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# Sovereign Wealth Funds' Internationalization Strategies: The Use of Investment Vehicles



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## ABSTRACT

In this paper, we examine the strategies used by sovereign wealth fund (SWF) investments in their cross-border investments. We investigate *how* SWFs internationalize their activities, specifically whether the use of investment vehicles as signal of passive investment approach to access foreign markets is influenced by SWF- and deal-specific characteristics and the presence of bilateral trade agreements between the SWFs and the target country. Our probit and multinomial logit estimates show that fund opacity, fund politicization, strategic industry targets, and majority ownership choices lead to a more likely use of vehicles, while bilateral trade agreements negatively affect such investment strategy. We also find that fund opacity increases the likelihood to use SWF-controlled vehicles, while fund politicization, strategic industry targets, and majority ownership choices increase the likelihood to use a corporate vehicle. Bilateral trade agreements reduce the use of corporate vehicles. Our results also indicate that politicized foreign SWFs are more likely to invest through vehicles located in third countries. On the other hand, when strategic industries are targeted, investment vehicles are likely to be located in the target country. Our results control for SWFs' strategic goals, SWF experience (reliance on external managers or advisors, fund size), type of funding sources, crisis period, deal-specific effects, and legal and institutional differences across countries and over time.

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*"Globalisation has not only disturbed the balance of power between the US and the rest of the world, it has also altered the balance of power between the public and the private sectors. One channel through which the public sector will gain influence over the financial markets is Sovereign Wealth Funds (SWF)." (Jen 2007: p. 1).*

## 1. Introduction

Sovereign wealth funds (SWFs) are funds owned and/or controlled by sovereign states aimed at reinvesting sovereign wealth assets in both domestic and foreign markets (Johan et al., 2013). Although SWFs have existed for six decades, it is only in recent

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years that their increasing presence as global equity investors has attracted scholarly attention (e.g. Aguilera et al., 2016; Al-Hassan et al., 2013; Butt et al., 2008; Megginson and Fotak, 2014; Vasudeva, 2013) in international economics and finance (e.g. Carrington, 2015; Hovlan, 2015; Johnson, 2015). According to the Sovereign Wealth Fund Institute, the market size of SWF investments has doubled from September 2007 to September 2014, with a growth rate faster than any other institutional investor (Aizenman and Glick, 2008). After the 2008 crash in financial markets, SWFs have been one of the major funding sources for corporations worldwide, with assets under management estimated at over \$4 trillion (Bernstein et al., 2013) – more than the value of all private equity or hedge funds.

Bernstein et al. (2013) highlight the controversies surrounding SWFs and their international investments, and explain the fear of developed economies toward the changing global power imbalances. Such fears are based on the active presence of politicians inside SWFs which might lead to the pursuit of strategic objectives, and finally to financial and political destabilization (Gieve, 2008; Johnson, 2007; Johnson et al., 2000; Knill et al., 2012a; Summers, 2007).<sup>1</sup> The risk of destabilization is higher when the investment target is a strategic infrastructure (Chhaochharia and Laeven, 2009; Karolyi and Liao, 2010; Knill et al., 2012a).<sup>2</sup>

The ability to take large stakes, the lack of short-term cash needs, the large size, and the potential presence of long-term horizons would make SWFs the ideal investors to monitor target firm managers and engage in effective corporate governance activities (Shleifer and Vishny, 1986; Chen et al., 2007; Ferreira and Matos, 2008). However, the active presence of politicians might lead to investment behaviors that do not maximize shareholder value (Shleifer and Vishny, 1994; Megginson and Netter, 2001), because of political and strategic objectives. From a macroeconomic perspective, there are also concerns about the expansion of governments in the global capital markets (Bortolotti et al., 2015; Summers, 2007). Among other forms including foreign exchanges reserves and state-owned enterprises (Keller, 2008), SWFs represent, in fact, a strategy employed by governments to invest and expand across borders (Cohen, 2009).

Suspensions and controversies surrounding SWF investments are also related to their structure and behavior, which are usually opaque. Such opacity leads to a higher perceived risk in the target country (Gieve, 2008; Johnson, 2007; Summers, 2007). Additionally, the interaction between SWFs and the government's political agenda is one of the crucial elements that needs to be considered when analyzing their investment strategies, especially in the international setting (Bortolotti et al., 2015; Knill et al., 2012a). In fact, some foreign SWF investments might be driven by home-country governments' ambition to gain international political influence or access key assets located in the host country (Chhaochharia and Laeven, 2009; Keller, 2008). Drawing insights from the international business (IB) and finance literature, this study analyzes how entry mode strategies can be used by SWFs to overcome or mitigate such concerns. More specifically, we explore the determinants of SWFs' investment strategy in cross-border acquisitions, i.e. the choice to use an intermediate investment vehicle - in the form of financial or corporate companies, or SWF-controlled firms/subsidiaries. Thus, the key question addressed by the present work is: *Why do SWFs use investment vehicles in cross-border acquisitions?*

Several studies have investigated the impact of investment vehicles on the corporate ability to access external assets, markets and technological opportunities (e.g. Tong and Li, 2011). In the case of SWFs, we claim that direct investments and investments by means of vehicles can be viewed as alternative governance strategies, which can be used to exploit business and market opportunities under different circumstances. SWFs may in fact use vehicles to signal a “hands-off” passive investment approach toward the home-country governments.<sup>3</sup>

Using a new dataset on SWF investments, whose size is comparable with the datasets used in the most popular SWF studies (Avendaño and Santiso, 2011; Bernstein et al., 2013; Bortolotti et al., 2015; Dewenter et al., 2010; Fernandes, 2014; Knill et al., 2012a; Kotter and Lel, 2011), we focus on the internationalization strategies of SWFs, analyzing *how* SWFs invest cross-border through acquisitions. In particular, we investigate whether the likelihood to use a vehicle in cross-border SWF investments is influenced by SWF- and deal-specific characteristics, and by the presence of bilateral trade agreements between the SWFs and the target country. Our probit results show that fund opacity, fund politicization, strategic industry targets, and majority ownership choices lead to a more likely use of vehicles, while bilateral trade agreements negatively affect such investment strategy. When we disentangle the different types of vehicles and their geographical location, multinomial logit estimates show that fund opacity increases the likelihood to use SWF-controlled vehicles, while fund politicization, strategic industry targets and majority ownership choices increase the likelihood to use a corporate vehicle. Bilateral trade agreements reduce the use of corporate vehicles. As to the geographic location of the vehicle, politicized foreign SWFs are more likely to invest through vehicles located in third countries, i.e. countries which are different from the home and the host ones. Instead, targeting strategic industries leads to invest in vehicles located in the target country.

