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Institutional mobility in global capital markets

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We thank workshop participants at Oregon State University, University of Massachusetts, University of Utah, Baruch College, Harvard Law School Program on International Financial Systems, Dutch Authority for the Financial Markets (AFM), Commodities and Futures Trading Commission (CFTC), Center for Interdisciplinary Research and Analysis on Organizations (CIRANO)/Sam M. Walton Workshop on Networks in Trade and Finance, the National Business Law Scholars Conference, the Utah Wasatch Finance Conference, Swiss Accounting Research Alpine Camp, Northwestern Law School's Empirical Conference on Standardization, and HARC. We received helpful comments from Janet Austin, Donal Byard, Jesse Fried, Nicolas Rudolf (discussant), Albert Shin (discussant), Verity Winship, Ethan Yao (discussant) and Feng Zhang.

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Abstract

When financial conduct in one country intrudes on another country, country-level institutional features (e.g., securities laws and their enforcement) cease to be effective because of jurisdictional limitations. In this study, we focus on how fragmented regulatory authority exposes global capital market participants to expropriation and information risks. We explore securities regulators' use of cooperative instruments. These instruments enable country-level institutional features to reach foreign jurisdictions. Using a powerful research design that controls for country-level factors (even time-variant ones), we find that cooperation is associated with the volume of deals in the cross-border merger and acquisition (M&A) market (in both number and dollar-value terms). Additional tests indicate larger effects of cooperation in country pairs where pre-cooperation M&A is scant (consistent with an extensive margin of investment). Moreover, we find that subtle and previously unexplored legal issues affect firm value in ways that refine the bonding hypothesis. Ultimately, we conclude that institutional features determined at the country-pair level are key determinants of economic outcomes in global markets.

Keywords: cross-border cooperation, M&A, regulatory networks, institutions, enforcement, legal frictions

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I. Introduction

The law and finance literature concludes that investor protection—largely determined by legal rules and their enforcement—is a critical institutional feature that shapes financial market outcomes and the real economy (La Porta et al. 1998). Legal systems are organized at the country level, and thus are almost universally viewed as country-level constructs. This perspective is logical for comparative cross-country studies, but in the context of global economic activities, we argue that this characterization is incomplete.

Global markets routinely scatter transactions, assets, records, claimants, and relevant legal entities across jurisdictions. In such cases, even highly effective domestic legal systems are ill equipped to tackle activities that originate in one country and intrude on another. No single regulator has unilateral authority to investigate or enforce compliance with applicable laws because each sovereign authority has exclusive jurisdiction in its own territory. Thus, a critical but largely overlooked dimension of institutional features is whether they can effectively *mobilize* and extend beyond their inherent boundaries.

Our study focuses on global securities regulation, where cross-border cooperation between foreign counterparts helps extend legal rules (and their enforcement) to foreign jurisdictions. Cooperation facilitates document sharing (e.g., auditor, bank, internet, and telephone records) and expands tactical abilities (e.g., compelling testimony, freezing assets, and prohibiting document destruction). Thus, we view cooperation as a critical vehicle for mobilizing institutional features beyond territorial boundaries.

Our tests examine how mobilizing institutions by way of regulatory cooperation affects cross-border economic outcomes. We show that cross-border mergers and acquisitions (M&A)—the largest component of foreign direct investment (FDI)—increase with cooperation. We also observe that the value of US cross-listed firms increases with cooperation, but only for firms with seizable assets within the US. The tests are consistent with our novel reconceptualization of institutional features as interactive and jointly determined by *pairs* of countries. This reconceptualization departs from prior work that views institutional features as *country*-level factors. We conclude that effective global securities regulation requires a coordinated transfer of institutional features across borders.

Our study begins by identifying a comprehensive set of the cooperative instruments used by securities regulators, including the Hague Conventions, financial intelligence units (FIUs), the International Organization of Securities Commissions' (IOSCO's) Multilateral

Memorandum of Understanding, and bilateral memoranda of understanding (MoUs). Our analysis describes the precise jurisdictional frictions that constrain legal systems and describes how, during different stages of investigation and litigation, each cooperative instrument helps resolve these frictions and mobilize institutional features across borders. These efforts are now widespread: over four decades, the country-pair connections under cooperative instruments have grown from a sparse patchwork into an extensive network of more than 7,000 connections between country pairs. These cooperative instruments allow us to observe, for each country pair in the sample, abrupt enhancements in the mobility of institutional features within the scope of securities regulation.

Examining institutional features generally raises endogeneity concerns that are notoriously difficult to address (Glaeser et al. 2004). In this regard, our setting has several advantages. One is that regulators—as opposed to market participants—impose the treatment (i.e., cooperation). Another advantage is that the instruments provide identification benefits because they affect different country-pairs at different times. The treatment is staggered in three dimensions (country i, country j, and time t), so we can include three-way fixed effects for acquiror country×year ($i \times t$), target country×year ($j \times t$), and country pair ($i \times j$)—without the fixed effects being a linear transformation of the treatment. Our design effectively controls for unobserved factors, including time-variant ones, at the acquiror-country and target-country level (e.g., new laws, policies, or economic conditions). It also addresses the unobserved heterogeneity in the cross-section of country pairs (e.g., time-invariant factors like geography). In addition, we include rigorous controls to identify country pairs' time-varying economic interests that may be correlated with M&A (e.g., bilateral trade, trade agreements, investment treaties, tax treaties).

Other advantages of our design stem from the *network* architecture of the multilateral instruments.[1] Connections via these instruments occur in an elaborately staggered design, reducing the likelihood that omitted variables align with them. When a new member joins, it simultaneously connects with all prior members. Later connections occur sporadically as more members join. As the n^{th} member joins, it forms connections with all previous (n-1) members.[2]

[1] These advantages do not necessarily extend to a purely bilateral connection between a pair of countries, since a bilateral agreement may result from unobserved economic incentives that drive a country to cooperate and could also drive economic outcomes.

[2] Table 1 uses different colors to illustrate the staggered nature of the IOSCO MMoU (a multilateral instrument) and helps convey some of the important properties of multilateral treatments. As an example of the complexity and variation in the MMoU treatment, consider the

The rigid network-based interdependencies of multilateral treatments further alleviate endogeneity concerns in powerful and novel ways. For example, in a hypothetical scenario where unobserved incentives between two countries drive them to jointly participate in a multilateral instrument, the resulting bias would be present in a single country-pair observation but counteracted by myriad connections with other counterparts. Because the multilateral instruments create $n\text{-}1$ other linkages in an unplanned and coincidental way, the endogeneity generated by the two nations affects only n of the total $n \times (n\text{-}1)/2$ linkages (we divide by two because we consider the network *un*directed). Since the number of signatories for the various instruments ranges from 66 to 167, this endogeneity could affect a maximum of 1.2% to 3% of the total linkages.[3]

For similar reasons, multilateral instruments reduce the likelihood that reverse causality—e.g., a nation's joining the instrument in *response* to a market outcome such as cross-border M&A—will affect the results. For an outcome to be attributable to reverse causality, a nation's regulators would have to not only predict the market outcome *but also* reverse engineer the alignment of multiple joining events that are beyond their control. Thus, in general, reverse causality seems unlikely to account for the multilateral linkages.

The goals that underlie the multilateral cooperative instruments suggest that countries join due to geopolitical rather than market forces. For example, the MMoU was established to fight terrorism following the events of 9/11.[4] Prior research argues that a country's MMoU admission is plausibly exogenous both because of this fact and because countries need varying amounts of time to meet the admission requirements (Silvers 2020). In the case of FIUs, anti-money-laundering efforts are the primary objective. And the Hague Conventions seek to streamline administrative procedures in order to avoid consular and

Netherlands as an acquiror country, shown in the column headed "NLD_2007" (with 2007 being the year the nation joined). Upon entering the MMoU, the Netherlands forms simultaneous linkages with all previous entrants (shown in green), including China (CHN), Mexico (MEX), Singapore (SGP), Germany (DEU), Israel (ISR), Spain (ESP), and many others. As other arguably similar countries subsequently join, they form new connections with the Netherlands that are offset in time and beyond the Netherlands' control. See, for example, the connections with Japan (JPN) in 2008, Brazil (BRA) in 2009, Switzerland (CHE) in 2010, Ireland (IRL) in 2012, and Argentina (ARG). These linkages are shown near the bottom of the "NLD_2007" column in light blue, dark blue, purple, magenta, pink, and brown, respectively. This variation allows us to make comparisons between treated and otherwise similar untreated countries, while holding constant the other (acquiror or target) country in a given country pair. These design benefits extend to all three of the multilateral instruments included in our study (the MMoU, FIUs, and Hague Convention).

[3] Imagine, for instance, that the Netherlands (NLD) and Luxembourg (LUX) jointly decided to enter the arrangement in 2007 for endogenous reasons (a purely hypothetical scenario). The effect of this single endogenous linkage is counteracted by 118 exogenous linkages involving every other country in Table 1 and dozens of others (which are unreported for brevity).

[4] This explanation is not *ad hoc*. Paragraph 2 of the MMoU itself explicitly states: "The events of September 11, 2001, … underscore the importance of expanding cooperation among IOSCO Members" (see the MMoU). This comports with views expressed by legal and political economy scholars (Sheng (2002), Nakagawa (2011), Austin (2012), and Kempthorne (2013)).

diplomatic involvement; the conventions are not specific to securities regulation, commerce, or economic interests.[5] Thus, within the scope of our tests, we view multilateral linkages as plausibly exogenous treatment events that are also well-identified (Kahn and Whited 2017).

We use this powerful setting to test two novel empirical predictions generated by our legal analysis. In our first set of tests, we explore the idea that country-pair-level institutional features affect global market outcomes. Specifically, we evaluate the effect of cooperation on the cross-border M&A market. In the presence of incomplete contracting, business combinations are anticipated when complementary assets are expected to be more valuable under common control (Grossman and Hart 1986; Maksimovic and Phillips 2001; Rhodes-Kropf and Robinson 2008). In cross-border settings, however, search frictions, information issues, and market-related risks create obstacles to M&A. Indeed, survey evidence suggests that regulatory risks and uncertainties are a top concern in cross-border deals, ranking higher even than underlying business risks (Deloitte 2017; Giambona et al. 2017). To the extent that cooperation alleviates these issues (e.g., via enhanced enforcement or reducing regulatory burdens), we expect it to expand the market for cross-border deals.

Our central argument is that risks and information problems deter cross-border M&A and affect matching in the M&A market. By helping resolve these economic frictions, cooperation creates positive shocks to both the supply of target firms and the demand from acquiring firms, which should increase the equilibrium quantity of cross-border M&A.[6] Cooperation's effect on price (e.g., target premiums), however, is more complicated because the price effect could depend on the increase in supply *relative* to the increase in demand.

To investigate, we begin with a macroeconomic perspective that aggregates cross-border M&A to a country-pair-year unit of observation. Our global sample represents more than $12 trillion (2020 constant USD) in transaction volume from 1994 to 2020 and includes 80 acquiror countries and 98 target countries from SDC Platinum. As described earlier, we include three-way fixed effects for acquiror country×year, target country×year, and country pair. This design effectively controls for institutional features (even time-variant ones) at the acquiror- and target-country level as well as variation in the cross-section of country pairs. Thus, our tests identify the effect of country-pair-level institutional features on cross-border M&A. Our approach seeks to estimate the effect of cooperation on M&A between

[5] As all-purpose instruments that apply broadly to criminal, family, and intellectual-property law (inter alia), we view the Hague Conventions as unlikely to endogenously reflect the affairs of the securities market.

[6] Ambiguity in the expected relationship arises if regulatory arbitrage *motivates* cross-border M&A.

two countries, compared to a hypothetical state of no cooperation. The counterfactual ("no cooperation") benchmarks take the form of M&A occurring in other country pairs that possess one of the treatment pair's countries (target or acquiror) at the same point in time.

We find that cooperation is associated with significant increases in the dollar value of cross-border deals. Our main results are based on traditional log-linear estimation, but we confirm the inferences—albeit with different magnitudes—using Poisson pseudo-maximum likelihood (PPML) (Silva and Tenreyro 2006; Larch et al. 2019; Weidner and Zylkin 2021) and iterative OLS (iOLS) estimation methods (Bellégo et al. 2022). These alternative methods are intended to address the potential bias induced by the truncation at zero and the prevalence of zero values in the dependent variable. Subsequent empirical tests buttress our proposition (articulated in our legal discussion) that different cooperative instruments complement one another in a way that yields multiplicative (as opposed to additive) effects.

