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Protectionism through legislative layering: Implications for auditors and investors

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Abstract
Protectionism is on the rise. Although it tends to be associated with tariffs on imports, governments are increasingly applying other mechanisms to influence international business. Import substitution initiatives have been used to replace purchases from foreign producers with local alternatives. Russia implemented import substitution through legislative layering where layers of regulation created requirements targeting different industries and companies. Following sanctions imposed in 2014 on Russia, the government responded with additional import substitution efforts. We are interested in effects of such measures on the Big 4, global professional service firms, and the choice of auditors by partially privatized enterprises (PPEs). PPEs have more complex multilevel agency problems because it is less clear who is in charge. We find that companies with state ownership were more likely to switch away from the Big 4, and this was more pronounced for companies in strategic industries. It also contributed to companies switching from the Big 4 to the next tier of audit firms. After 2015, PPEs were less likely to receive a modified audit opinion on IFRS audits. However, auditor changes did not occur at the cross-listed enterprises that are under enhanced monitoring from global investors and foreign stock exchanges.
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INTRODUCTION

Nations pursue protectionism to give preference to local companies (Evenett, 2019). Studies in this area tend to focus on changes made to tariffs, in part because less transparent forms of protectionism and their impact are "difficult to quantify" (Bems, Johnson, & Yi, 2013, p. 394). Although average tariff rates have fallen, the use of non-tariff measures to protect local businesses has increased in Europe, North America, and Central and South Asia (Niu, Liu, Gunessee, & Milner, 2018). As Evenett (2019) emphasized, other initiatives that favor local service providers do not receive sufficient attention, given that enterprises operating internationally

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experience "thousands of policy interventions that tilt the commercial playing field in favor of local rivals" (p. 29). Furthermore, there is a lack of data on the behind-the-border efforts and their impact on multinational enterprises (MNEs) (Evenett, 2019).

In a 2019 survey of the trade in services in 46 countries across 22 sectors, the OECD observed a "shift to increasing trade restrictive measures across most services sectors" (OECD, 2020, p. 3). Such measures include restrictions on foreign direct investment, lack of regulatory transparency, restrictions on the movement of people and barriers to competition from foreign companies (Mistura & Roulet, 2019). Their impact is not always readily apparent but is important to examine.

Import substitution (*importozameshchenie*) in Russia was considered as early as 2009 to increase the local "production of strategically important goods and services" (Connolly & Hanson, 2016, p. 8). The campaign intensified as the geopolitical conflict with the West deepened after Russia annexed Crimea in March 2014 and the US, the European Union, and others imposed sanctions. The Russian government expressed concerns about "economic sovereignty" and vowed not to be "managed from outside." It introduced a wide range of measures, including tariff and non-tariff barriers to prioritize local providers (Connolly & Hanson, 2016). The goal of replacing purchases from foreign[1] producers with locally made alternatives was to develop competitive firms in sectors other than national resources (Connolly & Hanson, 2016). Although the implied focus of import substitution initiatives has been to build production capabilities in industries such as IT, food, and medicine that depend heavily on imports, the audit sector was also targeted. In 2014, representatives from the State Duma, the legislative branch of the Russian government, proposed banning audit and consulting firms from countries that introduced sanctions on Russia from serving clients with state ownership (Podobedova, 2015). Although this particular proposal did not become law, it reflected the sentiment toward these firms (Shestopal, Safronov, & Kusnechova, 2014). Historically, state-initiated proposals have been viewed as calls to action. Additionally, laws related to state secrets and storage of confidential information were utilized to highlight concerns related to working with the Big 4 firms, such as Deloitte, Ernst & Young (EY), KPMG, and PwC. Russia offers a natural laboratory setting to examine politically driven import substitution and their impact on the audit market, particularly on the Big 4 that tend to be positioned as foreign experts.

We focus on the following questions: Did import substitution pressures influence the choice of auditor? What was the impact of state ownership on the choice of auditor? Did it have implications for the auditor's opinion? Relying on the multiple agency theoretical perspective and recognizing the influence of the state in the implementation of import substitution, we posit that (1) the extent of state ownership, (2) type of industry, and (3) foreign listing will affect the choice of auditor. In Russia, the financial statements of parent companies are prepared in accordance with the Russian Accounting Standards (RAS) and consolidated statements follow the International Financial Reporting Standards (IFRS). Both sets must be audited. Companies can choose the same firm for both audits or they can hire different firms. Given that the RAS and IFRS statements provide information to different stakeholders, we expect the considerations about choosing an auditor for the RAS and IFRS statements to differ.

We examine the change in auditor hiring pattern pre-and-post 2015, the timeframe when import substitution pressure intensified in response to Western sanctions. Based on 559 firm-year observations for companies listed on the Moscow Exchange, we find that enterprises with state ownership were less likely to hire the Big 4 post 2015. That was the case for IFRS and RAS-based annual audits. The relationship was more pronounced for companies in strategic industries. In contrast, the cross-listed enterprises with state ownership *did not* change their audit firm hiring patterns. Lastly, our findings indicate that for state-owned companies, there was a significant decline in the probability of receiving a modified audit opinion in the post-2015 period but only in the case of IFRS audits.

Our paper makes several contributions. First, as Evenett (2019) noted, "research that pays attention to changes in the treatment of international business by governments appears to be the exception rather than the rule" (p. 11). In contrast to other studies that examine the country- and firm-level factors associated with the choice of auditor (Guedhami, Pittman, & Saffar, 2014; Hope, Kang, Thomas, & Yoo, 2008; Wang, Wong, & Xia, 2008), we focus on the impact of the government's import substitution efforts. When the Big 4 firms entered transition economies in the early 1990s, they were

positioned as foreign experts. Such positioning was utilized to convey the long experience of these firms with audit and their ability to provide quality services in a setting where audit was not established but became necessary to access funding (Alon & Dwyer, 2012; Mennicken, 2008). However, that made the Big 4 more exposed to pressures aimed to increase domestic participation in the auditing field. While the Big 4 lost clients, they were replaced by the Big 5–10 tier firms. As of 2016, these, in declining order of total revenues (audit and consulting), were BDO-Unicon, Grant Thornton-FBK, Nexia-Nexia CIS, FinExpertiza, Crowe Horwath-Rosekspertiza, and RSM-RSM Rus (RA Expert Statistics, 2016). In contrast to the Big 4, which opened and developed their branches in Russia during the late 1980s and early 1990s (Alon et al., 2019), these firms are the product of partnerships between foreign and local auditing groups and were not the target of import substitution efforts.

Second, our study contributes to the debate regarding the state's influence amid the privatization that has occurred and is still ongoing in transition economies. State-owned enterprises represent an important element of many such economies and are prevalent in strategic sectors such as energy, infrastructure, and utilities (OECD, 2018). Many state-owned companies have been privatized and are publicly traded. Such partially privatized enterprises (PPEs) have varied levels of state ownership and more complex multilevel agency conflicts (Cuervo-Cazurra, 2018). The multiple agency theory perspective recognizes potential principal–principal conflicts in such situations where it is less clear who is in charge (Arthurs, Hoskisson, Busenitz, & Johnson, 2008). In addition to the state, there are also private shareholders with different objectives, incentives and time horizons (Bruton et al., 2015; Cuervo-Cazurra, 2018). Consequently, agents may need to choose or are forced to choose which principal's interests they serve. When the state has influence on companies and controls the regulatory and legal systems, it creates market inefficiencies and additional risks for investors (Economist, 2012).

Legislative layering is defined as "a process in which government actors, through laws and other forms of legislative provisions and guidance, introduce layers of regulation that build on and expand existing regulatory structures" (Alon, Mennicken, & Samsonova-Taddei, 2019, p. 1232). The state has used this method to expand requirements, allowing it to target different industries and companies. Investors in PPEs are more exposed to risks related to state priorities. Cross-listing can offer some protection due to a larger pool of shareholders and additional corporate governance requirements.

Third, the Russian setting provides a unique opportunity to examine the choice of auditors following import substitution pressures for two sets of annual reports aimed at different user groups. The co-existence of reporting according to RAS and IFRS allows us to differentiate between the choice of auditors for locally focused reporting and for IFRS statements aimed at investors. It remains more important to keep a Big 4 firm on IFRS as compared to RAS audits. RAS reporting follows Russian law, is primarily used for bookkeeping and taxation, and has less visibility than the IFRS reporting, which is subject to scrutiny by the domestic and international shareholders. However, we find that PPEs were more likely to move away from using the Big 4 firms for both sets of statements. In addition, switching from the Big 4 to smaller firms coincided with PPEs receiving a more favorable opinion on IFRS reports.