<sup>1</sup> The economic and financial distortions associated with foreign SWF investments are well explained by Megginson et al. (2013) and include “the risk of equity price bubbles arising from the sheer size of SWF investments and the related decline in demand for Treasury bonds; the risk of an increase in volatility of financial markets; the possibility that SWFs might have a detrimental effect on corporate governance because of political motives or lack of sophistication; and the risk of the emergence of a new form of financial protectionism as a reaction to SWFs” (p. 541).

<sup>2</sup> Some examples of regulatory/enforcement efforts aimed to hinder foreign SWF investments are provided by Fernandes (2014): “The first SWF, the Kuwait Investment Office, ran into trouble in the U.K. in 1987 when it acquired a stake of more than 20% in British Petroleum (recently privatized). The U.K. government, headed by Margaret Thatcher at the time, did not like the idea of an important national asset being owned by a foreign government. In the end, the Kuwaitis had to sell more than half their stake. [...] The German government, for example, has announced that it would introduce controls on investments by SWFs, especially if they seek stakes in strategic sectors. French President Nicolas Sarkozy has announced that he would use his country's state-owned bank (Caisse des Depots et Consignations) to help protect French companies against potential takeover threats posed by SWFs” (p. 6–7). Other examples are provided by Knill et al. (2012a).

<sup>3</sup> The authors are grateful to an anonymous reviewer for this suggestion.

The main contributions of this study lie at the intersection between the SWF, IB, and finance literature. First, regarding the SWF literature we provide original evidence on the role played by fund opacity and fund politicization in the internationalization strategies of SWFs. In fact, even if these SWF-specific characteristics have been widely recognized as major concerns underlying SWF investments (Bernstein et al., 2013; Bortolotti et al., 2015), no studies have empirically examined how they impact the strategic decision to invest cross-border by means of a vehicle. Further, we focus on the bilateral trade agreements between the SWFs and target country, as a proxy of bilateral political relations. Knill et al. (2012a) stressed the importance of the political nature of SWFs to improve the political relations of the governments behind the SWFs with other countries, finding that SWFs prefer to invest in countries with (relatively) weaker political relations. Providing a complementary perspective, we look at the strategy behind each SWF investment, and how the presence of *bridges* between home and host countries influences the investment decision-making process, and *how* SWFs invest abroad.

Second, this work also contributes to the IB literature by enlarging the understanding of the internationalization process of SWFs, which is a topic that is not adequately developed in IB research (e.g. Johan et al., 2013), but very relevant when considering the amount of foreign direct investments (FDI) involving SWFs. IB literature has mainly studied the internationalization strategies of private multinational companies, and more recently of government-related organizations – such as the state-owned enterprises (SOEs). (e.g. Cui and Jiang, 2012; Wright et al., 2005; Xia et al., 2014). Existing IB theory does not adequately explain the internationalization strategies of SWFs. We address this gap in the literature by drawing insights from prior research on investment vehicles, FDI, and political relations, extending the extant arguments to the case of foreign SWF investments.

Third, our results contribute to the literature on investor activism and shareholder impact on firm value. A significant body of prior research (e.g. Chen et al., 2007; Klein and Zur, 2009) shows that certain blockholders (mainly, hedge funds) increase firm value, while others (such as passive pension funds) do not appear to have the same impact. Focusing on the internationalization strategies of SWFs, we show the conditions under which SWFs use investment intermediaries to signal a hands-off approach, i.e. when SWFs are opaque and/or strongly politicized, when SWFs acquire stakes in target firms operating in strategic industries, and in the case of majority acquisitions.<sup>4</sup> To the best of our knowledge, the use of investment vehicles as a signal for a passive stance has not been explored in prior literature.

The rest of the paper is organized as follows. Section 2 presents a description of SWFs, while Section 3 develops the theoretical framework and research hypotheses. Section 4 describes the data, and the empirical methodology. Section 5 shows results, additional evidence, and robustness checks. Section 6 discusses our results and suggests directions for future research.

## 2. Sovereign wealth funds

There is not a shared definition of SWFs among scholars and practitioners. Bertoni and Lugo (2014) define SWFs as “government-owned investment vehicles that manage portfolios including foreign financial assets” (p. 21). More specifically, SWFs are investment funds owned and controlled by national (or sub-national) governments, with no explicit liabilities (i.e. SWFs might owe funding sources to the Central Bank and/or to the Ministry of Finance) (Clark et al., 2013). The control by the government can be exerted through a direct approach (i.e. the government directly manages the fund through politicians or managers appointed by politicians) or an indirect approach (i.e. ad hoc appointed board). Differently from hedge funds and private equity funds, SWFs use little or no leverage (for more details see Bertoni and Lugo, 2015). The funding sources of the SWFs are the surpluses given by exports of commodities, balance of payment surpluses, foreign currency operations, proceeds of privatizations, and/or fiscal surpluses. Broadly, SWFs are usually classified as either commodity funds (e.g. SWFs in the MENA region, Norway’s Government Pension Fund-Global) or non-commodity funds (e.g. SWFs based in Singapore, South Korea, and China) abased on their funding sources: the former are funded through the exports of natural resources, while the latter invest foreign exchange reserves.<sup>5</sup> As to the main objectives, Allen and Caruana (2008) classified the SWFs into five types: “(i) stabilization funds, where the primary objective is to insulate the budget and the economy against commodity (usually oil) price swings; (ii) savings funds for future generations, which aim to convert nonrenewable assets into a more diversified portfolio of assets and mitigate the effects of Dutch disease<sup>6</sup>; (iii) reserve investment corporations, whose assets are often still counted as reserve assets, and are established to increase the return on reserves; (iv) development funds, which typically help fund socio-economic projects or promote industrial policies that might raise a country’s potential output growth; and (v) contingent pension reserve funds, which provide (from sources other than individual pension contributions) for contingent unspecified pension liabilities on the government’s balance sheet” (p. 5). Usually, stabilization and development funds are more liquid in the short term, while SWFs with saving objectives have a longer investment horizon.

SWFs are defined as comparable to the pension funds (Blundell-Wignall et al., 2008; see also the reports provided by the SWF Institute). Pension funds are pools of capital aimed at financing public pension plans that may be owned directly by the

<sup>4</sup> The authors are grateful to an anonymous reviewer for this suggestion.

<sup>5</sup> Official foreign exchange reserves are useful to contrast the sudden stops of capital inflows (see what happened in Russia during the 1990s, where after a housing bubble and a credit bubble, a renegotiation of the outstanding debt and a depreciation of the national currency was mandatory). The accumulation of foreign reserves might be driven also by other determinants, such as the low birth levels in Asia. An example is provided by the government of Singapore that obliges employers and employees to invest 33% of their salaries in a special pension fund to ensure a sustainable level of consumptions in the future years. It is worth noting that investing through SWFs is a much more effective strategy than just the accumulation of foreign reserves (Reisen, 2008).