Before turning to pricing effects, we explore the nature of the increase in cross-border M&A. Cooperation could increase M&A mainly in country pairs where deals were already prevalent (intensive margin), mainly in country pairs where deals were scant (extensive margin), or roughly equally in both. Our results are consistent with extensive margin, as we observe increases in country pairs with low pre-cooperation levels of cross-border M&A and mild declines in country pairs with the highest pre-cooperation M&A. Together, the findings imply that cooperation facilitates a reorganization in the cross-border M&A market.

The effects of cooperation on price-related aspects of M&A (e.g., target premiums) are theoretically more complicated. On one hand, if cooperation leads acquirors to consider a wider set of firms for matches, it could improve merger synergies. On the other hand, by resolving risks, cooperation could lower the expected synergies required for a deal. Empirically, our overall evidence indicates nuanced changes in the pricing aspects of cross-border M&A. Using proxies from prior work (Betton et al. 2008; Harford et al. 2012; Field and Mkrtchyan 2017; Suk and Wang 2021), our deal-specific tests (using both return- and accounting-based proxies) show that merger synergies are mostly unchanged. The evidence tenuously supports higher target announcement returns and increases in target premiums—measured from returns from the day (or month) before the announcement to the final price. This suggests that cooperation may increase the targets' relative negotiating power, though the targets' share of merger synergies (using measures from Ahern (2012)) is unchanged.

Our second set of tests relate to the bonding hypothesis, which proposes that the threat of sanctions from a host market regulator offers firms a way to credibly commit to

better governance and disclosure practices (Coffee 1999; Stulz 1999). A possible corollary of the bonding hypothesis is that firms subjecting their assets to the risk of forfeiture (via litigation) achieve enhanced valuation benefits by strengthening their bond to host market legal systems. We test whether cooperation has valuation effects for US-listed foreign firms, focusing on the moderating role of seizable assets. Using the fraction of US assets for as our proxy for seizable assets, we observe that cooperation increases the value—measured using Tobin's Q—of US-listed foreign firms with higher levels of such assets. This "skin in the game" finding refines the bonding hypothesis and helps explain why firms often create a presence (e.g., a production facility) in the country that hosts their foreign shares. Our explanation diverges from prior conjectures that firms cross-list as a mechanism to increase their advertising, product demand, and visibility (Baker et al. 2002; Coffee 2002; Licht 2003).

Our paper makes five interdisciplinary contributions. First, we extend the law and finance literature by providing novel details on regulators' techniques for mobilizing securities laws across borders. Though "at some level it is obvious that institutions matter" (Acemoglu and Robinson 2001, p. 1369), whether country-level institutional features possess sufficient mobility to shape *global* market outcomes is far from clear. We describe why country-level institutional features are ineffective at the global level—and thus incapable of shaping global market outcomes—unless country pairs cooperate. This answers scholars' calls for a deeper understanding of cross-border legal frictions and how regulators manage them (Austin 2012). Our analyses indicate that globally interconnected capital markets add a novel country-*pair* dimension to institutional features. Our findings also reveal fragility in a variety of legal and economic theories that fail to consider cross-border issues.[7] Moreover, we motivate additional work on the topic by identifying issues that are relevant to regulatory policies, theoretical predictions, and empirical tests.

Second, by showing that institutional mobility is an important determinant of cross-border M&A, we add to the broad literature on global cross-border investment patterns and, in particular, to the nascent strand on regulatory cooperation (Silvers 2020, 2021a;

[7] For example, work on harmonization of securities laws (Simmons 2001; Pistor 2002) generally neglects the challenges raised by conduct straddling two countries. Similarly, Choi and Guzman (1998), Romano (2001), and Stulz (2009) posit that firms optimize their objectives by selecting their preferred set of securities laws, creating regulatory competition that leads to a "race to the top." Such an approach fails to consider cross-jurisdictional frictions (and their resolution). Even the literature that addresses extraterritorial application of securities law does so largely without considering assistance from foreign counterparts; it focuses on congressional intent or normative desirability (Beyea 2011; Painter 2011) rather than what is practically possible. Similarly, the bonding hypothesis relies on a threat of sanctions from host market regulators, yet the practicalities of applying foreign laws extraterritorially typically receive little attention (some exceptions being (Licht 2003; Siegel 2005; Licht et al. 2017; Silvers 2020)).

Lang et al. 2020; Beck et al. 2022).[8] This strand mainly focuses on a single instrument and its effect on foreign *portfolio* investment. Since foreign portfolio investment is highly liquid and potentially volatile, it can destabilize recipient economies (Prasad et al. 2007; Daude and Fratzscher 2008)). In contrast, cross-border M&A (our focus) represents foreign *direct* investment, which by nature is more permanent and has more profound effects on the real economy of recipient countries. For example, cross-border M&A can improve business processes, technological know-how, and managerial decision making, which helps promote country-level growth (Alfaro et al. 2004). Thus, cooperation could foster economic resilience and stability, making our findings relevant from a developmental economics perspective.

Third, the effect of institutional mobility on cross-border M&A is relevant to the literature on business combinations and, in particular, work on the determinants of cross-border M&A (Froot and Stein 1991; di Giovanni 2005; Makaew 2009; Erel et al. 2012; Ahern et al. 2015). We find that legal attributes are more influential in the cross-border M&A market than previous findings imply (Bris and Cabolis 2008). Cooperation-enabled legal protections appear to shift cross-border deals to country pairs with low historical levels of M&A, altering the M&A landscape through the extensive margin. Additionally, our findings identify cooperation as a credible channel through which institutional features influence M&A. This adds to recent findings suggesting that cross-border M&A depends on political uncertainty and diplomacy (Lee 2018; Cao et al. 2019; Aleksanyan et al. 2021).

Fourth, our analyses refine the theory that firms achieve valuation benefits from cross-listing in a foreign country because they bond to the host country's superior institutions. Conditional on the firm's geographic asset allocation (which can aid in enforcing a judgement against the firm), we show that the bond between firm and host country becomes stronger when the firm's home and host country regulators cooperate. Thus, bonding to a foreign legal system depends on subtle legal issues.

Finally, our new measures of the existence, proliferation, and use of cooperative arrangements are relevant to the economics, law, finance, and accounting literatures. The staggered multilateral shocks that cooperative arrangements generate can serve as time-variant indicators of institutional mobility, allowing researchers to capture the intensity of country-to-country regulatory cooperation, enforcement capacity, and, in turn, cross-border

[8] As examples, see: (Feldstein and Horioka 1980; French and Poterba 1991; Knack and Keefer 1995; Gordon and Bovenberg 1996; Brennan and Cao 1997; Portes et al. 2001; Alfaro et al. 2004; Glaeser et al. 2004; Obstfeld and Taylor 2005; Portes and Rey 2005; Lane and Milesi-Ferretti 2008a, 2008b, 2017; Alfaro et al. 2007, 2008; Leuz et al. 2008; Warnock and Warnock 2009; Forbes and Warnock 2012; Coppola et al. 2021).

expropriation risk. Several instruments are explicitly designed for capital markets and have extensive coverage across many countries over a lengthy time series. The staggered, lock-step timing of the shocks generated by multilateral mechanisms is attractive for empirical studies because it improves identification and reduces endogeneity concerns. Our measures complement and extend prior work that relies on more generic bilateral proxies such as the so-called "gravity" variables (e.g., geographic distance, shared language or border, and colonial ties), telephone call volume, migration patterns, cultural distances, and trust surveys (Gould 1994; di Giovanni 2005; Portes and Rey 2005; Daude and Fratzscher 2008; Guiso et al. 2008, 2009; Cohen et al. 2017).

II. Cooperation increases the mobility of country-level institutional features

A. Cooperative instruments

In global capital markets, interjurisdictional frictions obstruct cross-border securities regulation. Cross-border investigations often lead regulators beyond their jurisdictions and into regions where they lack any legal authority. Sovereign countries have the right to govern their own territories according to their domestic laws, without interference from foreign states. In global markets, sovereignty inevitably generates cross-border frictions because misconduct in one jurisdiction is bound to harm the citizens, investors, or legal entities of another. Although cooperation between foreign counterparts is an obvious solution to cross-border frictions, it is hindered by obstacles that go beyond a simple lack of authority. Incompatible laws and norms across countries create differences in how countries treat discovery, gather evidence, maintain the confidentiality of citizens' information, ensure constitutional rights against self-incrimination, serve defendants, and preserve national sovereignty. Requests for assistance are not trivial, and can expose staff members in the involved regulatory agencies (both "requesting" and "requested") to severe penalties, including the risk of imprisonment.[9]

In part A, we summarize the five main cooperative instruments that regulators use to overcome these obstacles. In part B, we describe how the instruments are used at different stages of litigation (e.g., acquiring records, asset freezes, service, deposition, and enforcement

[9] Potential prosecution mainly arises out of blocking and secrecy laws. For example, Article 1 of France's 1968 blocking statute states that "no person shall *request*, search or communicate, in writing, orally or in any other form, documents or information of an economic, commercial nature…in connection with foreign judicial or administrative proceedings" (as translated, emphasis added). Article 3 goes on to state that violation of the blocking statute is "punishable by imprisonment." The full text is available here.

of the judgement).

A.1 Ad hoc efforts

Four decades ago, as capital markets began to internationalize, securities regulators interacted on uncertain terms, with no clearly established mechanisms or guiding principles.[10] Early efforts to cooperate occurred through *ad hoc interactions* between regulatory counterparts. In many cases, basic logistical challenges arose because the regulators had no established points of contact. As time went on, more requests were routed to the proper agents, but this often revealed procedural inadequacies and other underlying challenges. There was no model or precedent for these interactions; investigators simply used any means that seemed likely to work.

Letters rogatory is a formal type of ad hoc instrument that relies on established diplomatic channels. A centuries-old mechanism, letters rogatory allows a local judicial authority to make a request to a foreign authority, which has no legal obligation to fulfil it. Countries that prefer this method have streamlined their related processes. In most countries, however, letters rogatory involving civil securities cases are given a lower priority than those involving other crimes (Swire and Hemmings 2015), so the securities-related requests tend to languish. Thus, there is wide country-by-country variation in the effectiveness of letters rogatory.

A.2 Hague Conventions

The Hague Evidence and Service Conventions (HEC and HSC) are multilateral treaties that provide important capabilities for evidence gathering and serving defendants abroad and can be used even in private litigation.[11] Drafted in the late 1960s, the HEC and HSC were ratified by more than 60 signatories. Unlike letters rogatory, HEC requests, called "letters of request," are enforceable by virtue of their treaty status.[12] Of course, even treaties are notoriously difficult to enforce (Ederington 2001).

[10] To our knowledge, the earliest known cross-border investigation by a securities authority was in the 1950s, when foreign intelligence agents purchased shares of US defense companies through Swiss bank accounts.

[11] Similar mechanisms include the Inter-American Evidence Convention on the Taking of Evidence Abroad.

[12] The scope of the HEC is limited to "civil or commercial" matters. Some countries disqualify securities agencies from the ambit of the HEC because they deem public agencies' actions to be criminal in nature. In some countries, the process is administratively streamlined; in others, it is so complicated that foreign regulators must often hire local counsel that is familiar with local requirements and customs. The Hague Conventions can require that formal petitions be directed to high-level magistrates (e.g., courts of appeals).

There is considerable cross-country variation in the effort required for, and the effectiveness provided by, these conventions. Although the text of the treaties is identical for all, each signatory interprets its obligations differently. A final drawback is that the conventions apply exclusively to the litigation stage and do not help in investigative stages.

A.3 Financial intelligence units (FIUs)

Almost every country in the world has a designated FIU. These agencies, which are often housed within a larger financial regulator (for example, the United States' FIU, FinCEN, is a division of the US Treasury), are mainly designed to combat money laundering and terrorism financing. They can be especially useful in contexts where local securities regulators are weak (or nonexistent).

A.4 Mutual legal assistance treaties (MLATs)

MLATs offer securities regulators the capability of pursuing a case via a *criminal* agency. However, because they require coordination with state departments (e.g., the Department of Justice (DoJ) in the United States),[13] they usually take longer to execute than other instruments. In addition, MLATs require a criminal "probable cause" pleading standard, which is higher than the "preponderance of the evidence" standard that is customary in domestic civil securities cases. Ordinary enforcement lawyers are often unaware of, or unaccustomed to, the higher standard. To invoke an MLAT, securities regulators must demonstrate that the investigation has the *possibility* of criminal referral (which is usually not difficult to argue). More recent MLATs have been negotiated to directly include securities regulators, which streamlines the process (by bypassing the involvement of criminal agencies as a go-between) and broadens securities regulators' reach. Finally, requests are considered within or outside the scope of the MLAT, so there is no middle ground in terms of the instrument's applicability (even if a counterpart *wants* to help).