The paper proceeds as follows. "Background" provides background information. "Hypotheses development" discusses related research and formulates the hypotheses. "Methodology" describes the data collection process and the research design. "Results" reports the empirical findings and additional analyses. "Discussion and conclusion" concludes the paper.

BACKGROUND

Global Adoption of IFRS and Financial Reporting in Russia

Countries around the globe are using IFRS for financial reporting. The pace of global IFRS adoption gained momentum in 2005 when companies listed on the European Union's (EU) regulated markets were required to prepare consolidated reports under IFRS (EU Regulation 1606/2002). As of 2018, the International Accounting Standards Board (IASB) had evaluated the use of IFRS in 166 jurisdictions and concluded that, "144 jurisdictions require IFRS Standards for all or most domestic publicly accountable entities (listed companies and financial institutions) in their capital markets" (IFRS Foundation, 2018). Large markets that do not allow IFRS for domestically listed companies

include the United States, China, and Japan (IFRS Foundation, 2018).

The adoption of IFRS by developing countries was expected to improve the legitimacy and quality of the financial statements and make companies more attractive to global investors. In 2012, IFRS became mandatory in Russia in *consolidated* reporting for all companies listed on the Moscow Exchange (with or without state ownership), banks and credit institutions, pension funds, and clearing houses (Federal Law 208-FZ issued by the Ministry of Finance). These financial statements must adhere to the official IFRS version as issued by the IASB based in London. The IFRS are principle-based with a strong emphasis on the substance of a transaction rather than its legal form. Listed companies must also prepare *parent* RAS-based financial statements that serve as the basis for taxation and are used primarily by the government. The Ministry of Finance and the Central Bank of Russia regulate the format of these statements and the RAS reporting requirements. The standards have remnants from the Soviet bookkeeping system where the chart of accounts is prescribed and transactions are recorded when supporting documents are collected. IFRS statements are prepared in English and Russian, while RAS statements tend to be available only in Russian. Companies that do not fall into a group for which IFRS statements are required prepare only the RAS-based reports. With the adoption of IFRS, which is aimed primarily at listed companies, the existence of multiple standards within a jurisdiction is increasingly common. Indeed, such is the case in EU countries, where IFRS and a domestic standard are both used but serve different types of users.

Protectionism and Import Substitution Initiatives

Despite the "belief that economic theory has irrefutably established the superiority of free trade," protectionism has a long history and continue to be utilized to protect local industries (Chang, 2002, p. 1). Methods such as tariffs, quotas, and exchange controls are used to give preference to local producers. In the 1930s, the United States and Britain raised tariffs in response to economic and political instability. At the end of World War II, the Netherlands introduced policies to protect and subsidize certain companies and industries (Chang, 2002). Since the 1950s, numerous developing countries across South America and Asia have adopted import substitution policies to shield their economies from imports and to develop local industries and producers (Bruton, 1998). The Soviet Union was the quintessential import substitution economy. According to Dohan (1976), the origin of "Soviet autarky" or self-sufficiency dates back to the 1930s. After World War II, the Soviet government continued this practice to reduce its dependence on Western nations for industrial and technologically complex production. In general, it mostly traded with the Soviet bloc countries until the system collapsed in 1989 (Stone, 2002).

The reasoning behind such efforts is to improve the capabilities of domestic companies by limiting competition from abroad. The resulting profitability of protected domestic production is expected to finance investment and stimulate the development of locally produced competitive products that can be exported. These policies also create distortions in prices and the misuse of resources (Bruton, 1998). The full impact is difficult to assess. Empirical studies tend to focus on changes in tariffs (Evenett, 2019) but less transparent forms of protectionism "are particularly difficult to quantify" (Bems et al., 2013, p. 394).

Following a range of international sanctions put in place in 2014, Russia expanded its focus on import substitution with the aim of stimulating manufacturing, developing local capabilities, and reducing its dependence on imports. Import substitution was introduced though a wide range of regulations and initiatives. The "Plan of Priority Measures to Ensure the Steady Development of the Economy and Social Stability in 2015" was presented on January 27, 2015. Subsequent decrees were prepared based on that plan and focused on developing local industry and encouraging the purchase of locally produced goods (Connolly & Hanson, 2016). The state adopted directives to limit purchases of foreign-made goods and allocated funding to support local production in a number of areas, including agriculture, metal products, and computer equipment (Bodrunov, 2015). Under import substitution, companies with state ownership were to prioritize Russian-made goods in procurement (Medovnikov & Mexanchik, 2014). De-globalization was presented as "good for the country" (Connolly & Hanson, 2016, p. 12).

In addition to regulations directly related to import substitution, other laws were passed or applied that prioritized local companies or limited the work of foreign providers. For example, the law (No. 242-FZ) that came into effect on September 1, 2015, requires companies to store collected personal data on servers in Russia. Due to its

noncompliance with this requirement, LinkedIn has been blocked in Russia since 2016 (Scott, 2016). Related to audit, there were discussions whether Big 4 firms should be allowed to work with state secrets. The move was perceived as political as the law applied dates back to 1993 (N 5485-1) and the Big 4 have been able to perform this work previously without much constraint (Economic newspaper, 2014). Such legislative layering of different regulations allows the state flexibility in applying and enforcing the law. Given that the laws can be contradictory, the state can choose which of them to apply and to whom.

HYPOTHESES DEVELOPMENT

The Choice of Auditor

An audit attests that the financial statements prepared by the management reflect entities' economic reality and, consequently, reduce information asymmetries and agency conflicts between the company and its investors (e.g., Craswell, Francis, & Taylor, 1995; Jensen & Meckling, 1976). The Big 4 are major multinational enterprises with extensive global presence. They are engaged in broader processes of economic globalization through the standardization of financial reporting and auditing practices (Boussebaa & Faulconbridge, 2019). These firms audit a large portion of the companies publicly traded worldwide. In the 1990s, the Big 4 assisted in the transition of the Soviet Bloc countries from the command to market economies. Post-Soviet liberalization allowed the Big 4 to enter the Russian market and provide audit services for the emerging private sector (e.g., Alon & Dwyer, 2012; Cooper, Greenwood, Hinings, & Brown, 1998; Mennicken, 2008). They were positioned as foreign experts and credited with introducing financial statement audits. The Big 4 worked with newly privatized companies and contributed to the development of regulations. These firms provided audits based on International Standards on Auditing (ISAs) to multinational subsidiaries and Russian companies looking for external financing (Samsonova-Taddei, 2013; Sucher & Bychkova, 2001). Due to the lack of an existing domestic audit profession, the Big 4 became market leaders and played an important role in training the local auditing staff.

The role of the state has been identified as an important factor in the choice of auditor (Wang et al., 2008). Articles examining state ownership came to different conclusions. In the cross-country study of newly privatized companies, the extent of government ownership had a negative relationship with the choice of a Big 4 firm, potentially due to the aim of the government owners to protect their interests (Guedhami et al., 2009). A similar pattern was observed in China (Wang et al., 2008). In contrast, in their investigation of the impact of political connections on the choice of a Big 4 firm by cross-listed firms in mostly developed countries, Guedhami, Pittman, and Saffar (2014) reported that politically connected companies, measured by their connections to state officials, were more likely to choose a Big 4 firm. They noted that such companies were "more eager to engage high-quality auditors when their ownership structures leave minority investors more vulnerable to expropriation by dominant shareholders" (p. 135). Differences in findings can be attributed to the unique characteristics of the context being examined because the scope of the state's activities varies across jurisdictions and companies.

As Buck (2003) indicated, the Russian state has a long history of extensive intervention in industry. Even after the wide-scale privatization of the 1990s, the banks and the state, not external stockholders, maintained "a significant voice in the control of enterprises" (Buck, 2003, p. 311). While privatization can reduce politicians' control (Perotti, 2004), PPEs may continue to focus on objectives other than financial performance (Martin & Parker, 1997). The conditions of state ownership and control require more thorough understanding as the state–manager relationship can be different than what is conveyed by traditional agency theory and "contingent on the institutional environment" (Liang, Ren, & Sun, 2015, p. 224). Agency theory tends to focus on the conflicts of interest between a principal (owner) and agents (managers). The multiple agency theory perspective recognizes potential principal–principal conflicts of interests (Arthurs et al., 2008). PPEs have more complex multilevel agency problems because it is less clear who is in charge (Cuervo-Cazurra, 2018). In addition to the state, there are also private shareholders with different objectives, incentives, and time horizons (Bruton et al., 2015; Cuervo-Cazurra, 2018). Consequently, agents may need to choose or are forced to choose which principal's interests they serve. Such conditions are present in PPEs in developing countries and contribute to suboptimal managerial decision-making (Young et al., 2008).