<sup>6</sup> As explained by Corden (1984, p. 359): “The term Dutch Disease refers to the adverse effects on Dutch manufacturing of the natural gas discoveries of the nineteen sixties, essentially through the subsequent appreciation of the Dutch real exchange rate”. In other words, if energy prices rise the national wealth of oil-exporting countries increases. However, this wealth increase leads to higher demand, an appreciation of the national currency, and a movement of resources from tradeable goods to non-tradeable goods industries (Bruno and Sachs, 1982). For more details about the use of SWFs to mitigate Dutch Disease see Bernstein et al. (2013) and Drezner (2008).

government or by the social security system. More specifically, Blundell-Wignall et al. (2008) classify pension funds into two categories: Social Security Reserve Funds (SSRFs) and Sovereign Pension Reserve Funds (SPRFs). As to the former, such funds mainly use the surpluses of employer and/or employee contributions, and the management of these funds can be either delegated to an independent firm or to the social security institution. SPRFs are established directly by the government, and their cash inflows mainly come from the fiscal transfers by the government. Even though SWFs and SPRFs may differ in terms of their objectives, investment strategies, funding sources, and transparency requirements (Blundell-Wignall et al., 2008), “SWFs do not appear fundamentally dissimilar to other internationally active investment vehicles, such as pension funds”, as claimed by Megginson et al. (2013, p. 541). Thus, in line with the definition of SWF proposed by the International Working Group of SWFs (IWG, 2008), we consider SPRFs as SWFs.

When investing cross-border, SWFs may use vehicles located in the target country or in a third country (i.e. a country which is different from the home and the host one) as means to indirectly enter the foreign country and avoid (or reduce) the hostility from the host country. However, the type of vehicle and the control right exerted by the SWF on such vehicle might influence the strategy behind cross-border investments and their likelihood to be accepted by the host country. Hence, we distinguish among three different types of vehicles: i) *non SWF majority-owned financial vehicles* (financial vehicles, hereafter), such as private equity funds, venture capital funds, investment banks, asset management companies, commercial banks, investment management companies, financial branches of big corporations, real estate investment trusts, and investment advisory firms; ii) *non SWF majority-owned corporate vehicles* (corporate vehicles, hereafter), in the form of non-financial corporations, or companies controlled by public agencies not controlled by the SWF or by the government of the country in which the SWF originates; and iii) *other SWF investment vehicles*, including SWF majority-owned financial and non-financial companies. Some examples of SWF investments through financial vehicles are the investment of Temasek Holdings in the Chinese solar company Yingli Green Energy Holding through JP Morgan, the investment of Khazanah Nasional in the software company PlaceWare Inc. through 3i Group, or the investment of Government of Singapore Investment Corporation in iKang Healthcare Group), the largest Chinese provider of healthcare services through Goldman Sachs Group. An example of SWF investments through corporate vehicles are the investments of Temasek Holdings using Singapore Telecommunications and Singapore Airlines in the acquisition of foreign firms in their respective industries, possibly due to their industry-specific expertise. Another example is the investment of International Petroleum Investment Company through its minority-owned Vienna-based international oil and gas company OMV, which targeted the petrochemical company Borealis AG. An example of the third category is the investment of Lybian Investment Authority in the Italian bank Unicredit SpA through the Central Bank of Lybia.

### 3. Theoretical framework and hypotheses

In the IB literature, the entry mode choice is one of the most researched topics (Werner, 2002). Traditional entry mode studies have focused on ownership decisions associated with FDI, taking into consideration three alternative possibilities: (full vs. partial) acquisitions, greenfield investments, and joint ventures (e.g. Barkema and Vermeulen, 1998; Chari and Chang, 2009; Chen and Hennart, 2004). However, despite the very rich literature about ownership decisions in cross-border investments, the IB literature on entry mode does not seem to capture other crucial decisions related on *how* to enter a foreign country, such as the use of investment vehicles or financial intermediaries. Direct investments and investments by means of investment vehicles can be considered as alternative entry strategies, which may have important implications for resource commitment, risk, performance, and control. By means of a proper design of the transaction, i.e. by choosing to invest via an investment vehicle or not, the investing organization might avoid adverse regulatory consequences – even when such organization has control rights in excess of cash-flow rights – or minimize the risks underlying the transaction.

In contrast to the IB literature, investment vehicles have been widely studied in the finance literature (e.g. Villalonga and Amit, 2009). Investment vehicles – such as trusts, foundations, limited partnerships, or corporations – are used by private equity funds, pension funds, and other institutional investors to monitor the shareholders of their target companies. Investment vehicles can be publicly traded or privately held. According to their nature, investment vehicles can be used for several reasons, such as tax purposes, liability protection, technology and/or foreign market access, strategic motivations, or political goals. Financial vehicles may be used for financial objectives, such as tax purposes, investment returns, and portfolio allocation. As to the corporate vehicles, SWFs may use investment vehicles for their unique skills and expertise, in order to pursue technological, market, and strategic goals. For instance, the industry-specific and/or country-specific expertise of the corporate vehicles may be useful to overcome the liability of SWFs in the acquisition of foreign firms that operate in the same industries of the corporate vehicles. In the case of SWF-controlled vehicles, these latter are sometimes set-up by SWFs. Alternatively, these vehicles are pre-existent and subsequently fully acquired by SWFs. As to this third type of vehicle, political motivations should be relevant, and the final goal can be either financial or strategic.

#### 3.1. SWF- and deal-specific determinants of the use of investment vehicles

SWFs often exhibit a low degree of transparency, which is one of the primary causes of fear experienced by the destination countries of their investments (Megginson et al., 2013). In fact, “SWFs, unlike privately owned and regulated funds, are not required to disclose information such as fund performance or investment strategy to stockholders” (Keller, 2008, p. 342). As a result, SWF investments are often surrounded by high secrecy, and relatively little information is disclosed about the nature, size and strategy of the ongoing investments (Bernstein et al., 2013). Several authors have called for greater disclosure of the investment strategies of

SWFs (e.g. Gilson and Milhaupt, 2008; Truman, 2007), and “in 2007 the G-7 Finance Ministers requested the IMF to develop a code of conduct for sovereign wealth funds” (Drezner, 2008; p. 7).

Even though opacity reduces market rumors and thus has the advantage to hide SWFs' and governments' strategies in the pre-investment period, such opacity may jeopardize the performance and the likelihood of success of foreign SWF investments, since SWFs may face hostility from the host country's government and adverse public opinion. Furthermore, an increase in transparency may not in itself ameliorate the political drawbacks of some of the controversial actions of the SWFs (Bernstein et al., 2013). For instance, one of the most cited examples is the case of the Norwegian Government Pension Fund and Walmart, which led to a diplomatic row between the U.S. and Norway (Landler, 2007; Pozen, 2007).