A.5 Memoranda of understanding (MoUs)

An MoU is a statement of intent to cooperate, collaborate, and share information in

[13] See Winship (2020) for a broader discussion of intragovernmental cooperation within the same country.

connection with regulatory and enforcement issues.[14] Pursuant to an MoU, a regulator can obtain access to banking, brokerage, beneficial ownership, internet, email, telephone, travel history, and purchase records, as well as satellite images, audit work papers, and compelled testimony. In addition to enabling information sharing, MoUs allow regulators to serve witnesses, freeze assets, prohibit document destruction, and halt flight risks on behalf of their counterparts. Of the cooperative instruments used by regulators, MoUs alone are negotiated by, and specific to, securities regulators. While other instruments have prespecified objectives that may not reflect regulators' goals, MoUs are precisely tailored to those goals. As a result, MoUs help foster strong relationships between representatives from foreign agencies.

Regulators continue to use both bilateral and multilateral MoUs extensively. The most notable of these is the IOSCO *M*MoU, which serves as a global benchmark for cooperation. As of 2022, more than 50,000 requests have been made pursuant to the *M*MoU. Mary-Jo White, then chair of the SEC, suggested in 2014 that just over half of the outgoing and incoming requests between the SEC and foreign regulators were pursuant to the *M*MoU (White 2014). While this statement illustrates the *M*MoU's strong impact on the commission, the fact that nearly half of requests are *not* pursuant to the *M*MoU supports the continued relevance of bilateral MoUs. It is unclear if other regulators observe a similar MoU/*M*MoU balance, but anecdotes indicate that both configurations remain important globally.

The appendix provides expanded commentary on MoUs.

B. Using cooperative instruments at different stages of litigation

B.1 Acquiring records

Acquiring records—including banking, brokerage, beneficial ownership, satellite image, internet, email, telephone, audit work paper, and travel history and purchase—from abroad is a critical element of any investigation. Record acquisition is typically accomplished via an MoU, an MLAT, the HEC, or, as a last resort, ad hoc efforts. Each instrument leads to different considerations.

MoUs provide a direct and straightforward avenue for acquiring records and are the

[14] Not included in our sample and discussion are MoUs pertaining to (i) auxiliary agencies, such as the Commodities and Futures Trade Commission or the treasury in the US; (ii) isolated industries, like banking, auditing, and insurance; and (iii) other topical areas, such as supervisory arrangements or general policy communiques.

primary instrument for this purpose. They enable direct inquiries in cases where regulators would otherwise have to obtain orders from a foreign magistrate or judge. The *M*MoU, for example, requires members to make banking, brokerage, and beneficial ownership records available to counterparts and facilitates the sharing of many other document types. The *enhanced M*MoU (*e*MMoU) is a follow-on instrument that builds on the success of the MMoU by requiring that more document types (including audit work papers and internet and telephone records) be made available. Ultimately, MoUs make document acquisitions easier because they establish protocols that typically do not require outside approval.[15]

The HEC can also be used to acquire certain kinds of evidence. Although the HEC allows for pre-trial discovery, the gathered evidence can only be used for litigation—not for investigations. In addition, different countries have different notions about what constitutes pre-trial discovery, and some nations frequently reject requests for being too broad (i.e., "fishing expeditions"). MLATs and ad hoc mechanisms can also prove useful but are subject to the considerations identified earlier (e.g., higher pleading standards).

B.2 Freezing assets

Assets obtained through fraud (e.g., proceeds from insider trading) dissipate quickly unless they are sequestered via the interlocutory procedure known as an "asset freeze" (also called a "mareva injunction"). Identifying and freezing assets is critical because it gives regulators time to gather evidence and determine whether securities laws were violated. There are several instruments for freezing assets, each with its own strengths and weaknesses.

MLATs are perhaps the most effective instruments for asset freezing because they are typically initiated through a foreign *criminal* agency. Relative to civil agencies, criminal agencies have greater authority to execute a permanent freeze. One drawback to MLATs is that they tend to move slowly through the administrative process.

In contrast, MoUs are typically executed by *civil* agencies whose authority is more limited. As a result, MoU-enabled asset freezes are impermanent and sometimes can be evaded. In addition, clients under investigation can be notified of the freeze, raising the risk that they will abscond with the money. Despite these shortcomings, a rapidly issued "soft" freeze from an MoU can serve as an interim mechanism that gives regulators time to

[15] MoUs provide an interesting privilege, in that the information shared by a foreign regulator cannot be provided to the defense (as it would be, were it obtained via the HEC or other mechanisms).

investigate the merits of the case and, if necessary, achieve a "hard" freeze using an MLAT; that is, the soft freeze gives regulators a window in which to meet the heightened pleading standards or establish the possibility of criminal referral, as required for an MLAT.

Like MoUs, Foreign Intelligence Units (FIUs) freeze assets quickly but temporarily, so regulators must often follow up by using an MLAT (or other instrument). As for ad hoc instruments, bank warning letters can prompt foreign banks to freeze customer assets, but the banks can also simply ignore them. Letters rogatory tend to be too cumbersome to be used in most cases.

Finally, it is important to note that even when only a portion of a bank account balance has been dishonestly obtained, an asset freeze sequesters the full amount, preventing a defendant from accessing *any* wealth (including for purposes of defending themselves). In such cases, a securities regulator gains a clear negotiating advantage in the dispute. We openly question whether this is normatively desirable from a constitutional perspective.

B.3 Serving a defendant

When a case advances to the point of filed charges, the regulator must decide how to serve notice of the proceeding to the defendant. Although a protocol exists for signatories of the Hague Service Convention, significant logistical challenges often remain. By way of illustration, consider serving a person known as "John Wang," whose given first name is unknown to you, in China, a country with 1.4 billion people. Even in smaller countries, it could take months to locate and serve this person. Critically, service requirements must be met in both the initiating regulator's country *and* the counterpart country. Even if an agency wins a judgement, enforcing the ruling is difficult if the original method of service did meet the due process standards in the counterpart country.

To make it easier to serve subpoenas, US regulators sometimes use "border watches," which provide access to defendants' i) visa requests prior to their entering the country, or ii) flight manifests after their arrival. Customs officials can then detain, serve, and search these individuals at the border.[16]

B.4 Taking depositions

Deposed witnesses on foreign soil are either "voluntary" or "compelled." Voluntary

[16] For example, BAE Systems CEO Mike Turner was detained, searched, and served with multiple subpoenas related to alleged bribery.

witnesses have agreed to give a deposition, typically because they are a party to the litigation.[17] As the subjects of investigation, these witnesses are motivated to cooperate by having their assets frozen. Thus, "voluntary" in this case is not the same as "sua sponte" (although occasionally the witness is a harmed investor who desires to aid an investigation). The voluntary witness and the regulator mutually agree on a venue for a deposition; the regulator usually pushes for the one that presents the fewest obstacles. By contrast, compelled testimony, in which witnesses have no choice but to give a deposition, is more difficult to obtain, although the *e*MMoU explicitly tackles this issue.

Regulators can choose among multiple instruments for pursuing depositions but most often use an MoU, an MLAT, or the HEC. Common law countries typically have deposition guidelines that are intended to encourage accurate and useful testimony. Such guidelines often require a sworn oath, a court reporter, the right to cross-examination, a certified interpreter, and, in criminal trials, the right to confront the accuser. Many countries stipulate that their deposition protocols be used even in foreign jurisdictions.[18] Such requirements are challenging because civil law countries have different litigation styles than common law countries. Often in civil law countries, only the defendant's counsel is present (the defendant is not allowed), witnesses do not swear an oath as to the truthfulness of their testimony, magistrate judges ask the questions (which must be provided in writing in advance of the hearing), cross-examination is not permitted, no verbatim transcript of the hearing is prepared, and the prosecution may be invited to confer privately with the magistrate.[19] These customs can make the evidence appear unfair, casting doubt on its relevance and admissibility in common law courts.

Savvy regulators, being mindful of this issue, sometimes request special accommodations by the local courts, so that foreign depositions more closely resemble the traditions at home. They may invite the local magistrate to allow (i) the defendant to be present, (ii) an oath to be taken from a consular official, (iii) cross-examination, and (iv) a

[17] Depositions raise issues regarding constitutional rights against self-incrimination (e.g., the 5th Amendment in the US). Almost every country has at least some rights against self-incrimination, but in different countries the rights apply at different points in the litigation process. Thus, a witness could be compelled to answer a question in one jurisdiction and have their answer used against them in another jurisdiction *where they would not have been obligated to answer the question*. To our knowledge, judges and prosecutors have anticipated and largely avoided the issue (failure to do so potentially violates constitutional rights).

[18] For example, in order for testimony to be admissible in a US court, it has to satisfy rule 28 of the Federal Rules of Civil Procedure, the essence of which is that the deposition must be conducted "fairly." The prosecution must be able to demonstrate that the deposition renders *probative* evidence. For example, the witness cannot be coerced or under duress.

[19] Furthermore, even basic logistical challenges like differences in language can be significant.

court reporter in the room. They may also decline to meet privately with the judge, to avoid questions about the fairness of such discussions (see US v. Salim (1988)). In addition to requiring a great deal of additional planning, these requests introduce unpredictability into the process, as one rarely knows whether the foreign tribunal will grant them.

B.5 Enforcing a judgement

Even when prosecutors succeed in winning a judgement, enforcing the judgement overseas can be difficult.[20] Ideally, the losing party complies with the judgement. If not, regulators can pursue asset forfeiture orders, which are enforced by seizing local assets. Of course, this measure is predicated on the party having a presence (bank account, subsidiary, or other assets) in the local jurisdiction. Similarly, in the context of US regulatory pressure over Chinese firms, Fried and Kamar (2020) suggest that individuals could hold assets in a host country to signal their commitment to follow host-country laws. The implication that a firm's (or individual's) choice of asset location can enable bonding is testable.[21]

C. Summary and discussion[22]

We conclude our analyses by describing six themes. First, cooperative instruments improve institutional mobility by mitigating the economic frictions that complicate cross-border investigations and enforcement. Consequently, cooperation creates country-*pair*-level shocks to investor protection. Second, successful cross-border outcomes still require diplomacy, patience, and institutional knowledge. Staff must anticipate, months in advance, the steps required to pursue a case. Furthermore, the assistance of foreign counterparts is paramount and depends largely on reciprocity. Third, different instruments create different capacities. A given instrument may be less desirable because it requires more effort, achieves its objective too slowly, or imposes restrictions on information use. Because each instrument entails different obligations and protocols and has different strengths and weaknesses,

[20] Stephanie Avakian, co-director of the SEC's Division of Enforcement, states that most of the division's successful actions involve settlements, but if a company does not agree to settle and the case is a litigated matter that the SEC has to pursue (either through collections or enforceability of a judgement), then enforceability of the judgement is incredibly difficult (SEC Roundtable 2020).

[21] If the illegal proceeds cannot be repatriated or seized by local regulators, an FIU is a second-best remedy. FIUs can invoke charges for money laundering, racketeering, or other crimes when other means fail. Use of an FIU does not usually result in the repatriation and disbursement of funds to harmed investors in a foreign jurisdiction, but it prevents the enrichment of perpetrators and exposes them to local legal consequences (which may deter such behavior in the future).

[22] We include more discussion of data privacy considerations and coordination with other domestic regulators in the appendix.

regulatory staff must be strategic in selecting from the menu of instruments. Fourth, when instruments are used in tandem, their capacities could either be duplicative or complementary. Fifth, in practice, there are significant departures from a "black letter" (i.e., interpreting the law exactly as it is written) understanding of how cooperation should play out. Identical instruments, deployed in cases with nearly identical circumstances, can yield heterogeneous outcomes in different counterpart countries. Even *within* the same country, individual magistrates or districts can produce widely varied outcomes for cross-border investigations. When drafting new arrangements, regulators should attempt to identify and address such variation *before* finalizing an arrangement. In this regard, the IOSCO MMoU illustrates a proactive strategy that anticipates issues before they hamper cooperation. Finally, uncertainty in cross-border investigations arises from both innate factors (i.e., factors arising from different legal traditions and cultural differences) and strategic factors (i.e., factors arising out of political and self-serving interests). Both types inhibit regulatory policy and enforcement.