Table 1 Data collection process

	Number of firm-year observations
Auditors' attributes (name, type of audit opinion), state ownership, industry affiliation, cross-listing markets, accounting standards, and other governance metrics were collected for 2013–2016	856
The hand-collected sample was merged with Datastream's financial variables (in USD) required for estimation of models (1)–(4) and 5 percentile outliers were removed. The final sample for regression estimations is:	559
2013–2014	290
2015–2016	269

State bodies have raised concerns about the work of auditors with foreign links. In 2014, representatives from the State Duma, the legislative branch of government, proposed banning auditing and consulting firms from countries that imposed sanctions on Russia from serving clients with state ownership (Podobedova, 2015). Although this particular proposal did not become law, it reflected the sentiment toward these firms (Shestopal et al., 2014). The Federal Security Service (FSB) voiced concerns about the Big 4 having access to sensitive information as part of their engagements. One of the reasons to cut ties with the Big 4 was to avoid the possible leak of strategically important information (Shestopal et al., 2014).

Recognizing the significant influence of the state in Russia, we expect companies with state ownership to be more politically constrained and more vulnerable to the state's demands. PPEs are expected to experience political pressure where the level of ownership by the state will impact their adoption of state policies. Thus, we anticipate that firms with state ownership would be more likely to switch away from the Big 4. Publicly traded companies are required to prepare IFRS statements for consolidated reporting and also prepare parent statements according to RAS. Both sets have to be audited and the company can elect to have the same auditor for both or different firms. Recognizing the political environment and positioning of the Big 4, we expect the level of state ownership to be associated with auditor choice as follows:

Hypothesis 1a: Post import substitution, the likelihood that companies will hire the Big 4 (for IFRS and RAS reporting) will decrease as the level of state ownership increases.

Researchers have found that the type and structure of the client's industry impact the choice of auditor. Companies in more concentrated industries prefer using different auditing firms than their competitors (Kwon, 1996). Dunn and Mayhew (2004) found that hiring auditors with industry specialization benefited companies in unregulated industries. The ability of audit firms to add value through improved disclosures was limited in regulated industries because additional regulatory monitoring limited the clients' motivation to differentiate themselves through disclosures. Russia classifies certain industries as strategic to the national interest and economy. We expect PPEs in these industries to experience greater state monitoring and to be more likely to move away from using the Big 4 auditors due to political pressures and conveyed risk of information leaks. In addition, in 2014, US officials announced sanctions on Russia's strategic industries such as financial services, energy, and defense (US Department of Treasury, 2014). Thus, we posit that:

Hypothesis 1b: Post import substitution, the likelihood that companies in a strategic industry will hire the Big 4 (for IFRS and RAS reporting) will decrease as the level of state ownership increases.

Enterprises that cross-list in other jurisdictions to gain access to external capital must follow the requirements of those jurisdictions in addition to domestic requirements. In such cases, closer monitoring of managers and their decisions is to be expected (Cuervo-Cazurra, 2018). For example, Kim (2013) noted that the cross-listing of Gazprom in 1996 on the London Stock Exchange (LSE) paved the way for others. Over time, London became the most popular cross-listing destination for Russian companies. Foreign issuers need to comply with extensive reporting obligations and the provisions of the UK Combined Code of corporate governance (LSE, 2020).

It is acknowledged that cross-listing in markets with more stringent reporting requirements than those of domestic stock exchanges creates an

Table 2 Distribution of firms by year, industry, and type of ownership

Panel A. Distribution by year and type of ownership			
Year	No. of firm-year obs.	No. of firm-year obs. with state ownership	% of total
2013	155	68	44
2014	135	62	46
2015	135	57	42
2016	134	57	43
Total	559	244	44

Panel B. Distribution by industry and state ownership			
Industry	No. of firm-year obs.	No. of firm-year obs. with state ownership	% of total
Aerospace and defense*	16	14	88
Automobiles and parts	16	10	63
Beverages	7	0	0
Chemicals	36	12	33
Construction and materials	14	0	0
Electricity*	170	131	77
Financial services	4	4	100
Fixed line telecommunications	19	15	79
Food and drug retailers	8	0	0
Food producers	14	0	0
Forestry and paper	2	0	0
Gas, water, and multiutilities*	5	0	0
General industrials	7	0	0
General retailers	7	0	0
Industrial engineering	26	11	42
Industrial metals*	75	4	5
Industrial transportation	17	6	35
Media	8	0	0
Mining*	33	4	12
Mobile telecommunications	8	0	0
Oil and gas producers*	40	31	78
Pharmaceuticals and biotechnology	9	0	0
Real estate investment and services	8	0	0
Software and computer services	2	0	0
Technology hardware and equipment*	5	0	0
Travel and leisure	3	2	6
Total	559	244	44

The * denotes strategic industries according to Russian Federal Law 'On Procedures for Foreign Investments in Companies Having Strategic Importance for the National Security and Defense' No. 57-FZ, dated April 29, 2008
This table presents the distribution of firms by year, industry, and type of ownership (N = 559, Table 1).

effective "bonding mechanism" and brings significant benefits such as lower cost of capital, enhanced liquidity, and higher firm value (Kim, 2013; Kim & Pinnuck, 2014). Leuz (2006) emphasized that the mechanisms through which cross-listing disciplines corporate behavior need further examination. Typically, cross-listed publicly traded companies have domestic and foreign shareholders. Cross-listed PPEs also have the state as a shareholder. While ownership stake can provide opportunities for the state to influence company decisions, cross-listing introduces a more diverse group of investors and a different regulatory framework with mechanisms to prevent rapid auditor changes. Cross-listing increases the attention from financial analysts and makes it less costly for outsiders to monitor controlling insiders. Thus, we hypothesize that:

Hypothesis 2: Post import substitution, cross-listed enterprises with state ownership are not expected to change their Big 4 hiring patterns.

Table 3 Descriptive statistics

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
DBig4IFRS	0.556	1	1	0	0.497
DBig4RAS	0.283	0	1	0	0.451
MAOIFRS	0.165	0	1	0	0.371
MAORAS	0.213	0	1	0	0.410
Size	13.497	13.678	19.829	6.599	2.250
Age	1.951	2.079	2.996	0.001	0.585
ROA	5.451	5.040	60.410	− 10.230	10.380
CapInt	3.877	1.272	9.590	0.023	4.089
Lev	0.594	0.579	8.340	0.002	0.418
DLoss	0.256	0	1	0	0.437
CFO	0.072	0.076	0.434	− 0.796	0.108
Current	2.075	1.164	93.848	0.258	5.277
Inv	0.115	0.062	0.724	0.000	0.137
Rec	0.212	0.130	0.987	0.002	0.211
Quick	1.535	0.885	93.841	0.086	4.334
Returns	0.137	− 0.087	8.777	− 0.976	0.959
Zscore	1.696	1.741	6.540	− 1.846	0.747
Dcrosslist	0.249	0	1	0	0.433
DStratInd	0.655	1	1	0	0.476
StateOwn	16.962	0	96.010	0	25.714
DHighstateown	0.327	0	1	0	0.470

This table reports the descriptive statistics for the variables of the study (N = 559). The definitions of the variables are presented in Appendix 1.

Table 4 Comparison of covariates

Variable	StateOwn = 0			StateOwn > 0			Diff. in mean values
	No obs.	Mean	Std dev.	No obs.	Mean	Std dev.	
DBig4IFRS	315	0.502	0.501	244	0.627	0.485	0.125***
DBig4RAS	315	0.156	0.363	244	0.447	0.498	0.291***
MAOIFRS	315	0.165	0.372	244	0.164	0.371	− 0.001
MAORAS	315	0.190	0.393	244	0.242	0.429	0.051
Size	315	12.941	2.213	244	14.215	2.093	1.274***
Age	315	1.827	0.640	244	2.110	0.459	0.284***
ROA	315	5.529	11.544	244	5.350	8.677	− 0.179
CapInt	315	5.506	5.439	244	1.773	3.161	− 3.733
Lev	315	0.614	0.515	244	0.568	0.240	− 0.046
DLoss	315	0.251	0.434	244	0.262	0.441	0.012
CFO	315	0.067	0.115	244	0.078	0.100	0.011
Current	315	2.660	6.925	244	1.319	0.980	− 1.341***
Inv	315	0.153	0.155	244	0.066	0.086	− 0.087***
Rec	315	0.232	0.217	244	0.186	0.201	− 0.045**
Quick	315	1.908	5.704	244	1.054	0.824	− 0.855**
Returns	315	0.157	1.027	244	0.112	0.865	− 0.045
Zscore	315	1.785	0.784	244	1.581	0.680	− 0.205***
Dcrosslist	315	0.238	0.427	244	0.262	0.441	0.024
DStratInd	315	0.543	0.499	244	0.799	0.401	0.256***

This table reports the comparison of the covariates of the sub-samples with and without state ownership (N = 559)
*, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively. The definitions of the variables are presented in Appendix 1.

