.0196)
HongKongSARChina*AcquirerAssets	-0.2496***	HongKongSARChina*AcquirerSales	-0.2166***	HongKongSARChina*AcquirerEBITDA	-0.2576***
	(0.0345)		(0.0277)		(0.0399)
India*AcquirerAssets	0.0178	India*AcquirerSales	0.0684*	India*AcquirerEBITDA	0.0444
	(0.0334)		(0.0371)		(0.0420)
Ireland*AcquirerAssets	-0.0215	Ireland*AcquirerSales	-0.0067	Ireland*AcquirerEBITDA	-0.0489
	(0.0349)		(0.0344)		(0.0421)
Italy*AcquirerAssets	0.0233	Italy*AcquirerSales	0.0241	Italy*AcquirerEBITDA	-0.0159
	(0.0291)		(0.0300)		(0.0359)
Japan*AcquirerAssets	0.0125	Japan*AcquirerSales	-0.0390	Japan*AcquirerEBITDA	-0.0462
	(0.0403)		(0.0456)		(0.0554)
KoreaRep*AcquirerAssets	0.0294	KoreaRep*AcquirerSales	0.0095	KoreaRep*AcquirerEBITDA	0.0552
	(0.0504)		(0.0494)		(0.0542)
Malaysia*AcquirerAssets	-0.2115***	Malaysia*AcquirerSales	-0.1429***	Malaysia*AcquirerEBITDA	-0.2109***
	(0.0426)		(0.0421)		(0.0558)
Mexico*AcquirerAssets	-0.3658***	Mexico*AcquirerSales	-0.1508***	Mexico*AcquirerEBITDA	-0.0526
	(0.0316)		(0.0437)		(0.0550)
Netherlands*AcquirerAssets	-0.0799***	Netherlands*AcquirerSales	-0.0567***	Netherlands*AcquirerEBITDA	-0.1291***
	(0.0209)		(0.0215)		(0.0259)
NewZealand*AcquirerAssets	-0.1727***	NewZealand*AcquirerSales	-0.1197***	NewZealand*AcquirerEBITDA	-0.3288***
	(0.0307)		(0.0266)		(0.0381)
Norway*AcquirerAssets	-0.1155***	Norway*AcquirerSales	-0.0915***	Norway*AcquirerEBITDA	-0.1021***
	(0.0273)		(0.0262)		(0.0340)
Poland*AcquirerAssets	-0.0356	Poland*AcquirerSales	-0.0602	Poland*AcquirerEBITDA	-0.0928*
	(0.0452)		(0.0441)		(0.0500)
RussianFederation*AcquirerAssets	-0.0841	RussianFederation*AcquirerSales	-0.1421**	RussianFederation*AcquirerEBITDA	-0.0242
	(0.0558)		(0.0607)		(0.0884)
Singapore*AcquirerAssets	-0.1589***	Singapore*AcquirerSales	-0.1096***	Singapore*AcquirerEBITDA	-0.1836***
	(0.0315)		(0.0268)		(0.0356)
SouthAfrica*AcquirerAssets	-0.1952***	SouthAfrica*AcquirerSales	-0.1524***	SouthAfrica*AcquirerEBITDA	-0.1421***
	(0.0376)		(0.0371)		(0.0543)
Spain*AcquirerAssets	-0.0371	Spain*AcquirerSales	-0.0328	Spain*AcquirerEBITDA	-0.0454
	(0.0317)		(0.0312)		(0.0358)
Switzerland*AcquirerAssets	-0.0841***	Switzerland*AcquirerSales	-0.0741***	Switzerland*AcquirerEBITDA	-0.0619*
	(0.0264)		(0.0285)		(0.0350)
UnitedKingdom*AcquirerAssets	-0.0884***	UnitedKingdom*AcquirerSales	-0.0762***	UnitedKingdom*AcquirerEBITDA	-0.1113***
	(0.0174)		(0.0179)		(0.0214)
Australia*AcquirerROA	-0.0370				
	(0.0295)				
Belgium*AcquirerROA	0.0158***				
	(0.0057)				
Brazil*AcquirerROA	-0.0375				
	(0.0277)				
Canada*AcquirerROA	-0.0413				
	(0.0390)				
China*AcquirerROA	-0.0043				
	(0.0112)				
Denmark*AcquirerROA	0.0424				
	(0.5075)				
Finland*AcquirerROA	-0.1937				
	(0.1496)				
France*AcquirerROA	0.0021				
	(0.0058)				
Germany*AcquirerROA	0.0108**				
	(0.0053)				
HongKongSARChina*AcquirerROA	-0.0648*				
	(0.0355)				
India*AcquirerROA	-0.0484				
	(0.0374)				
Ireland*AcquirerROA	-0.0134				
	(0.0453)				
Italy*AcquirerROA	-0.0068				
	(0.0254)				
Japan*AcquirerROA	-0.0642*				