III. Empirical tests

A. Cross-border M&A

Cross-border M&A accounts for more than half of foreign direct investment (FDI) worldwide (ECB 2018) and provides an ideal setting in which to examine the effects of mobilizing institutional features via cooperation. Prior work suggests that the way a country's laws and institutions protect shareholders is a major factor that affects cross-border M&A (Erel et al. 2022). The discussion above makes it clear that cooperation can help regulators resolve market issues, in target and acquiror countries, that might otherwise create vulnerabilities in a deal. Critically, the setting allows us to identify the acquiror country and the target country, which in turn allows us to identify when cooperative instruments have mobilized the institutional features in that country pair.[23]

A.1 Hypothesis development

Prior research shows that country-level institutions influence M&A (Rossi and Volpin

[23] The first-ever bilateral MoU between securities regulators came in response to suspicious trading from foreign accounts prior to several mergers (Friedman et al. 2002). At that time, it took the SEC more than three years of negotiating with Switzerland to accomplish even the most basic tasks, such as ascertaining the identity and accounts of persons trading from Swiss bank accounts. Cooperation expands the set of regulatory tactics and can shorten such processes to a few days.

2004). Cross-border M&A faces heightened (and sometimes unique) risks related to regulatory complexity, information and agency issues, market-related abuse (e.g., insider trading), and post-merger integration and monitoring efforts. Institutional features, enabled by cooperation, add critical safeguards that can reduce these risks.[24] For example, regulators that cooperate closely can simplify or reduce administrative requirements related to securities regulation, disclosure, and due diligence. Furthermore, information quality is critical in cross-border deals. Because information precision improves synergy signals, firms operating in well-regulated foreign markets may be more attractive to investors. Prior work shows that cooperation improves disclosure and reduces information asymmetry (Silvers 2020, 2021b), which may, in turn, help signal opportunities in the M&A market (Bernard et al. 2020). Also, in a domestic setting, Fich et al. (2021) find that regulatory demands help reveal synergies, increasing M&A activity. Similar logic applies to cross-border regulation for cross-border M&A. Cooperation can also mitigate misvaluation concerns that would otherwise reduce the probability of a deal (Shleifer and Vishny 2003; McLean et al. 2012).

Before the deal, the potential for heightened enforcement should create incentives that deter malfeasance. Cooperation dramatically increases the likelihood that insiders will be caught if they trade based on knowledge of the impending transaction (which constitutes material nonpublic information and can increase the risks and costs of the deal). By deterring insider trading, cooperation may also allow acquirors to more closely evaluate targets, as the acquirors may be less concerned that it will result in information leakage or insider trading (Varottil 2017). Cooperation also helps resolve misaligned incentives that can lead acquirors or targets to leak information that threatens, or affects the cost of, a prospective deal.[25] After a deal is completed, cooperation allows regulators to investigate the agreement with assistance from foreign counterparts.[26] Finally, cooperation may enhance post-merger integration if public regulation complements, or substitutes for, costly monitoring of a foreign subsidiary.

[24] Dinc and Erel (2013) show that economic nationalism may prompt governments to prefer that firms stay domestically owned. Cooperation may signify that foreign governments are amenable to cross-border deals.

[25] Targets stand to lose market value when the information puts the target at a disadvantage with their customers, suppliers, employees, or competitors. This benefits the acquiror. On the other hand, targets stand to gain if leaked information attracts other acquirors or boosts the acquisition price (through a bidding war or upward drifts in stock prices). This occurs to the detriment of acquirors.

[26] Information quality is likely to be higher with cooperation because abusive schemes can be investigated by a foreign regulator. Such schemes include inflating accounting-based metrics like growth or profitability, insider trading (both before and after the merger), undisclosed management relationships (such as conflicts of interest), the target's bribery policies (which can reduce the post-acquisition value of the acquisition), or other manipulation of the target's stock price or performance metrics.

Ultimately, we expect that cooperation, by mobilizing institutional features across borders, will expand the set of merger candidates to include cross-border firms that would otherwise be overlooked. That is, if targets and acquirors rely on institutional features that are enabled by these tactics then cooperation will increase cross-border M&A. Of course, if targets and acquirors rely wholly on private due diligence—irrespective of regulatory oversight—cross-border cooperation will *not* affect cross-border M&A.

Our empirical measures of cooperation include bilateral MoUs, along with membership in the Hague Convention, FIUs, and IOSCO's MMoU. (Ad hoc efforts are unobservable, and we have been unable to access MLAT data.) Bilateral MoUs span 1981 to the present, but occur primarily from the mid-1990s on. Each of the multilateral membership-based mechanisms have wide participation—from 66 to 167 members, depending on the arrangement. This creates $(n^{*}n\text{-}1)/2$ linkages (ranging from 2,145 to 13,861). The entry-into-force dates of the Hague Conventions occur from 1969 to the present. The FIUs' entry-into-force dates occur from 1994 to the present. And MMoU entry occurs from 2002 to the present. Because members join at different times, the multilateral mechanisms create a treatment that is staggered in three dimensions (acquiror country, target country, and time). Thus, the treatment is staggered and network-based, with the admission of the n^{th} member creating linkages to all previous $(n\text{-}1)$ members.

Note that the *M*MoU, which was designed in response to the terrorist acts of 9/11, may be the most attractive measure of cooperation, as a host of factors (described by Silvers (2020)) render the timing of its connections nearly random.[27] The Hague Conventions have similar beneficial research design properties but comingle the shock to regulators' capacities with new capacities that accrue to private plaintiffs. Thus, we cannot attribute the estimate exclusively to cooperation between securities regulators (although the inferences generally should remain intact). FIUs often have predecessor organizations that serve functions similar to theirs, which biases against finding a result. Finally, we emphasize that bilateral MoUs seem more likely to be complicated by endogeneity, as the initiative to formalize a commitment to cooperate between two countries cannot reasonably be viewed as exogenous.

[27] For example, regulators must address competence issues, resolve arcane laws against information sharing, and undergo an examination process (the timing of which is affected by the verification team's workload). In addition, a connection is only formed when *both* countries in a country pair are individually approved as MMoU members, making endogeneity less likely.

A.2 Sample

We construct the sample from the SDC Platinum Mergers & Acquisitions database. The sample includes all transactions in the 27-year period from 1994 to 2020. We require that both the acquiror and target have a Datastream code, to ensure that both are publicly traded and thus subject to securities regulation. This helps exclude investment that falls outside the scope of securities regulation (e.g., private firms or greenfield investments). We require that countries be MMoU signatories, to provide some level of homogeneity across countries (and to help ensure that the results are not attributable to non-adopting countries). We aggregate 12,092 M&A transactions to the country-pair-year level (as in di Giovanni (2005)), which results in 6,143 non-zero country-pair-year observations that represent about $9 trillion in aggregate transaction value (or about $12 trillion in constant 2020 USD). To limit the influence of outliers, we winsorize at the 1% tails.

In Table 1, we summarize our data by country pair for the 30 largest acquiror and target countries. We sort countries by the year they sign the MMoU, on both the acquiror and target dimensions—not alphabetically. This organization conveys the complexity of the staggered treatment in the MMoU. Different colors represent different initial treatment years. The figure indicates wide variation in the timing of the treatment, based on the entrance of each country in a country pair. Conceptually similar staggered treatments occur for the Hague Convention and FIU memberships but are unreported for brevity. One consideration is that the links between early adopters of bilateral MOUs, the Hague Conventions, and FIUs are not observed in our sample (since they pre-date it).

The largest acquiror countries—the US, the UK, Germany, and Canada—are predictably the largest target and acquiror countries. It also shows that the matrix is fairly well populated—roughly 60% of the cells have nonzero values. Some country-pairs have sparser M&A activity, but there remains enough activity that the design remains valid.

In Table 2, we present a correlation table for the main dependent variable, cross-border M&A, the measures of cooperation, and the control variables. The pairwise correlations between our main dependent variable—*M&A ($US)*—and the cooperation proxies are positive and significant at the 1% level. Of course, this test of whether cooperation relates to cross-border M&A is very crude, since there are many omitted variables. The correlation between the cooperation instruments themselves is low enough to suggest that each reasonably captures unique country-pair-year variation.

A.2 Empirical design and test results

To take advantage of the country-pair-year data structure and the staggered treatment, we base our empirical model on techniques from international trade. Originally introduced by Tinbergen (1962), the gravity model expresses trade as a multiplicative function of the sizes of, and the distance between, two countries (which is linear in log form). Gravity is also a multiplicative function of the masses of, and distance between, two objects.

Our design seeks to estimate the effect of cooperation on M&A between a country pair, compared to a hypothetical state of no cooperation. In our tests, the counterfactual takes the form of M&A occurring in other country pairs that possess the treatment pair's target or acquiror countries at the same point in time. Our assumption is that, in the absence of the treatment, cooperating country-pairs would follow a path parallel to that of non-cooperating pairs (conditional on covariates). We make this comparison by including fixed effects for acquiror country×year, target country×year, and country pair (Larch et al. 2019; Weidner and Zylkin 2021). This accounts not only for unobserved heterogeneity in the acquiror and target countries but also for any time-variant characteristics that are common to both. Consequently, the fixed effects remove variation in cross-border M&A that can be explained by time-variant institutional features, as well as country-level economic-state variables that could impact the attractiveness of cross-border M&A (e.g., GDP, factors of production, and growth). Similarly, country-pair fixed effects remove variation resulting from time-invariant cross-sectional differences that make certain country pairs more likely to engage in M&A. Thus, the effect of cooperation is empirically separable from country-level attributes (even ones that vary over time). Finally, note that traditional gravity variables (e.g., geographic distance, shared language or border, and colonial ties) cannot be included in the model, as they would be linear transformations of the fixed effects.

$$(1)\quad M\&A_{ijt} = \gamma_0 + \lambda_1 Cooperation_{ijt} + \sum_{c=2}^{C} \lambda_{ijt}\, Controls + \sum_{i=C+1}^{I} \lambda_{it}\, Acquiror \times time\ FEs + \sum_{j=C+I+1}^{J} \lambda_{jt}\, Target \times time\ FEs + \sum_{m=C+I+J+3}^{M} \lambda_m\, Acquiror \times Target\ \ (country\ pair)\ FEs + \upsilon_{ijt}$$

Eq. 1 expresses cross-border M&A as a function of cooperation and the three-way fixed effects and controls. Cooperation is defined as the linkages from bilateral MoUs, the MMoU, the Hague Conventions, and FIUs. Key to our identification strategy is that any shifts in the cross-border M&A markets must follow a fairly elaborate sequence and timing

of connections between country pairs to achieve an association with the MMoU, Hague, or FIU linkages. Note that any cooperative linkages that occur prior to 1994 have no effect on our estimates (since they are subsumed by the country-pair fixed effects).

Additional controls attempt to capture any time-varying changes in current or prospective economic relationships within a country pair that could explain cross-border M&A. These include bilateral trade (from the ITPD-E (Borchert et al. 2021)), bilateral investment treaties (from the UNCTAD Investment Policy Hub), tax treaties (from the International Bureau of Fiscal Documentation), and preferential trade agreements (from Hofmann et al. (2017)). As noted, we make no effort to include traditional gravity variables used in prior work on cross border M&A activity (di Giovanni 2005), as they are not the focus of our study and are subsumed by the three-way fixed effects. Nevertheless, our design captures relative barriers to cross-border deals (Anderson and van Wincoop 2003).

One empirical challenge is that many country-pair-years have no cross-border M&A. The prevalence of zero observations can impart substantial bias and inconsistency for log-linear ordinary least square (OLS) estimates. There is no outright solution to this issue, but Poisson pseudo-maximum likelihood (PPML) estimation (Silva and Tenreyro 2006) is often applied in similar settings (e.g., international trade) because of its consistency. A recent estimator developed by Bellégo et al. (2022)—iOLS—nests both log-linear and Poisson regressions as special cases at opposite ends of a spectrum of intermediate models. It uses a model selection parameter to minimize the deviation between the observed and model-expected pattern of zeros. We report the log-linear model as our baseline specification, and show that PPML (at the opposite end of the spectrum) and the data-driven model selection from iOLS estimation yield similar inferences. Each of these estimation techniques allows for the demanding three-way fixed-effects (Correia et al. 2020; Larch et al. 2019; Weidner and Zylkin 2021; Bellégo et al. 2022). Finally, we account for residual dependencies by bootstrapping standard errors.[28]

The main result is presented in column 1 of Table 3. Despite the three-way fixed effects and the control variables, cooperation—via bilateral MoUs, the MMoU, the Hague Conventions, and FIUs—is associated with increased cross-border M&A, with estimates ranging from 0.025 to 0.038. In columns 2 and 3, we report the iOLS and PPML estimates,

[28] Clustering at the country-pair level, the same level as the treatment, as advocated Abadie et al. (2022), yields identical inferences. Moreover, we confirm that the main results are unaffected when clustering standard errors to account for residual correlation at the acquiror- or target-country level.

respectively. OLS, iOLS, and PPML use a log-link function, so the estimates must be translated (by exponentiating and subtracting one) to clarify their economic significance.[29] The estimated economic magnitudes show wide heterogeneity across different methods. For example, the MMoU estimate (after being appropriately transformed) implies a 2.8%, 17%, and 33% increase for OLS, iOLS, and PPML, respectively. The different methods yield broadly similar inferences about cooperation (with the exception of FIUs, which are somewhat inconsistent across the three tests).