Opinion Shopping

The evidence on whether companies engage in opinion shopping and aim to get a more favorable audit opinion by switching to a different audit firm is mixed. Based on a US sample, Krishnan (1994) found that switching was triggered by the

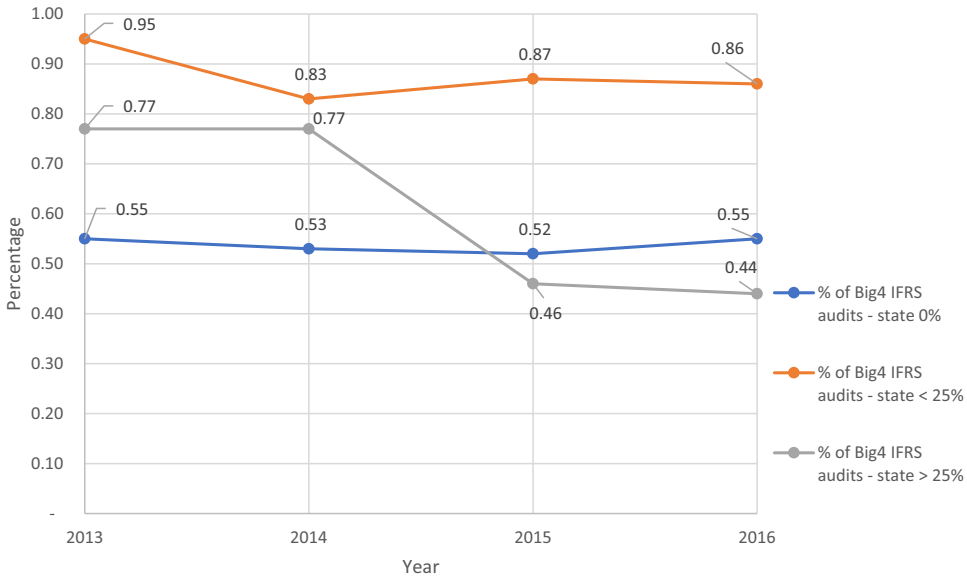

Figure 1 Percentage of IFRS audits conducted by the Big 4 (2013–2016).

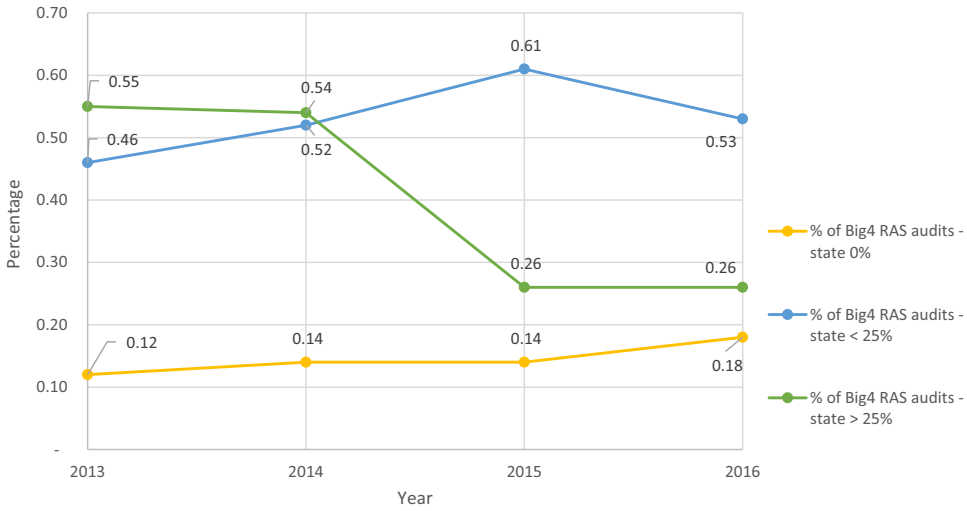

Figure 2 Percentage of RAS audits conducted by the Big 4 (2013–2016).

conservative application of the standards by the auditor rather than the issuance of a qualified opinion.[2] In a follow-up study, Krishnan and Stevens (1995) compared the audit opinion decisions of the predecessor and successor auditors for clients who switched relative to the auditors' treatment of non-switching clients. They found no differences, suggesting either the absence of successful opinion shopping or that the switch was not motivated by opinion shopping. Improvement in the audit opinion after a switch attracts the attention of regulatory authorities and investors, and raises questions about the auditor's independence. Krishnan, Krishnan, and Stephens (1996) found support for DeAngelo's (1982) proposition that a change in auditors can be associated with a qualified opinion and vice versa. Others have identified firm switching as a factor contributing to the likelihood of a more favorable opinion. For example, based on a UK sample, Lennox (2000) concluded that, "switching auditor increases the probability of a change in audit opinion" (p. 336).

Qualified audit opinions for listed companies in many developed markets are infrequent and regulators view such reports negatively. For example, the US Securities and Exchange Commission (SEC) can consider "financial statements filed with anything other than an unqualified opinion to be in violation of securities laws, resulting in possible suspension or delisting of the registrant's securities"

Table 5 Empirical analysis – H1a

Variable	Pr(Big4IFRS)		Pr(Big4RAS)	
1	StateOwn 2	DHighstateown 3	StateOwn 4	DHighstateown 5
Constant	− 1.648***	− 1.639***	− 1.020***	− 1.013***
	[− 5.53]	[− 5.46]	[− 3.55]	[− 3.52]
StateOwn [DHighstateown]	0.003*	0.168**	0.003*	0.186**
	[1.85]	[2.22]	[1.74]	[2.03]
DPost2015	0.009	0.014	0.028	0.041
	[0.27]	[0.46]	[0.91]	[1.36]
StateOwn [DHighstateown]*DPost2015	**− 0.007*** **	**− 0.378*** **	**− 0.006*** **	**− 0.358*** **
	[− 5.08]	[− 4.98]	[− 3.90]	[− 4.00]
Size	0.101***	0.099***	0.069***	0.067***
	[4.81]	[4.60]	[3.34]	[3.27]
Lev	0.182***	0.185***	− 0.052	− 0.051
	[3.56]	[3.64]	[− 0.87]	[− 0.85]
Age	0.075	0.077*	0.054	0.055
	[1.64]	[1.66]	[1.08]	[1.10]
ROA	0.006**	0.006**	− 0.001	− 0.001
	[2.19]	[2.17]	[− 0.34]	[− 0.36]
DLoss	0.086	0.088	− 0.018	− 0.018
	[1.51]	[1.54]	[− 0.28]	[− 0.29]
CFO	0.604**	0.612**	0.425**	0.424**
	[2.47]	[2.51]	[2.31]	[2.30]
Current	− 0.006	− 0.005	− 0.004	− 0.004
	[− 1.19]	[− 1.18]	[− 1.62]	[− 1.59]
CapInt	− 0.001	− 0.001	− 0.001	− 0.001
	[− 0.04]	[− 0.10]	[0.89]	[0.82]
Dcrosslist	0.023	0.026	0.026	0.028
	[0.25]	[0.28]	[0.25]	[0.27]
Industry-fixed effects	Included	Included	Included	Included
Adj. *R*-sq.	0.38	0.38	0.24	0.25

This table reports the results testing H1a ($N = 559$). Model (1) is estimated using a linear probability technique (OLS) with cluster robust standard errors (firm level). The definitions of the variables are presented in Appendix 1. Examined period: 2013–2016. The *t*-statistics are reported in brackets. Bold emphasize the interaction terms that are tested in the Hypotheses. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively.

(Cipriano, Hamilton, & Vandervelde, 2017, p. 26). Researchers examined SEC filings and identified a total of 11 qualified opinions issued to eight unique companies from 2000 to 2015, meaning that, "less than one qualified audit opinion is issued annually to US SEC registrants" (Cipriano et al., 2017, p. 29).