Concerns about the possible economic distortions SWF investments might create are also related to the potential political control of the SWF investment strategy. The interaction between SWFs and politicians sometimes generates cronyism (Bernstein et al., 2013), reducing or excising the possibility of SWFs' professional managers to take appropriate strategic decisions. It might happen, in fact, that political strategies prevail over business strategies, even if it is difficult to identify the boundaries between the two in the case of SWFs.<sup>7</sup> The active presence of politicians in the SWFs' boards (Bernstein et al., 2013; Bortolotti et al., 2015) might lead to investment behaviors that do not maximize shareholder value (Megginson and Netter, 2001; Shleifer and Vishny, 1994), because of political objectives. According to Bernstein et al. (2013) the involvement of politicians in the SWFs' management leads to international investment strategies which are more likely to target key industries or countries. Therefore, when SWFs invest internationally, the active presence of politicians in the board may generate hostility in the host country. This arises from two different but related concerns: i) the acquisition may be used as a mean to exert political influence in the target foreign firm, and ii) the impact of SWF investment on target firm performance may be negative (Bortolotti et al. 2015). As a result, we claim that the opacity and the politicization of the SWF may lead to higher perceived risks by the host-country government and more political pressure in the host country, because it is more difficult to identify the true investment strategy and clearly separate the investment goal from the political agenda of the SWF's home-country government (Gieve, 2008; Johnson, 2007; Keller, 2008; Summers, 2007). Under these circumstances, the skepticism surrounding SWF investments tends to be amplified, and the use of an investment vehicle to enter a foreign country enables SWFs to mitigate the hostility. SWFs, in fact, may employ investment vehicles to signal a hands-off entry strategy and to shield their funds from host country's political interference by adding one more degree of separation between local politicians and the SWFs. Therefore, opaque and politicized SWFs are more likely to use a vehicle in their cross-border acquisitions to show a passive investment approach and reduce the likelihood of hostility from the host country's government and the popular press. Hence, we hypothesize that:

**Hypothesis 1.** *Opaque SWFs are more likely to invest cross-border through an investment vehicle than transparent SWFs.*

**Hypothesis 2.** *Politicized SWFs are more likely to invest cross-border through an investment vehicle than non-politicized SWFs.*

The choice of using an investment vehicle to signal a passive cross-border investment approach may be also driven by deal-specific determinants. Other things being equal, we identified deal-level characteristics that potentially cause hostility from the host country's public opinion and government. These characteristics may drive the use of a vehicle to explicitly show a passive approach toward the target company, with the final aim to mitigate the risk perception of the acquisition and reduce the hostility faced in the host country. More specifically, we consider two deal-level characteristics: i) the industry of the foreign target company, and ii) the equity stake held in the acquired company.<sup>8</sup>

First, the fear toward foreign SWF investments is justified by the awareness that not all these investments are driven by pure commercial and financial goals, but some of them may be based on the home-country governments' ambition to strategically gain political influence or access key assets in the host country (Aguilera et al., 2016; Chhaochharia and Laeven, 2009; Keller, 2008). Thus, the concerns of host-country governments increase when foreign SWFs target domestic companies operating in strategic industries, as such investments may be perceived to negatively affect the national interest of the host country (Chhaochharia and Laeven, 2009). To this extent, many governments might hinder foreign SWF investments when the target is a strategic infrastructure or a sensitive firm operating in a strategic industry (Karolyi and Liao, 2010; Knill et al., 2012a).

Second, according to the arguments of Bortolotti et al. (2015) SWFs theoretically represent ideal investors due to their long investment horizons, and the ability to hold large stakes in the target company. Hence, SWFs may implement tailored monitoring incentives through an active involvement in the corporate governance of the target company (Brav et al., 2008; Chen et al., 2007). However, SWF activism – potentially pursued through majority acquisitions – may attract more hostility and generate more severe political opposition by host-country governments. This might refrain SWFs from taking an active corporate governance role in target foreign firms (Aguilera et al., 2016). Instead, they might opt for a non-voting observer board seat in target firms' boards or they may acquire only minority stakes (Bortolotti et al., 2015; Mehrpouya et al., 2009; Rose, 2008).

Following the above arguments, SWFs may be more likely to invest via investment vehicles as this enables them to signal a hands-off investment strategy, which should minimize adverse regulatory consequences – such as examination, reporting, and capital requirements<sup>9</sup> – and hostility from the host-country government. In fact, as such, a passive investment approach implies very limited ability

<sup>7</sup> It is worth noting that the interaction between the government and the SWF may also promote positive normative pressure. For example, in the case of Norway the government intervention was aimed at professionalizing responsible investments to establish legitimacy both at home and in the host market and reduce concerns about the political intent of the SWF's investments (Vasudeva, 2013).

<sup>8</sup> The authors are grateful to an anonymous reviewer for this suggestion.

<sup>9</sup> For more details about the U.S. regulation, see Rose (2008).

and willingness to influence target firm's decisions and monitor its local managers. Therefore our second set of hypotheses is stated as follows:

**Hypothesis 3.** *SWFs acquiring cross-border target firms operating in strategic industries are more likely to invest through an investment vehicle.*

**Hypothesis 4.** *SWFs acquiring majority equity stakes in cross-border target firms are more likely to invest through an investment vehicle.*

### 3.2. Bilateral trade agreements

SWFs are by definition government owned, and naturally embedded in the political scenario (Knill et al., 2012a). Knill et al. (2012a) study the role of political relations between SWFs and target countries in SWFs' investment-decision making process. Contrary to the FDI literature predictions (Gupta and Yu, 2009; Li and Vashchilko, 2010), Knill et al. (2012a) find that political relations are a key factor to determine where SWFs invest, but such relations slightly impact the investment amount.

We examine the role of bilateral political relations between the home country of the SWFs and the target countries in terms of the investment behavior of the SWFs, especially their decision to use a vehicle to enter foreign countries. More specifically, in line with Hoekman and Kosteci (2009) we refer to bilateral trade agreements, as reflection of political relations among countries. First, by means of international trade agreements, a government signals a credible lasting commitment to liberal economic policies, limited intervention in the domestic economy, and peaceful relations with the host country (Fernandez and Portes, 1998). Such pro-market policies are seen as desirable by foreign investors, and thus free trade agreements (FTAs) and preferential trade arrangements (PTAs) can increase transnational cooperation (Büthe and Milner, 2008). To this extent, Levy Yeyati et al. (2003) find a significant effect of PTAs on bilateral FDI stock. Second, trade alliances are useful to build political power. An example is the adoption of liberal trade policies among the United States (US) and several countries after the Second World War, which were aimed at inducing such countries to accept the political leadership of the US worldwide (Gilpin and Gilpin, 1987). Further, Bagwell and Staiger (1999) show that political and institutional reciprocity help to coordinate trade agreements among countries (for a recent theoretical and empirical evidence, see Bown and Reynolds, 2015). An example is given by the trade relations between the US and Israel (Baldwin, 1989), which were driven by a need to set coordinated national security policies. Another example is the Trans-Pacific Partnership (Tpp), which is a trade agreement among the US and eleven Asia-Pacific countries. The political nature of this agreement is clear from the exclusion of China. Thus, we can say that FTAs among countries play an active role in building and strengthening bilateral political ties (Inglehart et al., 1996).