Overall, our results re-establish the importance of institutional features in cross-border M&A. Bris and Cabolis (2008) conclude that firm-specific provisions (e.g., governance provisions and accounting choices) are more influential in cross-border merger premiums than are improved legal protections (which have no effect in some of their specifications). However, their result is unsurprising because (as described in the previous section) many changes in legal protections that occur when a target changes nationality depend on far more complicated dynamics (largely moderated by cooperation). Thus, in Bris and Cabolis' setting, these nominal changes in legal protections may not have been much of a change at all (despite the technical change in the country whose laws govern).

Our legal discussion suggests that cooperative instruments, used in conjunction, can complement one another. This suggestion implies an interactive effect, although the instruments could, alternatively, be substitutes. To explore whether the use of multiple instruments by a country-pair translates to larger M&A (which would suggest interactivity), we estimate Eq. 1 including the full set of four-way interactions and the control variables. We compute the effect of each circumstance relative to the referent group (which represents no cooperation via any of the four instruments). In Table 4, we find evidence of interactivity. For example, country-pairs with a bilateral MoU, the MMoU, and the Hague conventions at their disposal experience roughly 46% more cross-border M&A than the no cooperation baseline ($exp(0.377)$=0.458).

Next, we decompose the main estimates to understand the contribution from deal frequency versus the contribution from deal size. To do so, we exploit the law of logarithms, where the log of cross-border M&A (+1) is equal to the log of the number of deals (+1) plus the log of the average deal size (+1). This additivity provides a strict partitioning of the main effect, with the coefficient estimates in columns 1 and 2 of Table 5 summing to

[29] See Halvorsen and Palmquist (1980), Kennedy (1981), and van Garderen and Shah (2002) .

the main result (reported in column 1 of Table 3). We find significant increases in both deal frequency and deal size, but the latter is the larger contributor, accounting for roughly two-thirds of the effect.

The effect of cooperation may vary in the cross-section of country pairs. We seek to understand whether the results are attributable to an intensive or extensive margin of investment. A cooperation-facilitated expansion of cross-border M&A in contexts where M&A was historically high (low) would be evidence of intensive (extensive) margin. Our test focuses on the MMoU because it is the only instrument for which our sample pre-dates its introduction. We establish a baseline level of cross-border M&A by calculating the log of the final pre-MMoU year's level of M&A for each pair in the sample. We interact the pre-sample levels of M&A with the MMoU indicator. Column 3 of Table 5 shows that the interaction is significantly negative, suggesting the largest increases in cross-border deals occur in country pairs with less pre-cooperation M&A activity—consistent with extensive margin.

We seek to characterize the contexts in which cooperation has a larger or smaller effect on cross-border M&A. Because the pre-MMoU level of M&A is a rather opaque measure, we turn to more tangible and familiar cross-sectional analyses based on a country's regulatory quality. These tests are exploratory in the sense that we lack strong priors about which country-pair combinations will have the biggest effect. On one hand, countries with weak regulatory quality stand to gain the most from cross-border supervision. On the other hand, these same countries are inherently limited in terms of the assistance they can provide. Due to reciprocity concerns, such limitations could also impact the assistance they receive.

Our tests first divide country pairs into high or low regulatory quality using the median value from the Kaufmann et al. (2010) index. We do this for both the target and acquiror countries, producing four conditions: a 2x2 high-low split of target and acquiror regulatory characteristics. We interact these conditions with the cooperation instrument indicators. In Table 6, we present these interactions and find different patterns for different instruments. For the MMoU, the largest increases in cross-border M&A occur when the acquiror countries' regulatory quality is low (conditional on target country quality). Low acquiror regulatory quality paired with high target regulatory quality experiences the largest increase—about 7%, in expectation.

In Table 7, we turn our attention to pricing-related aspects of cooperation on the global M&A market. We shift to deal-specific tests that weight each observation by the size of the deal to help preserve an aggregate perspective. In column 1, we test for merger

synergy using the (-1,+1) window announcement returns of the target and acquiror, weighted by their respective market values 60 days prior to the announcement (Betton et al. 2008; Harford et al. 2012; Field and Mkrtchyan 2017; Suk and Wang 2021). Using OLS, we find little evidence to support appreciable changes in merger synergies. In unreported tests, we confirm a similar result using accounting-based measures. Acquiror announcement returns (column 2) are statistically unchanged, while target announcement returns (column 3) rise with certain types of cooperation. Specifically, the connections from the MMoU and the Hague Conventions are associated with target returns that are 9% and 12% higher, respectively. In column 4, we report that this is not enough to shift the target's share of merger gains. Finally, target premiums increase by about 7% with the Hague Conventions, but are unaffected by other types of cooperation.

B. Seizable assets, cooperation, and firm value

B.1 Hypothesis development

Our discussion in Section II B.5 suggests that even when prosecutors succeed in winning a judgement—which usually depends on cooperation from foreign counterparts—enforcing that judgement overseas can be difficult. During the enforcement stage, cooperation relies on ad hoc efforts, as cooperative instruments become less useful. In their stead, seizable assets in the host country could help ensure compliance with the judgment.

Our last set of empirical tests focuses on cross-listed firms (although our argument applies to individuals inside or outside firms who engage in conduct like insider trading, touting, and spoofing). We hope to assess whether cross-listed firms' choice to locate assets in the host market gives leverage to host market regulators. Indeed, firms with "skin in the game" face a higher cost of reneging on their commitment to uphold host market laws, which should strengthen the principals of the bonding hypothesis (Coffee 1999; Stulz 1999).

We test this conjecture by studying firm valuation—measured by Tobin's Q—as a proxy for the benefit of bonding. As described in Licht (2003) and Silvers (2016), the net effect, on firm value, of enhanced scrutiny from a foreign regulator is ambiguous. On one hand, cooperation has the potential to enhance firm value by increasing a firm's ability to bond to a foreign legal system. Because seizable assets give regulators leverage to discourage firms from violating investor protection and disclosure laws, the benefits of cooperation may increase when the firm has more assets in the host country. (Seizable assets also allow for

restitution to investors if firms renege.) On the other hand, if cooperation spurs litigation, diverts management's attention from operations to non-value-adding compliance issues, and fails to adequately enforce judgements, it could have a negative effect on firm value.

B.2 Sample and data—seizable assets, cooperation, and firm value

We focus on a sample of US-listed foreign firms because the bonding hypothesis is expected to be strongest in the US (whose standards for disclosure and investor protection are most demanding) and because these firms are required to disclose the geographic location of their asset base (subject to materiality thresholds), which helps us identify US assets.

We gather the data from Compustat, including data to construct Tobin's Q (the proxy for valuation) and geographic segment data for US sales and assets (the proxies for seizable assets). To make a firm's exposure to the threat of asset seizure comparable across firms of different sizes, we scale US assets by total assets. This data comes from IOSCO's website. The sample consists of 1,934 firms (16,417 firm years) from 62 countries over the period 1994–2020.

In Panel A of Table 8, we report the country averages for the variables of interest: US Assets, US Sales, and Tobin's Q. The overall sample averages are 17%, 11%, and 1.82, respectively. Panel B reports the sample composition over time and shows that the sample stays relatively constant in its coverage.

B.3 Empirical design and test results—seizable assets, cooperation, and firm value

Eq. 2 below evaluates firm value as a function of cooperation, moderated by seizable assets. We regress Tobin's Q on an indicator for cooperation (the MMoU), interacted with seizable assets. A positive coefficient on β_3 would support our claim that cooperation provides bigger valuation benefits for firms with assets located in the US.

$$(2) \qquad Tobin's\ Q = \beta_0 + \beta_1 US\ Assets + \beta_2 Cooperation + \beta_3 Cooperation \times US\ Assets + \sum_{i=i+3}^{I} \beta\ Home\ country\ FEs + \sum_{t=1}^{T} \beta\ Year\ FEs + \omega_{i,j}$$

Our main specification includes industry, home country, and year fixed effects to account for unobserved heterogeneity across these dimensions. Again, we use OLS estimation with bootstrapped standard errors, although our results are robust to using

PPML (which neither requires discrete outcomes nor is scale dependent).

The estimates of β_3 from columns 1-4 of Table 9 use alternative measures of cooperation. The estimates are all positive, ranging from 0.126 to 0.542, although only two are statistically significant. The MMoU and FIUs increase firm value conditional on having US assets. The estimate of β_3 for the MMoU in column 2 is 0.434, and firms' average percentage of assets in the US is 8%. Our estimates imply that a foreign firm with 8% of its assets in the US experiences little change in value ([8%×0.434]-0.027=0.0077). A firm with no assets in the US experiences an insignificant decline in value, while a firm with 50% of its assets in the US experiences a value increase of about 19%. The result for FIUs is very similar, but the estimate for β_2 (-0.096) is nearly significant, implying a separating equilibrium where cooperation is value-increasing for firms with US assets and (insignificantly) value-decreasing for firms with no US assets (similar to Huang (2020)).

The estimates of β_1 are negative. Thus, prior to cooperation, Q declines as a foreign firm holds more of its assets in the US. This may be driven by a diversification benefit provided by foreign assets. This benefit wanes with cooperation because asset seizure serves as a mechanism that strengthens the bonding hypothesis. Here, one could argue that the effect of asset seizure should work the same way prior to cooperation. However, as discussed previously, winning a judgement against an obstreperous foreign firm is unlikely in the absence of cooperation (because the basic fact-finding process is very limited).

Ultimately, we conclude that a firm's exposure to asset seizure moderates the effect of cooperation on firm value. When regulators identify misconduct but lack the tools to compensate harmed investors, firm value declines. But when seizable assets give regulators the leverage to enforce a judgement, firm value increases (presumably due to the regulators' enhanced ability to demand adherence to securities laws—the central prediction of the legal bonding hypothesis).

Table 10 explores differences in the effect of cooperation across different home countries, using the Regulatory Quality index from Kaufmann et al. (2010). The results are insignificant, suggesting that the effect of cooperation mediated by seizable assets is largely independent of home country regulatory quality.

IV. Conclusion

Capital markets no longer operate within the confines of individual, well-identified

legal systems. While interconnected global capital markets have opened new frontiers for financing, investment, and growth, these markets have an Achilles heel in that no single regulator has unilateral authority to investigate or enforce compliance pursuant to securities laws. This paper describes legal complexities that arise in cross-border securities regulation and the instruments regulators use to address them. We provide enough detail to motivate subsequent studies on the topic. Our empirical tests use two settings to substantiate the theoretical benefits of mobilizing institutional features across borders: the market for global M&A, and US cross-listing. We believe that the paper's innovative perspectives and measures will provide new direction for global financial market research.

The apparent economic benefits of cooperation notwithstanding, we hasten to point out that cooperation inevitably requires concessions of local authority and consolidates power in ways that may undermine the primacy of local governments. Moreover, the speed at which assistance takes place and the general lack of judicial oversight leaves citizens vulnerable to the misapplication of cooperation-related privileges (whether for political purposes or inadvertently). Absent appropriate safeguards, foreign agencies could impose harm to innocent citizens. We believe this issue is worthy of explicit consideration from regulators.

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Appendix (For Online Publication)

MOUs:

Unlike treaties, MoUs are *un*enforceable, so they cannot be adjudicated through the International Court of Justice.[30] Under an MoU, a regulator's decision to render assistance is therefore somewhat discretionary.[31] Yet there are several reasons why, relative to treaties, soft law may be as effective or more effective in addressing regulatory issues. First, enforcement by international courts may not be as critical in regulatory agreements as in fiscal or monetary contracts, where the partners may have stronger incentives to act in their own self-interest. Second, despite being technically enforceable, treaties must go through cumbersome state department channels and are especially difficult to enforce if parties fail to uphold their obligations. Third, soft law may offer needed flexibility in cross-border situations. Brummer (2011) states that "in the absence of a forceful legal regime, it is 'power', not law, which promotes the promulgation of international standards." Karmel and Kelly (2009) suggest that soft law is more nimble in responding to regulatory issues. Mann (2005) suggests that soft law is better suited to the fast pace at which markets move. Finally, interviews with regulatory staff from various countries indicate that regulators do not enter these arrangements lightly—they treat them as if they are binding.