Pragasam and Sands (1996) emphasized that the implications of switching to a different auditor are driven by the jurisdiction-specific institutional factors that shape the functioning of the audit market. Opinion shopping remains relevant for companies in transition and developing economies. Using data from China, DeFond, Wong, and Li (2000) reported that, after receiving a modified audit opinion (MAO[3]), companies were more likely to switch from large auditors to smaller firms that were more likely to issue clean reports. Another study by Chan, Lin, and Mo (2006) based on data from China concluded that companies were more likely to switch from non-local to local auditors after receiving a MAO and were more likely to obtain a clean report after such switches. Opinion shopping is likely to be successful if a company is economically important to an audit firm (Chen, Peng, Xue, Yang, & Ye, 2016). Given the pressure for import substitution, PPEs are expected to be more likely to move away from the Big 4, we anticipate fewer MAOs for these companies. Although receiving a more favorable opinion may not be the main driver of the switch, it would be an additional side effect because if many were switching auditors, changes

Table 6 Empirical analysis – H1b

Variable	Pr(Big4IFRS)		Pr(Big4RAS)	
	StateOwn	DHighstateown	StateOwn	DHighstateown
Constant	− 1.299***	− 1.258***	− 0.851**	− 0.877**
	[− 3.93]	[− 3.81]	[− 2.31]	[− 2.42]
StateOwn [DHighstateown]	0.003	0.061	0.001	0.152
	[1.20]	[0.59]	[0.06]	[0.82]
DPost2015	0.076**	0.080**	0.062	0.083
	[2.03]	[1.97]	[1.34]	[1.63]
DStratInd	− 0.287***	− 0.324***	− 0.138	− 0.119
	[− 2.80]	[− 3.33]	[− 0.78]	[− 0.71]
StateOwn [DHighstateown]*DStratInd	− 0.001	0.095	0.003	0.014
	[− 0.47]	[0.71]	[0.68]	[0.07]
StateOwn [DHighstateown]*DPost2015	− 0.001	− 0.075	0.001	− 0.067
	[− 0.68]	[− 1.46]	[0.55]	[− 0.78]
DStratInd*DPost2015	− 0.109**	− 0.108**	− 0.060	− 0.063
	[− 2.26]	[− 2.16]	[− 1.10]	[− 1.13]
StateOwn [DHighstateown]*DPost2015*DStratInd	**− 0.007*** **	**− 0.332*** **	**− 0.008*** **	**− 0.333** **
	[− 3.80]	[− 3.24]	[− 3.29]	[− 2.50]
Size	0.106***	0.099***	0.070***	0.070***
	[5.07]	[4.55]	[3.35]	[3.30]
Lev	0.179***	0.182***	− 0.054	− 0.050
	[3.57]	[3.67]	[− 0.90]	[− 0.87]
Age	0.060	0.069	0.048	0.046
	[1.32]	[1.50]	[0.96]	[0.92]
ROA	0.005*	0.005*	− 0.001	− 0.002
	[1.75]	[1.80]	[− 0.50]	[− 0.60]
DLoss	0.065	0.072	− 0.030	− 0.031
	[1.18]	[1.30]	[− 0.49]	[− 0.50]
CFO	0.617**	0.657***	0.430**	0.420**
	[2.576]	[2.76]	[2.47]	[2.42]
Current	− 0.005	− 0.006	− 0.004	− 0.004
	[− 1.09]	[− 1.24]	[− 1.59]	[− 1.45]
CapInt	− 0.001	− 0.001	0.001	0.001
	[− 0.25]	[− 0.16]	[0.79]	[0.67]
Dcrosslist	0.020	0.026	0.025	0.024
	[0.23]	[0.29]	[0.25]	[0.23]
Industry-fixed effects	Included	Included	Included	Included
Adj. *R*-sq.	0.41	0.41	0.25	0.26

This table reports the results testing H1b ($N = 559$). Model (2) is estimated using a linear probability technique (OLS) with cluster robust standard errors (firm level). The definitions of the variables are presented in Appendix 1. Examined period: 2013–2016. The *t*-statistics are reported in brackets. Bold emphasize the interaction terms that are tested in the Hypotheses. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively.

in opinion would not be scrutinized as closely. Thus, our final hypothesis states that:

Hypothesis 3: Companies with state ownership are less likely to receive a modified opinion on IFRS and RAS statements post import substitution.

METHODOLOGY

Research Design

The emphasis on a single country allows us to eliminate cross-country confounding factors, consider the context of the firms and investigate the disruptions in the audit market. To test H1a, we estimate the following model:

Table 7 Empirical analysis – H2

Variable	Pr(Big4IFRS)		Pr(Big4RAS)	
	StateOwn	DHighstateown	StateOwn	DHighstateown
Constant	− 1.695***	− 1.673***	− 1.013***	− 1.018***
	[− 5.77]	[− 5.67]	[− 3.50]	[− 3.51]
StateOwn [DHighstateown]	0.004***	0.236***	0.003	0.204**
	[2.87]	[2.65]	[1.64]	[2.02]
DPost2015	0.032	0.040	0.015	0.039
	[0.86]	[1.11]	[0.48]	[1.28]
Dcrosslist	0.131	0.126	− 0.005	0.010
	[1.25]	[1.13]	[− 0.04]	[0.08]
StateOwn [DHighstateown]*DPost2015	− 0.008***	− 0.444***	− 0.007***	− 0.417***
	[− 4.86]	[− 4.86]	[− 3.31]	[− 4.04]
Dcrosslist*DPost2015	− 0.077*	− 0.097**	0.057	0.002
	[− 1.76]	[− 2.33]	[0.79]	[0.04]
Dcrosslist*StateOwn [DHighstateown]	− 0.005**	− 0.251*	− 0.001	− 0.063
	[− 2.15]	[− 1.87]	[− 0.19]	[− 0.37]
StateOwn [DHighstateown]*DPost2015*Dcrosslist	**0.004**	**0.241**	**0.002**	**0.217**
	[1.49]	[1.55]	[0.47]	[1.07]
Size	0.102***	0.099***	0.069***	0.068***
	[4.85]	[4.64]	[3.33]	[3.26]
Lev	0.174***	0.181***	− 0.053	− 0.047
	[3.35]	[3.54]	[− 0.87]	[− 0.78]
Age	0.069	0.074	0.055	0.057
	[1.53]	[1.64]	[1.12]	[1.15]
ROA	0.005**	0.005**	− 0.001	− 0.001
	[2.11]	[2.17]	[− 0.33]	[− 0.29]
DLoss	0.080	0.082	− 0.015	− 0.014
	[1.42]	[1.45]	[− 0.23]	[− 0.22]
CFO	0.564**	0.576**	0.433**	0.439**
	[2.29]	[2.33]	[2.33]	[2.34]
Current	− 0.005	− 0.005	− 0.004	− 0.004
	[− 1.18]	[− 1.17]	[− 1.59]	[− 1.57]
CapInt	− 0.001	− 0.001	0.001	0.001
	[− 0.09]	[− 0.13]	[0.90]	[0.82]
Industry-fixed effects	Included	Included	Included	Included
Adj. *R*-sq.	0.39	0.38	0.24	0.25

This table reports the results testing H2 ($N = 559$). Model (3) is estimated using a linear probability technique (OLS) with cluster robust standard errors (firm level). The definitions of the variables are presented in Appendix 1
Examined period: 2013–2016. The *t*-statistics are reported in brackets. Bold emphasize the interaction terms that are tested in the Hypotheses. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively.

$$\Pr(DBig4IFRS/DBig4RAS)_{it} = \alpha_0 + \alpha_1 StateOwn_{it} + \alpha_2 Dpost2015 + \alpha_3 StateOwn_{it} * Dpost2015 + \sum_{k=4}^{n} \alpha_k Control_{k,i,t} + e_{i,t}. \quad (1)$$

In model (1), the dependent variable is a dummy variable equal to 1 if a company hired a Big 4 accounting firm to conduct an annual audit under IFRS or RAS, and 0 otherwise. The independent variable of interest, *StateOwn*, is the percentage of the state's ownership in a company. To ensure that confounding events do not affect the results, we limit our estimation to 4 years: 2 years prior to the import substitution efforts (2013–2014) and 2 years after (2015–2016). Accordingly, *Dpost2015* is a dummy variable equal to 1 for all firm-year observations in 2015-2016. We also examine whether the concentration of state ownership matters for the predicted association. Accordingly, we replace *StateOwn* with *DHighstateown* – a dummy variable equal to 1 if state ownership in a firm is equal to or exceeds 25%, and 0 otherwise. We expect the coefficient α_3 to be negative and significant to support H1a.