Building on the above insights gained from prior research on political and economic ties among nations, we shape our arguments using additional insights from IB research. In particular, according to Li and Vashchilko (2010), political relations are likely to be related with the perception of political risk. The authors highlight that bilateral relations between countries facilitate FDI and increase investment opportunities, because the information asymmetry is reduced, and “investors could anticipate government policies in allied hosts to be either less disruptive (e.g. fewer security checks, less demanding performance requirements) or even more favorable (e.g. entry into security-sensitive industries)” (p. 769).

Therefore, we argue that, other things being equal, the presence of bilateral ties between SWFs and target countries reduces the risk perception related to foreign SWF investments (Bertoni and Lugo, 2014), as the ongoing political relations act as *bridges* between countries and governments. Therefore, the presence of a formal *bridge*, such as a bilateral trade agreement, facilitates the entrance of SWFs in foreign countries, mitigating the potential fear surrounding their investments. All these arguments suggest that the presence of bilateral trade agreements reduces the need of SWFs to use investments vehicles to avoid hostility from the host country's government, and the need to signal a passive investment approach. Therefore, we expect that:

**Hypothesis 5.** *SWFs are less likely to invest cross-border through a vehicle, when there are bilateral trade agreements between SWFs' and host countries.*

## 4. Data and methods

### 4.1. Data and sample

In this work, we built a dataset on SWF investments, whose size is comparable with the datasets used in the most popular SWF studies (Bernstein et al., 2013; Bortolotti et al., 2015; Dewenter et al., 2010; Knill et al., 2012a; Kotter and Lel, 2011).

The data gathering process has followed these steps. First, SWF investments have been identified according to the list of SWFs reported by the Sovereign Wealth Fund Institute, and by Truman (2009). We chose these two sources because of their mutual coherence as to the funds' inception date. Second, to collect all investments made by the identified SWFs (and their majority-owned subsidiaries; see below), we used Lexis Nexis (for a similar approach, see Dewenter et al., 2010; Knill et al., 2012a) – using different combinations of the SWFs' names and the keywords “invest”, “stake”, or “acquire” (following Kotter and Lel, 2011) – and Bureau van Dijk's Zephyr (Zephyr, hereafter). Moreover, following Bortolotti et al. (2015), we collected additional information from websites and news sources, such as the Financial Times, the New York Times, the Wall Street Journal, Gulf News, Associated Press, and Reuters. The time period of our analysis goes from 1st Jan. 1997 to 31st Dec. 2013. We were forced

to exclude SWF investments before the year 1997 because Zephyr reports only deals from the year 1997 onwards. Even though other works include deals made in the 1980s (Bernstein et al., 2013; Bortolotti et al., 2015; Knill et al., 2012a), our dataset is the most updated one. Third, we selected the deals in which SWFs and intermediate acquirers were reported as active. This way, we found deals made by 29 SWFs. Fourth, we used Bureau van Dijk's Orbis database to obtain the list of all subsidiaries controlled by SWFs through a majority stake. This way, we are sure that subsidiaries' strategies and investment policies are directly managed by SWFs. As to the Norwegian SWF "Government Pension Fund – Global", a further step was necessary. Given that the deals related to such a fund were assigned to the company Norges Bank Investment Management – which manages the SWF on the behalf of the Ministry of Finance – we had to disentangle between the deals made by the SWF and those made by other entities managed by Norges Bank Investment Management. To this extent, we crosschecked the annual reports released by the Norges Bank Investment Management (source: <http://www.nbim.no/en/the-fund/holdings/>) with our dataset to exclude all the deals where the SWF had no involvement. Fifth, we cleaned the dataset by removing deals: i) with incomplete information about the name of the target company, and/or its geographical location region; ii) where the "completed date" item is blank; iii) where the names of the acquirer company or of the target company are "existing shareholders", "investors", "management", "private investors", "shareholders", "strategic investors", "consortium", "directors", "unnamed e-commerce group", "investment funds", "chemical joint venture", "undisclosed joint venture"; and iv) made by government-to-government joint ventures, e.g. Qatar and Abu Dhabi Investment Company (QADIC).

Then, we corrected all the misclassifications relating to: i) the countries of the acquirer and target companies (e.g. the country of the acquirer company "Global Logistics Properties Ltd" has been replaced to Singapore; the company Guinea Alumina Corporation Ltd. was headquartered in Australia at the time of the investment); ii) SWF names (e.g. the SWFs Istithmar World PJSC and Government of Singapore Investment Corporation were recorded with different names); and iii) the names of the acquirer and target companies (some of them were recorded with multiple names – e.g. Snam Rete Gas, Amyris Inc., Daimler AG, and John Buck Company LLC were recorded with two different names – some names – e.g. LeddarTech Inc. – were wrong). If a target company is a joint venture between a company operating in the SWF country and company headquartered in another country we consider the target company as located in the SWF country. As to the multiple investments in the same year in the same target company by the same SWF, we considered the situation at 31st Dec. to calculate the equity stake held by the SWF (we tracked the stakes by using only the information shown by the items "acquired stake" or "final stake", and we also checked all the deal headlines). We considered the multiple investments of two different SWFs in the same target company in the same year as two different investments (for a similar criterion, see Dewenter et al., 2010).<sup>10</sup> We carefully checked the transactions involving an acquirer company located in a tax haven (e.g. Cayman Islands, Virgin British Islands, Bermudas). In particular, we verified whether the acquirer company was already incorporated in the tax haven at the time of the investment.

Our final sample is composed of 22 SWFs from 15 countries. Table 1 shows the number of cross-border investments by SWF. Target countries are 53, while the total number of investments is 509. It is useful to directly compare the number of observations in this study with that of the prior literature. Using data from Dealogic M&A Analytics and SDC Platinum M&A, Bernstein et al. (2013) have a sample of 2662 transactions by 29 SWFs with a longer time period coverage (1984–2007). We were forced to start from 1997 because of Zephyr's constraints. However, our dataset also includes transactions from 2008 to 2013. Bortolotti et al. (2015) have a sample of 799 transactions over the 1980–2012 period. Our sample is more recently updated (including the year 2013), and also includes privately-owned target companies. Dewenter et al. (2010) have a sample of 996 investments in the time period 1997–2008, but "those include transactions which cannot be classified as investments (such as transfers between SWF subsidiaries and asset purchases) and some transactions that are disaggregated into multiple trades" (Bortolotti et al., 2015: p. 14). In fact, their empirical analysis is composed of 227 investments and 45 divestments. Kotter and Lel (2011) have a sample of 417 investments over the time period 1980–2009. Finally, Knill et al. (2012a) use a sample of 900 acquisitions in both public and private target companies over the period 1984–2009.