MoUs vary in their terms and configurations. They have the flexibility to create any terms they wish to formalize, and often predefine the circumstances in which they apply. They can operate bilaterally (between two regulators) or multilaterally (between more than two regulators). They can serve as adjuncts to other arrangements or laws and can even include other (non-securities) agencies or private associations. Their scope can be broadly defined or tailored to specific events, behaviors, or participants (e.g., insider trading around mergers and acquisitions; fintech issues; and joint supervision of central counterparties, broker-dealers, or credit-rating agencies). Indeed, many early MoUs only applied to insider trading cases that occurred within short windows around merger or acquisition announcements.

Early MoUs attempted—not always successfully—to provide certainty in the process of cooperation. Although MoUs signify a commitment to assist a foreign regulator, the decision to actually cooperate may depend on other factors. Early MoUs were hindered by a range of issues, including a lack of competence or authority in foreign regulators; absence of an independent interest in investigations by the foreign counterpart; "dual-criminality" requirements (which stipulate that assistance can be rendered only if the behavior in question is illegal in both regulators' jurisdictions); concerns about the "diagonal" use of information leading to involvement of criminal authorities (such as the Department of Justice (DoJ)) or tax authorities (such as the IRS)) in ways that violate local laws;[32] and transparency laws that might allow public access to sensitive

[30] The sample includes a handful of oddly configured arrangements. For example, the US SEC has an arrangement with the Kingdom of the Netherlands that is regarded as an MoU by the US but as a treaty by the Netherlands. It is unclear how a violation of this arrangement would be treated in an international court.

[31] Legal scholars' attitudes toward MoUs reflect this uncertainty. Some authors perceive international cooperative arrangements as critical to enforcement (Licht 1999; Slaughter 2005; Austin 2012; Gadinis 2015); others dismiss them as unenforceable "cheap talk" due to their being soft law (Klabbers 1998, 1996; Raustiala 2005; Zaring 2010; Cadmus 2011). Current scholarship on transnational regulatory networks mainly uses game theoretic models to speculate about how these networks should or do work based upon players' incentives (Licht 1999). These models, which have been criticized as "simply an exercise in mathematics," tell us little about the current state and inner workings of cooperation (Ahdieh 2015) p. 3), largely because actions within these networks are impossible to directly observe (Cadmus 2011).[31] Verdier (2009, p 116) states that "current evidence regarding the effectiveness of transnational regulatory networks is insufficient to support strong normative claims regarding their transformational impact on global governance."

[32] Many regulators that provide information in a supervisory capacity explicitly prohibit the use of that information for enforcement. For example, a supervisory investigation of a broker-dealer that identifies a potential violation of securities laws would have to make a new request for assistance in order to acquire the same information for enforcement purposes (essentially restarting the process). Given that the typical statute of limitations is five years, this represents a significant obstacle to an enforcement proceeding.

information (such as the Freedom of Information Act in the United States (Mann 2005)). Furthermore, many laws explicitly prohibit the transfer of information to foreign agencies. These laws include blocking statutes (also called preemptive jurisdiction laws), bank secrecy laws, and data protection laws (such as the EU's recent General Data Protection Regulation (GDPR)).

As time passed, cooperative arrangements began targeting these issues.[33] Such efforts are particularly evident in IOSCO's MMoU. This *multilateral* MoU standardizes the cooperative process and forces regulators to identify ex ante the scope, confidentiality obligations, and acceptable uses for shared intelligence.[34] Designed with input from *all* the members of IOSCO, the MMoU imposes a screening process in which applicants are required to answer survey questions about the scope of their authority and any impediments to their information sharing. This screen is not perfunctory: the verification team often takes months reviewing the applicant's laws and seeks clarification—or requires legislative changes—from the applicant. Although the MMoU remains soft law, members of IOSCO have incentives to join that do not exist for bilateral arrangements (Van Cauwenberge 2012). The team also considers any previous cooperation failures by the applicant and uses them to highlight impediments that must be overcome. The MMoU stipulates exemptions from blocking statutes and secrecy laws (known by the regulatory community as "gateways"). Thus, the MMoU and its entry process address many of the issues—including blocking and secrecy laws—that hindered MoUs in the past.

In addition, a multilateral (network) structure can harness a deeper set of collective experiences and greater expertise, which facilitates better problem solving and coordination (Slaughter 2000). Multilateral structures may also have greater leverage than bilateral arrangements, given the interdependencies of markets and their regulators as well as the regulators' need to stay familiar with best practices and avoid political complications. Indeed, members of IOSCO have incentives to join that do not exist for bilateral arrangements (Van Cauwenberge 2012). Licht (1999) suggests that a regulator may find it more politically acceptable to acquiesce to a network than to accede to the hegemony of a bilateral counterpart. For similar reasons, bilateral arrangements rarely impose a formal screening or offer the support mechanisms employed by IOSCO (described above). Consequently, multilateral arrangements may offer solutions that bilateral arrangements cannot.

Unlike the generally narrow focus of early MoUs, the MMoU provides a set of broadly applicable protocols for basic information (bank, brokerage, and beneficial ownership records). In addition, Section 7(a) of the MMoU stipulates that signatories are to deliver the "fullest assistance permissible." In 2016, IOSCO introduced the *enhanced* MMoU (*e*MMoU), which has a tiered system designed to ensure swift access to audit work papers, compelled testimony, freezing assets, and internet and telephone records. IOSCO now tracks recipients' response times to requests made under the MMoU and *e*MMoU and requires that a written explanation be provided for requests not fulfilled within two weeks.

Counterparts in an MoU often consult a requesting agency on a route that is likely to satisfy the

[33] The term "agreement" is often misapplied to these arrangements. An agreement is a term of art that implies enforceability. As described later in this section, MoUs are formal but legally nonbinding. Also note that "letter of intent (LoI)," "confidentiality undertaking (CU)," and various other terms are occasionally applied to these arrangements.

[34] Some argue that the multilateral structure of the *M*MoU is an additional advantage over bilateral MoUs (Ahdieh 2015). A nuanced debate in the legal and international relations literature concerns whether structural differences between multilateral and bilateral soft-law arrangements have important consequences (Verdier 2009). A number of authors believe that transnational regulatory networks like the MMoU[34] provide new and unique incentives that help resolve the issues of globalization (Licht 1999; Slaughter 2005; Austin 2012; Gadinis 2015). The promise of multilateral structures is rooted in a rationale about the incentives created by the network and rigorous theory about cooperation. Game theory suggests that cooperation games are more effective when the expectations of other players ("focal points") are well-defined (Schelling 1981). Compared with bilateral arrangements, networks may be able to better converge upon these focal points (Ahdieh 2015).

spirit of the request. Or, in cases where a defendant produces records of questionable repute, a foreign regulator may be able to help authenticate them. Thus, with respect to securities regulation, MoUs are uniquely more powerful than the other instruments.

Other considerations

Privacy

Regulators are obligated to safeguard any information they receive from foreign counterparts. The information-safeguarding obligations are usually defined by one of the instruments being used (or on an ad hoc basis). In general, however, these obligations continue to evolve. For example, the EU's GDPR gives individuals greater control over their personally identifiable data. The regulation strictly prohibits information sharing to areas *outside* the EU unless a prospective information recipient can demonstrate the ability to comply with the GDPR. The requirements for this demonstration are so detailed, technical, and demanding as to potentially require overhauls of IT systems and access permissions. As a solution, regulators have exchanged administrative arrangements known as "side-letters," which address the GDPR privacy issues associated with the existing cooperative instruments.

Criminal referral

Cases with possible criminal activities often attract interest not only from securities regulators but also criminal agencies in the same country, whose interests generally receive priority. Although the agencies can aid each other by granting reciprocal access to each other's files, they must first consider several issues. First, securities agencies typically obtain their documents via an MoU, whereas criminal agencies typically use an MLAT.[35] Before they share information, the two agencies must ensure that the foreign counterpart that provided these documents has not placed any onward-sharing restrictions on them. Second, in the US, the DoJ is prohibited from sharing documents acquired through a grand jury subpoena (see rule 6 of the Federal Rules of Civil Procedure). (Similar restrictions apply in many other countries.) Furthermore, there is an important distinction between "joint" and "parallel" investigations. When the SEC and DoJ coordinate closely, the investigation is considered joint. In joint investigations, each agency has access to the other's files. Because the agencies are considered part of the US government, they are obligated to provide any exculpatory evidence they uncover, even if it resides in a different agency. Thus, strategic choices must be made about whether to closely coordinate in a *joint* investigation, loosely coordinate and pursue a case in parallel, or have only one agency proceed.

[35] The DoJ has even broader authority via a "Bank of Nova Scotia grand jury subpoena," which allows investigators to subpoena any entity that does business within the US for any document within its control worldwide (see public commentary by Robert Zink, Chief of the Fraud Section at the DoJ (SEC Roundtable 2020)).

TABLE 1—MATRIX OF CROSS-BORDER M&A

Target Country \ Aquiror country	2002_AUS	2002_CAN	2002_GRC	2002_USA	2003_DEU	2003_ESP	2003_FRA	2003_GBR	2003_HKG	2003_IND	2003_ITA	2003_MEX	2003_ZAF	2005_BEL	2005_SGP	2006_ISR	2006_UAE	2007_BMU	2007_CHN	2007_FIN	2007_LUX	2007_NLD	2008_JPN	2009_AUT	2009_BRA	2010_CHE	2010_KOR	2011_SWE	2012_IRL	2015_RUS	+50 others	Total
2002_AUS		36,348	108	90,785	568	856	20,244	39,806	10,371	321	418	14,248	7,477	304	20,915		649	3,144	6,419	7	945	49	15,307	112		15,600	936	460	52	729	39,782	326,958
2002_CAN	16,023		17	242,385	10,164	8,636	45,984	72,048	1,382	309	1,136	1,884	6,421	979	17	318	5,597	83	5,335	215	4,899	402	628	1	21,203	36,938	152	1,376	6,467	6,613	23,201	520,815
2002_GRC		125		4,102	6,046		4,566	1,859			156							1,793					90			821					9,177	28,735
2002_TUR		26	2,995	3,404	2,895	5,505	276	676			1,674			311			2,767		417	146	877	5		2,854			3,100	214	3,862	5,374	37,378
2002_USA	31,581	487,695	250		309,611	40,650	274,179	497,275	9,519	3,538	27,557	14,382	5,176	70,258	12,571	76,880		155,937	23,722	23,904	11,362	110,982	141,559	911	2,295	207,872	22,413	24,009	102,531	4,866	6,229	2,699,714
2003_DEU	185	9,938	37	64,320		4,164	44,428	209,376	2	940	34,420		1,682	6,754					1,393	2,615	1,878	6,291	1,725	709		6,431		6,044	61	12	10,910	414,313
2003_ESP	741	488		5,140	65,664		15,894	10,433			52,350	472	220	978	113						646	1,110	758			564			0		1,140	156,713
2003_FRA	962	30,990		32,309	34,693	21,211		34,274	19	98	14,396		1,698	6,921		1,059		931	955	14,484	1,264	3,777	5,017	112	137	25,057	23	4,113	635		739	235,876
2003_GBR	239,612	10,779	2,934	659,404	98,953	78,230	135,773		52,679	1,338	5,690		8,844	117,597	967	942		2,724	4,036	1,371	3,820	243,165	47,434	245	17,564	72,951	78	2,541	6,935	4,132	4,090	1,824,827
2003_HKG	1,536	775		4,310	160	3,480	51	36,608		531	4			26	7,433	3		7	24,259		2,146		3,528			15	2,060		337		493	87,762
2003_IND		425		6,343	1,925		1,191	14,079	1		339		9,007	72	391				2,670	26		853	3,725			873	56	682	34		5,637	48,330
2003_ITA				10,142	93,028	25,567	32,800	3,829						103		167			27	61	99	1,137	1,037			6,133			22		6,006	180,157
2003_MEX		1,097		13,673		17,490	1,400	2,147													324	200	1,400		40	749					7,617	46,137
2003_ZAF	111	2,588		3,025	155	15	250	14,467		11,958	262						9,280		5,617		15	20,438	3,821		1,113	1,650	342	62	65	25	13,098	88,357
2005_BEL		2		2,707	3,819		53,954	793		190	22								2,672		193	30,657	1,167	95		205		53			3,030	99,558
2006_DNK	1,286			6,504	143		121	16,266	64		7,582								54	434		153				30		1,416			1,653	35,704
2006_ISR	39	358		45,341	856		302	45	63	917	482			8	2			2,695	2,956			40				1,762	30		2,689		8,090	66,675
2006_NOR		267	1,533	16,250	429		6,474	4,891		512	153			451			62	1,431		6,899	448	1,644	121	16		208	1,547	23,763	34		1,529	68,662
2007_BMU	20	7,457		27,829			15,129	1,834	5	2,129	6,715		30		258		405				1,341								4,127		15	67,295
2007_CHN	980			14,617	1,748	3,749	1,219	2,701	8,450		146				325						261	811	1,227			2,730	1,655	30			1,175	41,823
2007_LUX				10,385	13,335	362	83	2,591				87	2,158	1,801				599				35,091						1,881			249	68,622
2007_NLD	572	137		71,145	10,316	5,896	73,051	218,555			7,550	10,251	394	10,540		178		254	1,973	1,323			3,342	117		332	629	1,826			2,076	420,458
2008_JPN	4	0		21,774	5,473		7,076	6,827	589					144	560				350			15				356	329	464			899	44,861
2009_BRA	510	250		5,427	678	23,374	12,135	8,839			666	4,369		2,173				182	844		2,396	6,352	582	265		4,403	698	55			1,025	75,225
2010_CHE		185		64,607	11,304	9	14,511	9,856	549		454			169		130		193	288			447	696	29	1,400			2,276	443		1,738	109,285
2011_SWE		4,598		35,165	37,698	33	46,169	45,952	4		2,534					13			5	9,858		3,667	2,913			10,470	7		120	17	4,005	203,227
2012_IRL	622	169		158,210	7,847	56	884	4,923					74	35			1,171		2,533	3		279	60,117			116					5,588	242,624
2014_ARG		16		1,436		24,145	37	7			122	539		46				348			1,009	1			4,261						8,252	40,216
2015_RUS		54		2,096	4,040	87	9,502	16,284		38			182			129			3,501	1,044	9,200	68				31					4,055	50,310
+68 other co	61,371	43,326	24,604	23,888	16,711	9,601	12,230	14,047	24,334	30,181	1,470	16,700	173	13,359	1,317	9,791	13,336	13,866	1,135	384	17,591	9,248	7,493	1,265	24,702	6,625	2,513	5,953	25,253	12,291	119,858	564,613
Total	356,154	638,093	32,478	1,646,725	738,259	273,113	829,910	1,291,290	108,030	53,001	166,297	62,930	43,537	233,028	44,870	89,609	33,268	184,189	91,160	62,776	60,715	476,881	303,687	6,730	72,715	402,920	33,469	80,104	150,019	32,547	296,728	8,895,231