Table 8 Empirical analysis – H3

Variable	Pr(MAOIFRS)		Pr(MAORAS)	
	StateOwn	DHighstateown	StateOwn	DHighstateown
Constant	0.691**	0.687**	0.550*	0.554*
	[2.27]	[2.26]	[1.85]	[1.82]
StateOwn [DHighstateown]	− 0.001	− 0.003	0.001	0.018
	[− 0.01]	[− 0.04]	[0.76]	[0.25]
DPost2015	0.073**	0.079**	− 0.042	− 0.030
	[2.11]	[2.21]	[− 1.04]	[− 0.72]
StateOwn [DHighstateown] *DPost2015	− 0.002*	− 0.114**	− 0.001	− 0.077
	[− 1.79]	[− 2.15]	[− 0.53]	[− 1.03]
DBig4IFRS/DBig4RAS	0.104*	0.103*	0.199***	0.194***
	[1.89]	[1.87]	[3.63]	[3.55]
Size	0.020	0.019	− 0.019	− 0.015
	[1.41]	[1.39]	[− 1.13]	[− 0.91]
Age	− 0.123***	− 0.122***	0.050	0.051
	[− 2.92]	[− 2.89]	[1.25]	[1.27]
Lev	0.031	0.031	0.072	0.071
	[0.61]	[0.61]	[1.47]	[1.45]
Dcrosslist	− 0.130**	− 0.131**	− 0.123*	− 0.128*
	[− 2.00]	[− 2.02]	[− 1.77]	[− 1.83]
CFO	− 0.266**	− 0.252**	− 0.158	− 0.152
	[− 2.20]	[− 2.07]	[− 0.76]	[− 0.72]
Inv	− 0.255*	− 0.255*	0.048	0.038
	[− 1.67]	[− 1.67]	[0.23]	[0.18]
Quick	0.001	0.001	− 0.001	− 0.001
	[0.48]	[0.44]	[− 0.12]	[− 0.27]
Rec	− 0.091	− 0.098	0.173	0.154
	[− 0.81]	[− 0.85]	[1.04]	[0.92]
Returns	− 0.016	− 0.017	− 0.007	− 0.006
	[− 1.13]	[− 1.18]	[− 0.42]	[− 0.35]
ROA	− 0.001	− 0.001	0.001	0.001
	[− 0.53]	[− 0.54]	[0.48]	[0.41]
Zscore	− 0.051	− 0.051	− 0.059*	− 0.058*
	[− 1.21]	[− 1.20]	[− 1.67]	[− 1.68]
Industry-fixed effects	Included	Included	Included	Included
Adj. *R*-sq.	0.17	0.17	0.14	0.15

This table reports the results testing H3 ($N = 559$). Model (4) is estimated using a linear probability technique (OLS) with cluster robust standard errors (firm level). The definitions of the variables are presented in Appendix 1
Examined period: 2013–2016. The *t*-statistics are reported in brackets. Bold emphasize the interaction terms that are tested in the Hypotheses. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively.

Consistent with prior research examining auditor choice, we introduce several control variables in model (1): a firm's size (*Size*), leverage (*Lev*), age (*Age*), performance (*ROA*), financial distress condition (*DLoss*), cash flows (*CFO*), liquidity (*Current*), capital intensity (*CapInt*), and industry-fixed effects (Chaney, Jeter & Shivakumar, 2004; Chen, Chen, Lobo, & Wang, 2011; DeFond & Zhang, 2014; Francis, Maydew, & Sparks, 1999; Gul, Kim & Qiu, 2010). Additionally, we control for a firm's cross-listing on one or more foreign markets (*Dcrosslist*). Variable definitions are included in the Appendix 1. Lastly, we use a linear probability technique (OLS) to estimate model (1) and robust standard errors clustered at the firm level.

Next, we modify the model to test H1b as follows:

$$\begin{aligned}\Pr(DBig4IFRS/DBig4RAS)_{it} &= \beta_0 + \beta_1 StateOwn_{it} + \beta_2 Dpost2015 \\ &+ \beta_3 DStratInd_{it} + \beta_4 StateOwn_{it} * Dpost2015 \\ &+ \beta_5 DStratInd_{it} * Dpost2015 + \beta_6 StateOwn_{it} \\ &* DStratInd_{it} + \beta_7 StateOwn_{it} * DStratInd_{it} \\ &* Dpost2015 + \sum_{k=8}^{n} \beta_k Control_{k,i,t} + \varepsilon_{i,t}. \end{aligned} \quad (2)$$

In model (2), all of the variables are as previously defined. *DStratInd* is a dummy variable equal to 1 if

Table 9 Additional analyses – probability of hiring Big 5–10 firms

Panel A. H1a test with Big 5–10 audit firms				
Variable	Pr(Big5–10IFRS)		Pr(Big5–10RAS)	
	StateOwn	DHighstateown	StateOwn	DHighstateown
Constant	0.245	0.244	0.169	0.179
	[1.41]	[1.41]	[0.54]	[0.59]
StateOwn [DHighstateown]	− 0.001	− 0.096*	− 0.001	− 0.083
	[− 1.13]	[− 1.90]	[− 0.57]	[− 1.13]
DPost2015	0.058**	0.054**	0.045	0.029
	[2.11]	[2.13]	[1.29]	[0.86]
StateOwn [DHighstateown]*DPost2015	**0.006*** **	**0.333*** **	**0.006*** **	**0.385*** **
	[4.16]	[4.64]	[3.96]	[4.79]
Control variables	Included	Included	Included	Included
Industry-fixed effects	Included	Included	Included	Included
Adj. *R*-sq.	0.21	0.21	0.16	0.17

Panel B. H1b test with Big 5–10 audit firms				
Variable	Pr(Big5–10IFRS)		Pr(Big5–10RAS)	
	StateOwn	DHighstateown	StateOwn	DHighstateown
Constant	0.263	0.262	0.583	0.574
	[1.46]	[1.49]	[1.52]	[1.51]
StateOwn [DHighstateown]	− 0.001	− 0.043	− 0.001	0.014
	[− 1.04]	[− 0.51]	[− 0.20]	[0.08]
DPost2015	0.007	0.009	0.017	0.013
	[0.30]	[0.36]	[0.31]	[0.23]
DStratInd	− 0.036	− 0.022	− 0.377*	− 0.344
	[− 0.82]	[− 0.50]	[− 1.68]	[− 1.50]
StateOwn [DHighstateown]*DStratInd	0.001	− 0.043	0.001	− 0.117
	[0.29]	[− 0.44]	[0.01]	[− 0.62]
StateOwn [DHighstateown]*DPost2015	0.001*	0.042	-0.001	0.01
	[1.87]	[1.58]	[− 0.52]	[0.17]
DStratInd*DPost2015	0.085**	0.070**	0.051	0.023
	[2.23]	[2.01]	[0.90]	[0.42]
StateOwn [DHighstateown]*DPost2015*DStratInd	**0.005*** **	**0.331*** **	**0.008*** **	**0.449*** **
	[3.03]	[3.69]	[3.52]	[4.11]
Control variables	Included	Included	Included	Included
Industry-fixed effects	Included	Included	Included	Included
Adj. *R*-sq.	0.23	0.22	0.19	0.19

This table reports the results testing H1a and H1b ($N = 559$) wherein we replaced Big4IFRS/Big4RAS with Big5–10IFRS/Big5–10RAS audit firm indicator variables. Model (1) is estimated using a linear probability technique (OLS) with cluster robust standard errors (firm level). The definitions of the variables are presented in Appendix 1. Examined period: 2013–2016. All of the control variables are as previously defined in Tables 5 and 6. The *t*-statistics are reported in brackets. Bold emphasize the interaction terms that are tested in the Hypotheses. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively.

a company is associated with a strategic industry, and 0 otherwise. This list of strategic industry sectors comes from Russia's Federal Law "On Procedures for Foreign Investments in Companies Having Strategic Importance for the National Security and Defense" No. 57-FZ, dated April 29, 2008. We expect the coefficient β_7 to be negative and significant to support the H1b.

We test H2 by modifying the model as follows:

$$\begin{aligned}\Pr(DBig4IFRS/DBig4RAS)_{it} &= \gamma_0 + \gamma_1 StateOwn_{it} + \gamma_2 Dpost2015 + \gamma_3 Dcrosslist_{it} \\ &+ \gamma_4 StateOwn_{it} * Dpost2015 + \gamma_5 Dcrosslist_{it} \\ &* Dpost2015 + \gamma_6 StateOwn_{it} * Dcrosslist_{it} \\ &+ \gamma_7 StateOwn_{it} * Dcrosslist_{it} * Dpost2015 \\ &+ \sum_{k=8}^{n} \gamma_k Control^*_{k,i,t} + \xi_{i,t}. \end{aligned} \quad (3)$$

In model (3), as in model (1), we expect the coefficient γ_4 to be significant and negative if

companies with state ownership are less likely to hire Big 4 accounting firms in the post-import substitution period. No change is predicted for cross-listed enterprises with state ownership. Therefore, the coefficient γ_7 is not expected to be significant.