## 4.2. Variables and measures

### 4.2.1. Dependent variable

The dependent variable of our study is *Vehicle*, which is a dummy variable that equals one if the focal SWF invests in a foreign country through a vehicle. As explained in Sections 2 and 5.2, there are three different types of vehicles: financial vehicles, corporate vehicles, and SWF-controlled vehicles.

### 4.2.2. Independent variables

The five independent variables on which we posit the research hypotheses (see Sections 3.1 and 3.2) are *Opacity*, *Politicians*, *Strategic Industry*, *Majority*, and *Bilateral Trade Agreement*. As to the former, it has been built from the SWF scoreboard about accountability and transparency provided by the Peterson Institute for International Economics (Bagnall and Truman, 2013; Table 2). The average score for the 58 funds is 59, which represents our threshold. More specifically, *Opacity* is a dummy variable that equals one if the focal SWF has a score lower than (or equal to) such a threshold.<sup>11</sup> It is worth noting that specific SWFs are not classified as opaque

<sup>10</sup> As a robustness check, we count as single observations the SWF investments which are disaggregated as multiple trades (for more details, see Bortolotti et al., 2015). Results are almost unchanged, and are available upon request from the authors.

<sup>11</sup> As described by Truman (2009, p. 432): "The scoreboard contains 33 elements. They are constructed as questions and are grouped in four categories: 1) structure of the fund, including its objectives, fiscal treatment, and whether it is separate from the country's international reserves; 2) governance of the fund, including the roles of the government and the managers, and whether the fund follows guidelines for corporate responsibility and ethical investment behavior; 3) accountability and transparency of the fund in its investment strategy, investment activities, reporting and audits; and 4) behavior of the fund in managing its portfolio and in the use of leverage and derivatives."



**Table 1**  
Number of cross-border investments by SWF.

SWF parent acquirer	No. of investments
Abu Dhabi Investment Authority	1
Caisse de Dépôt et Placement du Québec	25
California Public Employees' Retirement System	5
Canada Pension Plan	70
China Investment Corporation	16
Dubai International Capital	16
Government of Singapore Investment Corporation	88
Government Pension Fund - Global	9
International Petroleum Investment Company	53
Investment Corporation of Dubai	8
Istithmar World	13
Khazanah Nasional	22
Korea Investment Corporation	6
Kuwait Investment Authority	3
Lybian Investment Authority	4
Mubadala Development Company	17
Qatar Investment Authority	30
State General Reserve Fund	2
State Oil Fund	2
Stichting Pensioenfonds ABP	37
Superannuation Fund	1
Temasek Holdings	81
Total	509

because they use investment vehicles. *Politicians* is a variable related to the politicization of the SWF. We use the same metric used by Bernstein et al. (2013), i.e. a dummy variable that equals one if politicians are present in the managing bodies of the SWF. To this extent, we check the information on the SWF profiles provided by the report of J.P. Morgan (Fernandez and Eschweiler, 2008).<sup>12</sup> *Strategic Industry* controls for the type of industry where the target companies operate. As highlighted by Drezner (2008), SWFs may influence the political decisions and strategies of target countries by acquiring control of key industrial sectors or infrastructures. We use the criteria suggested by Keller (2008) and Drezner (2008) to classify financial institutions (banks, insurance companies), construction and infrastructures, energy (gas, water, electricity), metals and metal products, post and telecommunications, mining, and transportation as strategic industries. *Majority* controls for the equity stake held by the SWF in the target company. More specifically, it is a dummy variable that equals one if the stake owned by the SWF exceeds 50%. As to the variable *Bilateral trade agreement*, this is a dummy variable that equals one whether the SWF's and target country have a FTA (North American FTA, European FTA, Association of Southeast Asian Nations Trade in Goods Agreement) or a PTA (source: World Trade Organization).

#### 4.2.3. Control variables

In our analysis, we have controlled for a number of factors that may influence the decision to use an investment vehicle. First, *CC Home* is the control of corruption in the SWF's country (source: World Bank). As highlighted by the theoretical and empirical works in the finance literature (Acemoglu et al., 2001; Alesina et al., 1999; Barth et al., 2009; Beck et al., 2003, 2006; Easterly and Levine, 1997; La Porta et al., 1999), corruption shapes the development of political and financial institutions, such as the SWFs. Second, even though Drezner (2008) claimed that SPRFs and sovereign funds seem to have a similar asset allocation – and thus a similar balancing between financial and strategic objectives – we control for potential differences in strategic goals between SPRFs and sovereign funds with a dummy variable (*SPRF*) that equals one if the fund is classified as a SPRF by Bagnall and Truman (2013). Third, *Foreign/Total Assets* is the fund-level ratio between total assets and foreign assets, and this measure proxies the degree of fund internationalization (Daniels and Bracker, 1989). Data about fund assets are provided by Truman (2009). Fourth, we control for the time trends by adding to our model specification the variable *Crisis*, which is a dummy variable that equals one in the years 2008–2013 (for a similar approach, see Magud et al., 2014; Klapper and Love, 2011).<sup>13</sup> Fifth, *Market Capitalization/GDP Target* is the percentage ratio between the market capitalization of the target country in the year of the focal SWF investment and the GDP of the target country in the year of the focal SWF investment (source: World Bank; for an application in the SWF literature, see Bortolotti et al., 2015). Finally, *CC Target* is the control of corruption in the target country based on World Governance Indicators published by the World Bank. Table 2 provides a detailed description of all the variables.

<sup>12</sup> As Bernstein et al. (2013), we are conscious that the variable *Politicians* has some weaknesses, such as its cross-section SWF-level nature, and the fact that it has been built on a report provided in the year 2008.

<sup>13</sup> It is worth noting that our results are extremely robust to different specifications of the variable *Crisis*.

**Table 2**  
Definition of variables.

Variable	Definition	Source
<i>Dependent variables</i>		
Vehicle	Dummy that equals 1 if the focal SWF invests in a foreign country through a vehicle	Our dataset
<i>Independent variables</i>		
Opacity	Dummy that equals 1 if the focal SWF has a scoreboard lower than (or equal to) 59	Bagnall and Truman (2013; Table 2)
Politicians	Dummy that equals 1 if politicians are present in the managing bodies of the SWF	Bernstein et al. (2013), Fernandez and Eschweiler (2008)
Strategic industry	Dummy that equals 1 if the target industry is strategic	Keller (2008), Drezner (2008)
Majority	Dummy that equals 1 if the stake owned by the SWF exceeds 50%	Our dataset
Bilateral trade agreement	Dummy that equals 1 if the SWF country and target country have a free trade agreement (FTA) and/or a preference trade arrangement (PTA)	World Trade Organization
<i>Control variables</i>		
CC home	SWF country-level corruption control estimate of Worldwide Governance Indicators (WGI) in the year of the focal SWF investment	World Bank
SPRF	Dummy that equals 1 if the fund is a sovereign pension reserve fund	Bagnall and Truman (2013; Table 2)
Foreign/total assets	Fund-level ratio between total assets and foreign assets	Truman (2009)
Crisis	Dummy that equals 1 in the years 2008–2013	Our dataset
Market capitalization/GDP target	Percentage ratio between the market capitalization and the GDP of the target country in the year of the focal SWF investment	World Bank
CC target	Target country-level corruption control estimate of Worldwide Governance Indicators (WGI) in the year of the focal SWF investment	World Bank