This table reports a matrix of the 30 largest acquiror and target countries in millions of US dollars from SDC Platinum. The top and left banners report the country and the year it joined the IOSCO MMoU. By organizing the matrix according to the year of MMoU entry, the staggered design can be observed using the different colored shading. The different colors indicate different MMoU linkage dates, which are jointly determined by the target country and acquiror country securities regulators. Each cell reports the total M&A for each country pair from 1994 to 2020. The gray bars aggregate 68 target countries and 50 acquiror countries (to help reduce the size of the matrix).

TABLE 2—CORRELATION TABLE OF COOPERATION MEASURES

	M&A ($US)	*Bilateral MoU*	*MMoU*	*Financial Intelligence Unit*	*Hague Convention*	*Bilateral Trade (goods and services)*	*Bilateral Investment Treaty*	*Trade agreement*
M&A ($US)	1							
Bilateral MoU	0.1768***	1						
MMoU	0.0699***	0.2496***	1					
Financial Intelligence Unit	0.0726***	0.2031***	0.4996***	1				
Hague Convention	0.1328***	0.2146***	0.3094***	0.3441***	1			
Bilateral Trade (goods and services)	0.1207***	0.0058***	0.0320***	0.0240***	0.0410***	1		
Bilateral Investment Treaty	0.0190***	0.1774***	0.1914***	0.2182***	0.2699***	-0.0068***	1	
Trade agreement	0.0664***	0.1710***	0.2277***	0.2684***	0.3747***	-0.0039***	0.2632***	
Tax treaty	0.0181***	0.0768***	0.1687***	0.1504***	-0.0052***	-0.0018	-0.0342***	-0.0191***

This table presents a correlation table for the main dependent and independent variables, which serve as proxies for country-to-country cooperation.
*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

TABLE 3—COOPERATION AND CROSS-BORDER M&A

	(1) *OLS* *ln(1+M&A ($US))*	*(2)* *iOLS* *ln(1+M&A ($US))*	*(3)* *PPML* *M&A ($US)*
MMoU	0.028***	0.160**	0.283**
	(2.77)	(2.74)	(1.99)
Hague Convention	0.031***	0.445***	0.338*
	(4.87)	(8.61)	(1.73)
Bilateral MoU	0.025**	0.100***	0.070
	(2.48)	(2.95)	(0.75)
FIU	0.038***	0.167***	-0.114
	(4.38)	(3.54)	(-0.80)
Bilateral Trade	0.000***	-0.000	-0.000
	(3.40)	(0.42)	(-0.11)
Bilateral Investment	-0.003	0.121**	-0.026
	(-0.48)	(2.54)	(-0.26)
Trade agreement	0.035***	-0.259***	0.113
	(4.90)	(-7.08)	(0.99)
Tax treaty	0.043***	-0.224***	0.169
	(4.57)	(-3.51)	(1.18)
N	187,920	17,483	21,708
(Pseudo) R^2	0.396	-	0.443
Acquiror×Year	Y	Y	Y
Target×Year	Y	Y	Y
Acquiror×Target	Y	Y	Y

This table provides the main estimates of the effect of cooperation on cross-border M&A. Cross-border M&A is measured in constant 2020 US dollars between acquiror country *i* and target country *j* in year *t*. Columns 1-3 present log-linear, iOLS, and PPML models, respectively. Control variables include *BILATERAL TRADE*, *BILATERAL INVESTMENT TREATY*, *TRADE AGREEMENT*, and *TAX TREATY* (all defined on p. 25) and fixed effects for Acquiror country×Time, Target country×Time, and Acquiror country×Target country. The estimates are based on OLS, iOLS, and PPML, respectively, using Eq. 1 (below):

$$(1)\quad M\&A_{ijt} = \gamma_0 + \gamma_1 Cooperation_{ijt} + \sum_{c=2}^{C} \lambda_{ijt}\, Controls + \sum_{i=C+1}^{I} \lambda_{it}\, Acquiror \times time\ FEs + \sum_{j=C+I+1}^{J} \lambda_{jt}\, Target \times time\ FEs + \sum_{m=C+I+J+3}^{M} \lambda_m\, Acquiror \times Target(country\ pair)\ FEs + \upsilon_{ijt}$$

MMoU: an indicator for IOSCO's Multilateral Memorandum of Understanding

Hague Convention: an indicator for joint participation in the Hague Convention (all-purpose legal instruments)

BILATERAL MoU: indicator for a bilateral cooperative arrangement between securities regulators

FIU: indicator for joint participation in the Egmont Group of Financial Intelligence Units (anti-money-laundering, terrorist financing, and financial crimes)

The reported coefficients are prior to transformation. Standard errors are clustered by country pair.

*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

TABLE 4—COOPERATION AND CROSS-BORDER M&A: INTERACTIONS

	No Financial Intelligence Unit (FIU)			Financial Intelligence Unit (FIU)		
No Hague		**No**	**MMoU**		**No MMoU**	**MMoU**
	No Bilateral	*(ref group)*	0.056	**No Bilateral**	0.036	0.099
	Bilateral	-0.023	0.145	**Bilateral**	0.104	0.135
Hague Convention		**No**	**MMoU**		**No MMoU**	**MMoU**
	No Bilateral	0.022	0.072	**No Bilateral**	0.109	0.131
	Bilateral	0.111	0.377	**Bilateral**	0.261	0.089

This table provides estimates of different combinations of cooperative mechanisms, relative to the referent group (no cooperative mechanisms). The dependent variable, cross-border M&A, is the total deal value of M&A between acquiror country *i* and target country *j* in year *t* in US dollars.

MMoU: an indicator for IOSCO's Multilateral Memorandum of Understanding
Hague Convention: an indicator for joint participation in the Hague Convention (all-purpose legal instruments)
BILATERAL MOU: indicator for a bilateral cooperative arrangement between securities regulators
FIU: indicator for joint participation in the Egmont Group of Financial Intelligence Units (anti-money-laundering, terrorist financing, and financial crimes)

The estimates come from a pooled regression based on Eq. 1 with full four-way interactions of indicators for cooperation. Control variables include *BILATERAL TRADE*, *BILATERAL INVESTMENT TREATY*, *TRADE AGREEMENT*, and *TAX TREATY* (all defined on page 25) and fixed effects for Acquiror country×Time, Target country×Time, and Acquiror country×Target country. The reported coefficients are prior to transformation.

TABLE 5—M&A COUNTS AND PRE-COOPERATION LEVELS OF M&A

	(1) $ln\,(1+\#deals)$	*(2)* $\ln(1+\overline{deal\ size})$	*(3)* $\ln(+1M\&A\ (\$US))$
MMoU	0.008***	0.019**	0.086***
	(2.76)	(2.15)	(7.67)
MMoU×Pre-MMoU M&A			-0.046***
			(-15.35)
Hague Convention	0.011***	0.020***	0.016**
	(7.11)	(4.43)	(2.24)
Bilateral MoU	0.007***	0.018**	0.038***
	(3.13)	(2.07)	(3.17)
FIU	0.012***	0.026***	0.028***
	(5.78)	(4.52)	(3.27)
Bilateral Trade	0.000**	0.000***	0.000***
	(2.25)	(3.37)	(4.35)
Bilateral Investment Treaty	-0.001	-0.002	-0.004
	(-0.73)	(-0.35)	(-0.47)
Trade agreement	0.011***	0.024***	0.036***
	(5.77)	(4.92)	(3.75)
Tax treaty	0.015***	0.028***	0.027**
	(6.16)	(3.98)	(2.44)
N	187,920	187,920	21,708
R^2	0.538	0.339	0.4517
Acquiror×Year	Y	Y	Y
Target×Year	Y	Y	Y
Acquiror×Target (country pair)	Y	Y	Y

This table provides the main estimates of the effect of cooperation on cross-border M&A. The dependent variable, cross-border M&A, is the total deal value of M&A between acquiror country *i* and target country *j* in year *t* in counts (in column 1) and US dollar value (in column 3). Control variables include *BILATERAL TRADE*, *BILATERAL INVESTMENT TREATY*, *TRADE AGREEMENT*, and *TAX TREATY* (all defined on page 25) and fixed effects for Acquiror country×Time, Target country×Time, and Acquiror country×Target country. The estimates are based on OLS using Eq. 1 (below):

(2) $$M\&A_{ijt} = \gamma_0 + \gamma_1 Cooperation_{ijt} + \sum_{c=2}^{C} \lambda_{ijt}\, Controls + \sum_{i=C+1}^{I} \lambda_{it}\, Investor \times\ time\ FEs + \sum_{j=C+I+1}^{J} \lambda_{jt}\, Investee \times time\ FEs + \sum_{m=C+I+J+3}^{M} \lambda_m\, Investor \times Investee\ (country\ pair)\ FEs + \upsilon_{ijt}$$

MMoU: an indicator for IOSCO's Multilateral Memorandum of Understanding
Hague Convention: an indicator for joint participation in the Hague Convention (all-purpose legal instruments)
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FIU: indicator for joint participation in the Egmont Group of Financial Intelligence Units (anti-money-laundering, terrorist financing, and financial crimes)

The reported coefficients are prior to transformation. Standard errors are clustered by country pair. *** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

TABLE 6—COOPERATION AND CROSS-BORDER M&A: CROSS-SECTIONAL TESTS

MMoU		*Acquiror Regulatory Quality*	
		Low	**High**
Target Regulatory Quality	**Low**	0.031***	0.019
	High	0.066***	0.017

HC		*Acquiror Regulatory Quality*	
		Low	**High**
Target Regulatory Quality	**Low**	0.026**	0.036***
	High	0.017	0.035***

Bilateral MoU		*Acquiror Regulatory Quality*	
		Low	**High**
Target Regulatory Quality	**Low**	0.016	0.078***
	High	0.039*	0.012

FIU		*Acquiror Regulatory Quality*	
		Low	**High**
Target Regulatory Quality	**Low**	0.035***	0.036***
	High	0.025***	0.044***

This table provides estimates of the effect of cooperation on cross-border M&A, conditional on different country pairs. The dependent variable, cross-border M&A, is the total deal value of M&A between acquiror country *i* and target country *j* in year *t* in US dollar value (in column 1) and counts (in column 2). Control variables include *BILATERAL TRADE*, *BILATERAL INVESTMENT TREATY*, *TRADE AGREEMENT*, and *TAX TREATY* (all defined on page 25) and fixed effects for Acquiror country×Time, Target country×Time, and Acquiror country×Target country. The estimates are based on PPML using Eq. 1 (below):