In our final test of H3, we examine whether the likelihood of auditors issuing a MAO under IFRS or RAS changed for companies with state ownership.

We estimate the following model:

$$\begin{aligned}\Pr(MAOIFRS/MAORAS)_{it} = {} & \chi_0 + \chi_1 StateOwn_{it} \\ & + \chi_2 Dpost2015 \\ & + \chi_3 StateOwn_{it} \\ & * Dpost2015 \\ & + \sum_{k=4}^{n} \chi_k Control^{**}_{k,i,t} + \zeta_{i,t}. \end{aligned} \quad (4)$$

In model (4), the dependent variable is a dummy variable equal to 1 if a company received a modified opinion under IFRS/RAS, and 0 otherwise. Following prior studies, MAOs include unqualified opinion with explanatory paragraph, as well as qualified, disclaimer, and adverse opinions (Chen et al., 2016; He, Pan, & Tian, 2017; Wang et al., 2008). We control for auditor (*DBig4IFRS/DBig4RAS*), a firm's age (*Age*), leverage (*Lev*), operating cash flows (*CFO*), loss (*DLoss*), inventory (*Inv*) and accounts receivable (*Rec*), risk (*Returns*), liquidity (*Quick*), performance (*ROA*), size (*Size*), and financial health (*Zscore*) (Carcello & Neal, 2000; DeFond & Zhang 2014; DeFond, Raghunandan & Subramanyam, 2002; Francis & Yu, 2009; Lennox, 2005; Lennox & Li, 2012). To support H3, we expect the coefficient χ_3 to be negative and significant.

Data Collection Process

Using Thomson Reuters' Datastream database, we identified companies listed on the Moscow Exchange as of December 31, 2016. Of the 211 companies, 207 had financial information that was available on Datastream.[4] For these companies, we hand-collected information regarding the auditors and their opinions, state ownership, industry, cross-listing markets, accounting standards, and other governance metrics from the SKRIN database – the most complete depository of audited financial statements for Russian public firms. We collected these metrics for 856 firm-year observations: 432 pre- and 424 post-import substitution observations, respectively. We also merged this sample with Datastream's financial variables required for the estimation of models (1)–(4). Finally, we removed 5 percentile outliers of financial variables,[5] which reduced our sample to 559 firm-year observations: 290 [269] firm-year observations in the pre-[post] sanctions period. Table 1 summarizes the data collection process.

In Table 2, we present the distribution of the firms in the final sample ($N = 559$) by year, industry, and state ownership. Panel A lists the distribution by year: on average, 44% of the firms had state ownership and distribution was fairly even across the years. Panel B presents the distribution by industry. Several industries did not have companies with state ownership.

RESULTS

Table 3 reports the descriptive statistics for the study's main variables. About 56% [28%] of the companies hired Big 4 firms for IFRS [RAS] annual audits. Next, 17% [21%] received a MAO under IFRS [RAS]. Approximately 26% of the sample reported losses. Furthermore, 25% were cross-listed on one or more foreign markets; 66% of companies were affiliated with strategic industry sectors. The average state ownership was about 17% and 33% of examined companies had state ownership equal to or exceeding 25%.

We compared the covariates (mean values) of the sub-samples with and without state ownership. The results appear in Table 4. Companies with state ownership were more likely to hire Big 4 auditors to conduct both the IFRS and the RAS annual audits. Firms with state ownership were also larger and older; these firms have lower levels of inventory and accounts receivable and have lower liquidity. The financial stability indicator, z-score, was higher for firms without state ownership. Lastly, companies with state ownership were more likely to belong to strategic industries.

Figures 1 and 2 illustrate auditor choice based on the level of state ownership. There was a visible drop after 2015 in enterprises with state ownership greater than 25% hiring a Big 4 firm for IFRS (from 77% in 2014 to 46% in 2015) and RAS audits (from 54% in 2014 to 26% in 2015).

In Table 5, we present the results from testing H1a. Our results are generally consistent for both the continuous variable of state ownership and the dummy variable indicating a high level of state ownership (> = 25%). The firm's size and cash flows were positively associated with the probability of hiring Big 4 firms for IFRS and RAS audits. Leverage

and performance (ROA) were significantly related to the probability of hiring Big 4 firms only for IFRS audits. When we estimated model (1) for IFRS audits (columns 2 and 3), the explanatory power was higher than for RAS audits. Overall, companies with state ownership were more likely to engage Big 4 firms. Nevertheless, the probability of these companies doing so declined post import substitution. The coefficient on the interaction term *StateOwn*DPost2015* was negative and significant at 1% or better[6] for IFRS and RAS audits. The magnitude of the coefficient, however, was somewhat lower in the case of RAS estimations. Overall, these results support H1a.

We present the results testing H1b in Table 6. Firms in strategic industries were less likely to hire Big 4 auditors for IFRS audits. Again, the explanatory power for the IFRS-based estimations was greater than for the RAS-based estimations. Consistent with H1b, the coefficient β_7 was negative and significant across all estimations. Accordingly, enterprises with state ownership, especially in strategic industries, were less likely to hire Big 4 auditors post import substitution for either IFRS or RAS audits. Overall, these results support H1b.

We report the results from testing H2 in Table 7. Based on both IFRS and RAS estimations, companies with state ownership were less likely to hire Big 4 firms after 2015. However, that was not the case for IFRS and RAS reporting for cross-listed companies with state ownership. Overall, the results support H2.

In Table 8, we present the results from estimating model (4) that tests H3. We find that Big 4 firms were more likely to issue a modified opinion. Furthermore, older firms and those with higher cash flows and inventory levels were less likely to receive a MAO but only in the case of an IFRS-based estimation. Consistent with stricter governance processes, cross-listed companies were less likely to receive a MAO on IFRS and RAS reports. Thus, companies with state ownership were less likely to receive a MAO after 2015, but only in the case of IFRS reports. These results partially support H3.

Additional Analysis and Robustness Checks

In the previous section, we found that listed companies with state ownership were less likely to hire Big 4 firms post import substitution (H1a) and that this association was more pronounced for enterprises in strategic industries (H1b). Naturally, the question arises as to which audit firms these companies switched to. The next segment of auditing firms operating in the Russian market are Big 5–10. In contrast to the Big 4, which opened and developed their branches in Russia during the late 1980s and early 1990s (Alon et al., 2019), these firms are the product of partnerships between foreign and local auditing groups.

Accordingly, we examined whether companies with state ownership were more likely to hire Big 5–10 firms post import substitution. The results are reported in Table 9. As Panel A indicates, PPEs were more likely to hire Big 5–10 firms, and this effect was stronger for firms with state ownership of 25% or above. As Panel B shows, this association was more pronounced for PPEs that operate in strategic industries. Overall, there was a shift from the Big 4 to their smaller counterparts, the Big 5–10. Previously, the Ministry of Finance noted the inability of domestic auditors to expand due to the dominance of the Big 4, which at the time accounted for 42.6% of all audit revenues of the Russian market (Alekseyevskikh, 2014). The import substitution efforts contributed to a greater number of firms auditing listed companies.

In our main analysis, we assigned the Russian public companies to the sub-samples (with and without state ownership and high levels of such ownership) in a non-random manner, which raises concerns about the self-selection bias in our empirical tests. To address this potential bias, we conducted a two-stage Heckman (1979) procedure. In the first stage, we estimated a probit model where we regressed a dummy variant of *StateOwn* on a number of factors affecting a company's association with state ownership, using the factors that appear in Table 4 for which differences in the mean values were significant. To estimate this model, we had to select an exclusion instrument that would be correlated with state ownership but uncorrelated with the choice of auditor (Larcker & Rusticus, 2010).[7] We used headquarter's location (HQ) as such an instrument. Russian state-owned and strategic entities, especially those in the energy and mining sectors, have historically been headquartered outside metropolitan areas. Therefore, the HQ location is likely to be correlated with state ownership.[8] On the other hand, there is no evidence to support that Russia's remote locations

relate to the companies' choice of auditor. In our sample, 30% of the examined companies had headquarters in Moscow, and we used the dummy variable *Moscow* as an exclusion instrument.