	(0.0346)
KoreaRep*AcquirerROA	-0.0577*
	(0.0337)
Malaysia*AcquirerROA	0.0007
	(0.0079)
Mexico*AcquirerROA	-0.0010
	(0.0081)
Netherlands*AcquirerROA	-0.0154
	(0.0531)
NewZealand*AcquirerROA	0.0195
	(0.0137)
Norway*AcquirerROA	-0.0151
	(0.0344)
Poland*AcquirerROA	-0.0394
	(0.0410)
RussianFederation*AcquirerROA	-0.0564*
	(0.0339)
Singapore*AcquirerROA	-0.0539
	(0.0349)
SouthAfrica*AcquirerROA	0.0006
	(0.0076)
Spain*AcquirerROA	-0.0365
	(0.0386)
Switzerland*AcquirerROA	0.0027
	(0.0058)
UnitedKingdom*AcquirerROA	-0.0098
	(0.0196)

Table reports supplemental results of regressions (3), (4) and (5) of Table 12. In particular, the coefficient of the interaction between candidate target country fixed effects with acquirer-specific consolidated financial data (acquirer total assets, acquirer return on assets, acquirer net sales and acquirer earnings before interest, taxes, depreciation and amortization) are shown. In all regressions, the US represent the base category *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.

Table 14. Cross-border M&A sample (2002-2014) for analyzing effect of CFC rules on direction of cross-border M&As (Section 4.4).

Country	CFC rule	Number of acquirers	Number of targets	Country	CFC rule	Number of acquirers	Number of targets
Australia	1	43	57	Luxembourg	0	3	6
Austria	0	7	3	Mexico	1	7	5
Belgium	0	21	27	Netherlands	0	41	19
Brazil	1	3	24	New Zealand	1	4	4
Canada	1	70	101	Norway	1	9	24
Chile	0	2	6	Poland	0	1	5
China	1	14	6	Portugal	1	2	1
Denmark	1	7	9	Russian Federation	0	6	2
France	1	64	83	South Africa	1	20	10
Germany	1	55	65	Spain	1	29	40
India	0	32	12	Sweden	1	5	5
Ireland	0	32	14	Switzerland	0	40	18
Israel	1	21	16	United Kingdom	1	156	338
Italy	1	30	21	United States	1	411	260
Japan	1	55	9				
Korea, Rep.	1	9	9	**Total**		**1,199**	**1,199**

Table shows number of acquirer ultimate parents and targets ultimate parents per country in our cross-border M&A sample to investigate Hypothesis 2. In this context, cross-border M&As are defined as acquirer ultimate parent and target ultimate parent residing in different countries; the direct acquirer and acquirer ultimate parent reside in the same country and also the direct target and target ultimate parent reside in the same country. CFC rule takes the value one, if the country has implemented CFC rules in 2014. Each country has at least one acquiring firm and one target firm to ensure that maximum likelihood estimation yields finite likelihood.

Table 15. Definition, data sources and summary statistics of variables for analyzing effect of CFC rules on direction of cross-border M&As (Section 4.4).

Variable	Definition	Data source	Obs.	Mean	Std. Dev.	Min	Max
ΔCFC_value	Difference in CFC value of the two firms (see Section 4.2)	Tax guides	1,199	0.059	1.536	-3	3
ΔCFC_dummy	Difference in CFC rule of the two firms (see Section 4.2)	Tax guides	1,580	-0.069	0.466	-1	1
ΔSTR	Difference in STRs, including typical local taxes, of the two firms (in %)	Tax guides	1,199	1.149	9.233	-26.706	26.823
ΔDTM	Difference in method to avoid double taxation on foreign dividends of two firms where 0 (1) represents the credit (exemption) method	Tax guides	1,199	-0.008	0.690	-1	1
$\Delta Size$	Difference in total assets of the two firms divided by the sum of the firms' total assets	SDC; Compustat North America; Compustat Global	1,199	0.799	0.301	-0.990	1.000
ΔPTI	Difference in pre-tax incomes of the two firms divided by the sum of the firms' pre-tax incomes, where non-positive values of pre-tax income are replaced by 0.001 to avoid low values in the denominator	SDC	1,199	0.645	0.550	-1.000	1.000
$\Delta Leverage$	Difference in leverage ratios of the two firms (total liabilities/total assets, in %)	SDC; Compustat North America; Compustat Global	1,199	-0.082	0.942	-22.413	4.314
$\Delta StockMrk$	Difference in stock market capitalizations of the two countries divided by the sum of the countries' stock market capitalization volume	World Bank	1,199	0.104	0.783	-1.000	1.000
$\Delta CreditMrk$	Difference in domestic credits to private sector of the two countries divided by the sum of the countries' domestic credit volume	World Bank	1,199	0.089	0.732	-0.997	0.998
$\Delta Inflation$	Difference in inflation rates of the two countries (in %)	World Bank	1,199	0.037	2.106	-13.352	11.742