(1) $M\&A_{ijt} = \gamma_0 + \gamma_1 Cooperation_{ijt} + \sum_{c=2}^{C} \lambda_{ijt}\, Controls + \sum_{i=C+1}^{I} \lambda_{it}\, Acquiror \times time\ FEs + \sum_{j=C+I+1}^{J} \lambda_{jt}\, Target \times time\ FEs + \sum_{m=C+I+J+3}^{M} \lambda_m\, Acquiror \times Target\ (country\ pair)\ FEs + v_{ijt}$

MMoU: an indicator for IOSCO's Multilateral Memorandum of Understanding
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FIU: indicator for joint participation in the Egmont Group of Financial Intelligence Units (anti-money-laundering, terrorist financing, and financial crimes)

The reported coefficients are prior to transformation. Standard errors are clustered by country pair.
*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

TABLE 7—DEAL-SPECIFIC TESTS OF SYNERGY, MARKET RETURNS, AND DEAL PREMIUM

	(1) *ln(Merger Synergy)*	*(2)* *ln(Acquiror (-1,1)) CAR*	*(3)* *ln(Target (-1,1) CAR)*	*(4)* *ln(Target share of merger gains)*	*(5)* *ln(Target Premium)*
MMoU	-0.003	-0.018	0.092*	0.007	-0.045
	(-0.14)	(-0.81)	(1.79)	(0.30)	(-0.41)
Hague Convention	0.014	-0.012	0.120**	0.029	0.067*
	(0.63)	(-0.43)	(2.48)	(1.31)	(1.82)
Bilateral MoU	0.016	0.001	-0.004	0.019	-0.009
	(0.98)	(0.07)	(-0.09)	(0.93)	(-0.15)
FIU	-0.007	-0.007	-0.009	0.014	-0.253
	(-0.37)	(-0.40)	(-0.13)	(0.65)	(-1.25)
Bilateral Trade	0.000	0.000**	-0.000	-0.000**	-0.000
	(1.30)	(2.03)	(-0.41)	(-2.43)	(-0.08)
Bilateral Investment Treaty	0.046***	0.045***	0.003	-0.025***	-0.050
	(3.82)	(3.64)	(0.13)	(-2.87)	(-0.76)
Trade agreement	0.052***	0.045***	0.074	-0.018	-0.071
	(2.83)	(3.51)	(1.34)	(-1.51)	(-1.22)
Tax treaty	-0.069***	-0.056*	-0.045	0.023	-0.235
	(-2.97)	(-1.78)	(-0.93)	(0.90)	(-0.64)
N	4,831	4,831	4,831	4,831	2,336
R^2	0.686	0.695	0.674	0.736	0.766
Acquiror×Year	Y	Y	Y	Y	Y
Target×Year	Y	Y	Y	Y	Y
Acquiror×Target (country pair)	Y	Y	Y	Y	Y

This table provides the estimates of the effect of cooperation on cross-border M&A synergy, acquiror returns, target returns, and merger gains attributable to the target. The dependent variables for each column are as follows: column 1 is *Merger Synergy* (defined as the combined cumulative abnormal returns (CAR) using the acquiror and target's three-day (−1, +1) CAR weighted by their respective market values 60 days prior to the acquisition announcement (Suk and Wang 2021); column 2 is the *Acquiror CAR*; column 3 is the *Target CAR*; column 4 is the *Target share of merger gains* defined by dollar-value CAR (CAR multiplied by market value) for the target, divided by the combined dollar-value CAR of the target and acquiror. Control variables include *BILATERAL TRADE*, *BILATERAL INVESTMENT TREATY*, *TRADE AGREEMENT*, and *TAX TREATY* (all defined on page 25) and fixed effects for Acquiror country×Time, Target country×Time, and Acquiror country×Target country. The estimates are based on OLS regression using Eq. 1 (below):

(1) $$DV = \gamma_0 + \gamma_1 Cooperation_{ijt} + \sum_{c=2}^{C} \lambda_{ijt}\, Controls + \sum_{i=C+1}^{I} \lambda_{it}\, Investor \times time\ FEs + \sum_{j=C+I+1}^{J} \lambda_{jt}\, Investee \times time\ FEs + \sum_{m=C+I+J+3}^{M} \lambda_m\, Investor \times Investee\ (country\ pair)\ FEs + \upsilon_{ijt}$$

MMoU: an indicator for IOSCO's Multilateral Memorandum of Understanding
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The reported coefficients are prior to transformation. Standard errors are clustered by country pair.
*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

TABLE 8—SEIZABLE ASSETS SAMPLE (US CROSS-LISTED FIRMS)

Panel A: By country

Country	*Firms*	*Firm-years*	*US Assets*	*Tobin's Q*
ANT	3	19	0.3862	0.36817
ARG	15	169	0.01046	0.06339
ATG	1	17	0	0.15717
AUS	47	352	0.24169	0.32473
AUT	1	16	0	0
BEL	10	66	0.31817	0.27084
BHS	6	55	0.28173	0.07749
BLZ	1	10	0.39463	0.40699
BMU	117	904	0.30461	0.15252
BRA	32	316	0.07064	0.03063
CAN	632	5250	0.33885	0.20876
CHE	26	358	0.295	0.15764
CHL	20	274	0.07369	0.0278
CHN	23	296	0.02056	0.01142
COL	1	5	0.22035	0
CUW	3	54	0.3947	0.12152
CYM	283	1704	0.08366	0.05488
CYP	3	11	0	0
DEU	38	437	0.25378	0.25567
DNK	8	70	0.22974	0.18924
DOM	1	5	0.25467	0.52295
ESP	10	111	0.14739	0.12621
FIN	9	108	0.13949	0.24896
FRA	44	524	0.24411	0.18833
GBR	177	1517	0.30267	0.18806
GGY	1	10	0.5285	0
GHA	1	8	0	0
GRC	4	33	0.0007	0
HKG	15	177	0.0282	0.00297
HUN	1	23	0	0
IDN	5	48	0	0
IMN	1	8	0.02828	0.25004
IND	15	180	0.33884	0.05703
IRL	58	672	0.55272	0.21214
ISR	159	1717	0.33432	0.04375
ITA	14	168	0.17685	0.22781
JEY	19	191	0.31506	0.19027
JPN	48	775	0.18407	0.22429
KOR	12	121	0.03362	0.00417
LBR	6	42	0.35556	0
LUX	25	224	0.15941	0.18107
MEX	45	462	0.11115	0.17515
MHL	14	94	0.09844	0.02128
MUS	1	9	0.03221	0
NLD	72	735	0.28303	0.24872
NOR	9	119	0.10486	0.14642
NZL	8	62	0.0693	0.14956
PAN	6	78	0.34655	0.12193
PER	4	42	0.14945	0
PHL	5	40	0.08018	0
PNG	1	13	0.00298	0
POL	1	4	0	0
PRT	2	10	0	0
RUS	10	104	0.00177	0
SGP	12	132	0.29295	0.13458
SWE	21	222	0.17805	0.15818
THA	1	6	0	0
TUR	1	20	0	0
TWN	9	134	0.22095	0.05763
VEN	4	22	0.00135	0.02695
VGB	77	557	0.14885	0.07328
ZAF	23	204	0.06329	0.16572
Total	*2,223*	*20,119*		
Average			*0.17*	*1.82*

Panel B: By year

Year	*Firms*	*US Assets*	*Tobin's Q*
1994	590	0.275	1.929
1995	643	0.291	2.191
1996	745	0.286	2.212
1997	796	0.256	2.203
1998	822	0.166	2.121
1999	752	0.184	2.872
2000	815	0.168	2.047
2001	826	0.167	1.882
2002	807	0.170	1.695
2003	777	0.168	2.033
2004	773	0.167	2.189
2005	760	0.191	2.175
2006	752	0.197	2.312
2007	755	0.177	2.255
2008	731	0.169	1.473
2009	745	0.139	1.794
2010	771	0.106	1.965
2011	783	0.090	1.678
2012	794	0.091	1.717
2013	804	0.090	2.010
2014	831	0.089	1.886
2015	825	0.088	1.876
2016	798	0.085	1.810
2017	790	0.080	2.068
2018	803	0.080	1.853
2019	733	0.082	2.065
Total	*20,021*		
Average		0.34	2.58

This table describes the sample for the asset seizure tests (by country in Panel A, and by year in Panel B). The data come from the Compustat segments file.

TABLE 9—COOPERATION, SEIZABLE ASSETS, AND VALUATION: MAIN TESTS

	(1) $Cooperation = Bilateral\ MOU$	*(2)* $Cooperation = MMoU$	*(3)* $Cooperation = FIU$	*(4)* $Cooperation = Hague\ Convention$
Fraction US Assets	-0.275*	-0.389***	-0.496***	-0.244
	(-1.93)	(-3.54)	(-4.06)	(-1.42)
Cooperation	-0.089	-0.027	-0.096	-0.535***
	(-0.76)	(-0.44)	(-1.60)	(-3.78)
Fraction US Assets × Cooperation	0.179	0.434***	0.542***	0.126
	(1.08)	(3.01)	(3.61)	(0.67)
N	20,119	20,119	20,119	20,119
R^2	0.049	0.049	0.049	0.049
Year	Y	Y	Y	Y
(Home) Country	Y	Y	Y	Y

This table provides the main estimates of the effect of cooperation on firm value (measured by Tobin's Q), conditional on seizable assets in the US. Data to construct Tobin's Q and the fraction of assets located in the US come from Compustat. The dependent variable, Tobin's Q, is the total deal value of M&A between the target and acquiror country for firm *i* in year *t*. *BILATERAL MOU*, *MMOU*, *FIU*, and *HC* are indicator variables equal to 1 in country-pair-years that are linked by the variable cooperative instruments (0 otherwise). The estimates are based on OLS using Eq. 2 (below), where cooperation takes on different definitions based on the instruments used by regulators:

$$(2) \quad Tobin's\ Q = \beta_0 + \gamma_1 Cooperation_t + \beta_2 US\ Assets + \beta_3 Cooperation_t \times US\ Assets + \sum_{i=i+3}^{I} \beta_{it}\ Home\ country\ FEs + \sum_{t=1}^{T} \beta_{jt}\ Year\ FEs + \omega_{i,j}$$

The reported coefficients are prior to transformation. Standard errors are clustered by country pair.
*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

TABLE 10—COOPERATION, SEIZABLE ASSETS, AND VALUATION: CROSS-SECTIONAL TESTS

	(1) $Cooperation = Bilateral\ MOU$	*(2)* $Cooperation = MMoU$	*(3)* $Cooperation = FIU$	*(4)* $Cooperation = Hague\ Convention$
Fraction US Assets	-0.369**	-0.448***	-0.491***	-0.396**
	(-2.41)	(-4.03)	(-3.98)	(-2.12)
Cooperation	-0.131	-0.061	-0.055	-0.651***
	(-1.09)	(-0.96)	(-0.90)	(-4.24)
Fraction US Assets × Cooperation	-0.270	-0.309	-0.524	-0.659
	(-0.31)	(-0.32)	(-0.55)	(-0.63)
Fraction US Assets × Cooperation × Reg. Qual.Rank	0.006	0.010	0.012	0.011
	(0.69)	(0.94)	(1.17)	(0.96)
N	17,957	17,957	17,957	17,957
R^2	0.049	0.050	0.050	0.050
Year	Y	Y	Y	Y
(Home) Country	Y	Y	Y	Y

This table provides the main estimates of the effect of cooperation on firm value (measured by Tobin's Q), conditional on seizable assets in the US. Data to construct Tobin's Q and the fraction of assets located in the US come from Compustat. The dependent variable, Tobin's Q, is the total deal value of M&A between the target and acquiror country for firm *i* in year *t*. *BILATERAL MOU*, *MMOU*, *FIU*, and *HC* are indicator variables equal to 1 in country-pair-years that are linked by the variable cooperative instruments (0 otherwise). The estimates are based on OLS using Eq. 2 (below), where cooperation takes on different definitions based on the instruments used by regulators:

(1) $$Tobin's\ Q = \beta_0 + \gamma_1 Cooperation_t + \beta_2 US\ Assets + \beta_3 Cooperation_t \times US\ Assets + \sum_{i=i+3}^{I} \beta_{it}\ Home\ country\ FEs + \sum_{t=1}^{T} \beta_{jt}\ Year\ FEs + \omega_{i,j}$$

The reported coefficients are prior to transformation. Standard errors are clustered by country pair.
*** Significant at the 1 percent level. ** Significant at the 5 percent level. * Significant at the 10 percent level.

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