In the second stage, we repeated our tests related to H1–H3 using the inverse Mills ratio computed based on the first-stage estimation as an additional control regressor for models (1)–(4). In unreported results, the inverse Mills ratio was a significant factor. Thus, we confirmed that controlling for self-selection bias produced qualitatively similar results to those reported above.

DISCUSSION AND CONCLUSION

The efforts of the state to give preference to domestic companies have consequences for MNEs, investors, and international business in general. The study explores the implications of such efforts for the audit market and the Big 4 global firms in Russia. As Big 4 dominated the audit market, the sector was highlighted as an area where domestic firms needed to gain ground (Shestopal et al., 2014). In addition to the direct input from the state, pressure was exerted through new and existing laws to highlight risks of using foreign providers. Such legislative layering promoted the targeting of companies viewed as foreign to give preference to domestic enterprises.

The Big 4 entered the Russian market as the Soviet Union collapsed. These firms opened offices, trained staff, and helped to build the auditing profession. Russia presents an interesting setting due to the varying levels of state ownership of the companies traded on the Moscow Exchange. All companies report under two sets of accounting rules – IFRS and RAS. Utilizing different standards in parent reporting and in consolidation occurs in many countries, including in the European Union. In such cases, listed companies can use national standards for parent reporting and IFRS for consolidation. In Russia, the focus and treatments in the national standards and IFRS differ. In addition, both sets are audited and can receive different audit opinions as to their compliance with the respective standards. IFRS statements have greater external importance and are presented in English.

We find that while PPEs were more likely to hire the Big 4 for RAS and IFRS audits prior to import substitution, the opposite occurred subsequently. This effect was more pronounced for companies in strategic industries. In addition to import substitution, industries such as defense, natural resources, and finance were specifically targeted by the sanctions where external financing from foreign sources became inaccessible. With the lack of access to foreign financing, the legitimization function and lower cost of capital associated with the Big 4 (Khurana & Raman, 2004; Pittman & Fortin, 2004) were no longer a consideration in the choice of auditor for the affected companies.

Our study makes a number of contributions and highlights additional questions that should be considered. First, the study provides insights into settings where the state plays a dominant role in business activities. The implications of mixed ownership and related principal–principal conflicts, where the principals are the state and external investors, warrant investigation. Given that the extent of influence and control of the state over enterprises varies based on the type of industry, the shareholder base, and the institutional setting, the implications for corporate governance and minority shareholders should vary as well. We highlight that the external investors of the listed companies with significant state ownership were more exposed to the state's priorities. Cross-listing was effective in preventing quick changes in auditors, which can be perceived as a negative signal and diminish the market value of the company due to the risk of reduced understanding of the business by a new auditor and a "disruptive change of view on existing accounting treatment" (KPMG, 2018, p. 2). We also found a lower likelihood of a modified opinion in the post import substitution period for the IFRS statements of PPEs. This result might indicate a deterioration in the quality of the audit. However, that question requires further study.

We also contribute to the stream of research examining the implications of mechanisms that create distortions in the market for goods and services (Doxey, 1983; Kaempfer & Lowenberg, 1988). Numerous jurisdictions are taking a more protectionist stance that will have implications for a wide range of industries, requiring future examination. In contrast to the more common protectionism mechanisms, such as tariffs, data on other trade distortions are scant (Evenett, 2019). In Russia, the state targeted specific segments and companies to give preference to domestic providers. The Big 4 were singled out as foreign and lost their contracts with leading Russian firms. The FSB voiced concerns about the Big 4's ability to store data securely and not share information that they obtained from entities with state ownership. It is important to note that although the Big 4 are

global audit networks, their local offices operate as legal Russian entities with local employees and shareholders. The politically driven protectionism measures have turned the perceived foreignness of the Big 4 from an advantage to a liability. How the Big 4 respond to the changing conditions and whether the protectionist measures are removed once the sanctions are lifted are questions to examine in the future.

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NOTES

[1]Supplied from outside the Eurasian Economic Union (EAEU) (Connolly & Hanson, 2016).

[2]An audit opinion is qualified when the auditors present issues in the report that prevented their issuance of an unqualified opinion, also known as a clean audit report.

[3]MAOs include unqualified opinions with explanatory notes, as well as qualified, disclaimer, and adverse opinions (Chen et al., 2016; Wang et al., 2008).

[4]The Moscow Exchange had 211 actively traded companies on December 31, 2016. Four micro-firms had short-lived listings and were never covered by Datastream.

[5]As is the case with data from other emerging markets, the financial variables of Russian public companies are more volatile than those of developed economies and the removal of outliers is common (see Kim, 2016).

[6]Columns 3 and 5 of Table 5 compare firms with high state ownership with other firms, including those with low (< 25%) ownership or no state ownership. Our results are qualitatively similar to those reported above if we estimate model (1) with *DHighstateown* only for a sub-sample of firms that have state ownership.

[7]Careful instrument identification in the selection model is important, as Lennox et al. (2012) argued, "The selection model is fragile and the results can be non-robust and therefore unreliable when researchers choose exclusion restrictions in an *ad hoc* fashion or choose none at all" (p. 590).

[8]According to a CNBC report (2010), the Russian government has chosen to retain a significant share of ownership in businesses located on the periphery to allow for the gradual restructuring of the country's state-controlled corporations without putting jobs in the Soviet-era single-industry towns at risk or unduly exposing strategic assets.

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APPENDIX 1

Definitions of the variables

DBig4IFRS/ DBig4RAS	A dummy variable equal to 1 if a company hired a Big 4 accounting firm to conduct IFRS/RAS annual audits
MAOIFRS	A dummy variable equal to 1 if a company received a modified opinion, defined as any type of opinion other than a standard unmodified ("clean") report for IFRS financial statements, and 0 otherwise
MAORAS	A dummy variable equal to 1 if a company received a modified opinion, defined as any type of opinion other than a standard unmodified ("clean") report for RAS financial statements, and 0 otherwise
DPost2015	A dummy variable equal to 1 for firm-year observations in the post sanctions period of 2015–2016 and 0 otherwise
Size	Natural logarithm of total assets
Age	Natural logarithm of a company's age, defined as the difference between the financial year t and the year when a firm became public per Datastream
Lev	Leverage defined as total debt/total assets
ROA	Return on assets defined as net income divided by average total assets
CapInt	Capital intensity ratio, defined as total assets divided by net sales
DLoss	A dummy variable equal to 1 if a company's reported net income is negative, and 0 otherwise
CFO	Cash flows from operations scaled by total assets
Current	Liquidity ratio defined as current assets/current liabilities
Inv	Total inventory (net) scaled by total assets
Rec	Net accounts receivable scaled by total assets
Quick	Liquidity ratio defined as [current assets – inventory]/current liabilities
Returns	A firm's realized returns adjusted for stock splits and dividends for the most recent financial year
Altman z-score	Natural logarithm of the z-score for emerging markets, a proxy for financial stability. Z-score (emerging markets) = natural log of [3.25 + [Working Capital/Total Assets] * 6.56 + [Retained Earnings/Total Assets] * 3.26 + [EBIT/

(*Continued*)

	Total Assets] * 6.72 + [Book Value of Equity/Total Liabilities] * 1.05]. Higher value of the index indicates greater financial stability of a firm
Dcrosslist	A dummy variable equal to 1 if a company is cross-listed overseas on one or more foreign market(s), and 0 otherwise
DStratInd	A dummy variable equal to 1 if a company operates in a strategic industry under governmental control, and 0 otherwise (see industry list below for details). This list is based on Russian Federal Law 'On Procedures for Foreign Investments in Companies Having Strategic Importance for the National Security and Defense' No. 57-FZ, dated April 29, 2008.
StateOwn	The percentage of a company's share of capital held by the Russian government
DHighstateown	A dummy variable equal to 1 if a state's ownership is > = 25%
Industry	A set of dummy variables created for each industry according to Datastream's classification: aerospace and defense*; automobiles and parts; beverages; chemicals; construction and materials; electricity*; financial services; fixed line telecommunications; food and drug retailers; food producers; forestry and paper; gas, water and multi utilities*; general industrials, general retailers; industrial engineering; industrial metals*; industrial transportation; media; mining*; mobile telecommunications; oil and gas producers*; pharmaceuticals and biotechnology; real estate investment and services; software and computer services; technology hardware and equipment*; travel and leisure The * denotes strategic industries

Financial variables were collected from Datastream. Auditor's attributes (name, opinion), state ownership, and cross-listing statistics were collected from quarterly and annual reports and audited financial statements deposited in SKRIN. Examination period: 2013–2016.

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