Data on country fixed effects are not reported but are available upon request. These statistics show relative values of the variables when firm a acquires firm b, see expression (11). For example, if firm a has a leverage ratio of 0.45 and firm b has a leverage ratio of 0.50, then $\Delta Leverage$ takes the value -0.05 (=0.45-0.50).

Table 16. Effect of CFC rules on direction of cross-border M&As (Section 4.4).

Explanatory variables	Level of direct acquirer & direct target		Level of acquirer ult. par. & target ult. par.			
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
ΔCFC_value	-1.127**		-1.438**		-2.025[a]	
	(0.530)		(0.701)		(1.558)	
ΔCFC_dummy		-2.027*		-3.543**		-10.944***
		(1.132)		(1.754)		(2.620)
ΔSTR	0.168*	0.096**	0.278***	0.062	0.693***	0.079
	(0.086)	(0.038)	(0.105)	(0.043)	(0.254)	(0.058)
ΔDTM	-0.242	0.201	-0.910	-0.399	-1.833**	-0.881
	(0.652)	(0.671)	(0.853)	(0.879)	(0.927)	(1.040)
$\Delta Size$	5.101***	5.509***	5.480***	5.698***	7.523***	6.037***
	(0.398)	(0.409)	(0.501)	(0.477)	(1.403)	(0.886)
ΔPTI	1.177***	1.128***	1.399***	1.307***	1.571	0.906
	(0.407)	(0.375)	(0.466)	(0.366)	(1.040)	(0.844)
$\Delta Leverage$	0.158**	0.216**	0.123*	0.206**	-0.098	-0.372
	(0.068)	(0.086)	(0.068)	(0.083)	(0.983)	(0.638)
$\Delta StockMrk$	4.914***	2.802**	6.446***	3.004**	9.175***	2.896
	(1.615)	(1.292)	(2.278)	(1.459)	(3.105)	(2.410)
$\Delta CreditMrk$	-6.363***	-2.533*	-8.826***	-3.069	-9.829*	0.013
	(1.848)	(1.403)	(2.851)	(1.884)	(5.900)	(4.130)
$\Delta Inflation$	0.193	0.083	0.321	0.132	0.245	0.002
	(0.205)	(0.171)	(0.245)	(0.210)	(0.534)	(0.427)
Country fixed effects	YES	YES	YES	YES	YES	YES
Observations	1,199	1,580	989	1,305	418	492
Number of countries	30	31	30	30	29	29
Log-likelihood	-99.2	-133.6	-70.2	-100.7	-24.8	-38.1
Time period	2002-2014	1995-2014	2002-2014	1995-2014	2002-2014	1995-2014

Logit regressions of probability of being the acquirer country on (potential) CFC rules in a cross-border M&A; see expression (11). For variable definitions and data sources, see Table 15. All regressions control for country fixed effects, which are available upon request. Regressions (1) and (2) consider M&As where the direct acquirer and direct target reside in the same country as their respective ultimate parents. Regressions (3) and (4) are the same as (1) and (2), but require that the direct acquirer and the direct target are the respective groups' ultimate parents. Regressions (5) and (6) are the same as (3) and (4), but exclude M&As involving the United States. Regressions (2), (4) and (6) consider in addition years 1995-2001; due to a lack of more detailed historic CFC rule data ΔCFC_value cannot be constructed for the time period 1995-2001. *, **, and *** denote statistical significance at 10%, 5%, and 1% levels, respectively. Robust standard errors are provided in parentheses.
[a] The level of statistical significance is 19.4%.

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