#### 4.3. Methodology

The likelihood that cross-border SWF investments use vehicles is modeled by means of a probit model. The model is specified as follows:

$$\Pr(\text{Vehicle}_i) = \gamma_0 + \gamma_1 \text{Opacity}_i + \gamma_2 \text{Politicians}_i + \gamma_3 \text{StrategicIndustry}_i + \gamma_4 \text{Majority}_i + \gamma_5 \text{BilateralTradeAgreement}_i + \eta V_i + \varepsilon_i \quad (1)$$

The vector  $V$  in Eq. (1) includes the control variables (see Section 4.2.3);  $\varepsilon_i$  is a zero mean error term. It is worth noting that the use of a Heckman-style model where the first equation relates to the foreign nature of the investment could be problematic to control for systematic differences between domestic and cross-border SWF investments. This is confirmed by the LR test of independence between such first stage equation and our main Eq. (1) that does not reject such independence. Thus, we simply excluded domestic investments.<sup>14</sup>

#### 4.4. Descriptive statistics

In Table 3, we show the descriptive statistics of the dependent, independent, and control variables. In our sample of 509 cross-border SWF investments, almost 43% of them were made through a vehicle. The majority of such investments were made by transparent (more than 70%) and – in line with Bernstein et al. (2013) – not politicized SWFs (more than 53%). More than one third of the cross-border SWF investments (35%) targeted a strategic industry. As was expected (Bortolotti et al., 2015), very few cross-border SWF investments (less than 22%) were made by taking a stake exceeding 50% of the target company's equity. In line with Knill et al. (2012a), less than one fourth (almost 21%) of the SWFs targeted countries with pre-existing trade agreements when investing cross-border. More than 54% of the cross-border SWF investments were undertaken in the crisis period highlighting the counter-cyclical nature of SWFs (Keller, 2008).

In Table 4, we provide the tetrachoric correlation matrix including the dependent variable and the independent variables of our econometric analysis. All of them are dummy variables; thus, we focus on the tetrachoric correlation among them. No issues of multicollinearity seem to be present. Variance inflation factor (VIF) tests were also run and confirmed the absence of multicollinearity concerns: the mean VIF is 1.46, and no VIF is greater than 2.30, which is significantly lower than the commonly used threshold of 10 (O'Brien, 2007; Xu et al., 2004).

<sup>14</sup> The authors are grateful to an anonymous reviewer for this suggestion.

**Table 3**  
Descriptive statistics.

Variable	Mean	S.D.	Min	Max	N
Vehicle	0.4263	0.4950	0	1	509
Opacity	0.2927	0.4555	0	1	509
Politicians	0.4695	0.4996	0	1	509
Strategic industry	0.3497	0.4773	0	1	509
Majority	0.2161	0.4120	0	1	509
Bilateral trade agreement	0.2083	0.4065	0	1	509
CC home	87.4358	16.1716	5.24	99.52	509
SPRF	0.2692	0.4440	0	1	509
Foreign/total assets	0.7728	0.2528	0.1	1	509
Crisis	0.5481	0.4982	0	1	509
Market capitalization/GDP target	103.8457	71.8511	9.8676	606.001	509
CC target	78.6929	22.7004	4.78	100	509

## 5. Results

### 5.1. Main results

In Table 5, we present the estimation results of Eq. (1).

Our results show that opaque SWFs are more likely to use vehicles. The coefficient of the variable *Opacity* is positive and statistically significant at 10% confidence level, and the associated increase in the likelihood to use a vehicle is +12.6% (significant at 10%). These findings support [Hypothesis 1](#). Politicized foreign SWFs are more likely to use vehicles: the coefficient of the variable *Politicians* is positive and statistically significant at 5%, and the magnitude of the marginal effect is high (+13.3%, significant at 5% confidence level). Thus, our [Hypothesis 2](#) is supported. As to [Hypothesis 3](#), foreign SWFs are more likely to use a vehicle when they target a strategic industry. The coefficient of the variable *Strategic Industry* is positive and statistically significant at 5%, and the associated marginal effect is +10.9% (significant at 5%). As regards [Hypothesis 4](#), our results show that foreign SWFs prefer to use investment vehicles when they take a majority stake in the target company. The coefficient of the variable *Majority* is positive and statistically significant at 1%, and the associated marginal effect is +15.9% (significant at 1%). Finally, SWFs are less likely to use a vehicle when investing cross-border if there is a bilateral trade agreement between the country where the SWF investment originates and the target country. The coefficient of the variable *Bilateral Trade Agreement* is negative and statistically significant at 5%, and the magnitude of its marginal effect is high (−14.2%) and statistically significant at 5%. Thus, our [Hypothesis 5](#) seems to be supported. As to the control variables, the use of vehicles is more likely by SPRFs: the marginal effect is +13.5%, even though its statistical significance is at 10% only. Further, more internationalized funds are less likely to use vehicles. The coefficient of the variable *Foreign/Total Assets* is statistically significant at 5%, and the marginal effect is −23.9% (significant at 5%). Finally, during the crisis the use of vehicles is less likely in cross-border SWF investments: the magnitude of the marginal effect is −14.5% (significant at 1%). This latter result can be explained by the recent higher sensitivity of many economies to foreign state investments ([Jen, 2007](#)).

### 5.2. Additional evidence

In order to deepen our understanding of the ratios behind the use of investment vehicles by SWFs, we now focus on two main characteristics of the investment vehicles involved in these cross-border acquisitions. More specifically, we ask how our results change according to: i) the type of vehicle used in cross-border SWF investments; and ii) the country in which the vehicle is located. As to the former, as described in [Section 2](#), we classify three different types of vehicles that SWFs may use when investing cross-border. The first type is related to financial vehicles, which take the form of private equity and venture capital funds, banks (either investment banks or commercial banks), asset management companies, investment management companies, financial branches of big corporations (e.g., GE Capital), real estate investment trusts, and investment advisory firms. The second type refers to corporate vehicles, i.e. non-financial corporations. The last type mainly refers to SWF majority-owned financial and non-financial companies. In doing so, we use a multinomial logit model – which is very common in the finance (e.g. [Cumming et al., in press](#)) and IB literature

**Table 4**  
Tetrachoric correlation matrix.

	1)	2)	3)	4)	5)	6)
1) Vehicle	1					
2) Opacity	0.1795	1				
3) Politicians	0.0894	0.4577*	1			
4) Strategic industry	0.1887*	−0.3023*	−0.1543	1		
5) Majority	0.2524*	0.3714*	0.1233	−0.1759	1	
6) Bilateral trade agreement	−0.1981	−0.5536*	−0.2729*	−0.0013	0.0482	1

\* p-Value <0.01.

**Table 5**  
Probit results.

Dependent variable: vehicle	
Opacity	0.3208* (0.1680)
Politicians	0.3414** (0.1502)
Strategic Industry	0.2776** (0.1324)
Majority	0.4038*** (0.1441)
Bilateral Trade Agreement	−0.3751** (0.1574)
CC Home	0.0006 (0.0048)
SPRF	0.3418* (0.1981)
Foreign/Total Assets	−0.6102** (0.2705)
Crisis	−0.3708*** (0.1213)
Market Capitalization/GDP Target	−0.0005 (0.0009)
CC Target	0.0015 (0.0031)
Obs.	509

Legend: Standard errors in round brackets. Regressions are estimated through a probit procedure with an intercept term.

\* p-Value <0.1.

\*\* p-Value <0.05.

\*\*\* p-Value <0.01.

(Filatotchev et al., 2007), and was already used in SWF studies (Knill et al., 2012b). We estimate the following multinomial logit model:

$$VehicleType = f(Opacity, Politicians, StrategicIndustry, Majority, BilateralTradeAgreement, V). \quad (II)$$

*Vehicle Type* is a categorical variable and assumes four different values: 1 for financial vehicles (*Financial Vehicle*), 2 for corporate vehicles (*Corporate Vehicle*), 3 for SWF-controlled vehicles (*SWF-Controlled Vehicle*), and 0 for the baseline category (i.e. cross-border SWF investments that did not use a vehicle). The likelihood to fall in the outcome  $j$  is  $p_j = \exp(X'\beta_j) / [1 + \sum_{j=1}^4 \exp(X'\beta_j)]$ .

Results from the multinomial logit estimates are shown in Table 6. In columns I, II, and III, we show the results related to the likelihood that cross-border SWF investments are made through financial vehicles, corporate vehicles, or SWF-controlled vehicles, respectively. As to our first hypothesis, fund opacity increases the likelihood to use SWF-controlled vehicles. The coefficient of the variable *Opacity* is statistically significant at 1% confidence level. As to the marginal effect, *Opacity* leads to an increase in the likelihood to use SWF-controlled vehicles of +6.9% (significant at 1%). As to Hypothesis 2, politicized foreign SWFs are more likely to use corporate and SWF-controlled vehicles: the coefficients of the variable *Politicians* are positive and statistically significant at 10% and 5% in columns II and III, respectively. However, while the marginal effect on the use of corporate vehicles is +7.4% (significant at 10%), the one on SWF-controlled vehicles is +3.7% and only close to significance (p-value = 0.105). As regards our third hypothesis, a strategic target increases the likelihood to use a corporate vehicle: the coefficient of the variable *Strategic Industry* is positive and statistically significant at 5%, and the associated marginal effect is +7% (significant at 5%). As regards Hypothesis 4, when taking a majority stake in the equity of the portfolio company, foreign SWFs are more likely to use corporate vehicles. The coefficient of the variable *Majority* is positive and statistically significant at 1%, and the marginal effect is very high: +13.8%, significant at 1% confidence level. Even though the coefficient of the variable *Majority* is also positive and statistically significant at 10% in column I, the associated

**Table 6**  
Multinomial logit results.

	Financial vehicle		Corporate vehicle		SWF-controlled vehicle	
	I		II		III	
Opacity	−0.0620 (0.3310)		0.5436 (0.4398)		1.6930*** (0.5549)	
Politicians	0.1122 (0.2741)		0.8089* (0.4244)		1.0371** (0.5258)	
Strategic industry	−0.0265 (0.2616)		0.6494** (0.3213)		−0.1183 (0.5074)	
Majority	0.5683* (0.3025)		1.4011*** (0.3400)		−0.4333 (0.5754)	
Bilateral trade agreement	−0.0915 (0.3052)		−1.5597*** (0.4252)		−0.6016 (0.8162)	
CC home	0.0085 (0.0062)		−0.0278*** (0.0088)		−0.0309*** (0.0102)	
SPRF	−0.6341 (0.4042)		2.1537*** (0.5570)		−12.2679 (525.3823)	
Foreign/total assets	−1.9307*** (0.5687)		−0.5356 (0.6807)		−0.1274 (0.7118)	
Crisis	0.0969 (0.2473)		−2.0556*** (0.3318)		−0.4753 (0.4425)	
Market capitalization/GDP target	−0.0001 (0.0017)		−0.0040 (0.0033)		−0.0038 (0.0048)	
CC target	−0.0052 (0.0053)		0.0146 (0.0090)		−0.0053 (0.0100)	
Obs.	509		509		509	
Log likelihood	−455.02802		−455.02802		−455.02802	

Legend: Standard errors in round brackets. Regressions are estimated through a multinomial logit procedure with an intercept term. In column I, results related to the use of a financial vehicle. In column II, results related to the use of a corporate vehicle. In column III, results related to the use of a SWF-controlled vehicle.

\* p-Value <0.1.

\*\* p-Value <0.05.

\*\*\* p-Value <0.01.

**Table 7**  
Probit results.

Dependent variable: third-country vehicle	
Opacity	−0.3276 (0.2919)
Politicians	0.6126* (0.3213)
Strategic industry	−0.7871*** (0.2451)
Majority	0.2211 (0.2368)
Bilateral trade agreement	0.4777 (0.2979)
CC home	−0.0089 (0.0101)
SPRF	−0.5148 (0.3556)
Foreign/total assets	0.4004 (0.4316)
Crisis	−0.1220 (0.2252)
Market capitalization/GDP target	0.0012 (0.0021)
CC target	−0.0328*** (0.0081)
Obs.	217
Pseudo R <sup>2</sup>	0.3305

Legend: Standard errors in round brackets. Regressions are estimated through a probit procedure with an intercept term.

\* p-Value <0.1.

\*\*\* p-Value <0.01.

marginal effect is not statistically significant. Finally, the presence of bilateral trade agreements between the SWFs and target country reduces the likelihood that SWFs use corporate vehicles (−15.7%, statistically significant at 1%), while such bilateral relations have no impact on the use of financial vehicles and SWF-controlled vehicles. An interesting finding is related to the control of corruption in the home country. While in Table 5 we did not find a significant effect, when splitting among vehicle types we find that more corrupt home countries are more likely to use corporate and SWF-controlled vehicles. The coefficients of the variable *CC Home* are negative and statistically significant at 1% in both columns II and III.

As regards the potential effect of the country in which the vehicle is located, we focus on the 212 cross-border SWF investments that use a vehicle. We use the following probit model specification:

$$\Pr(\text{Third-CountryVehicle}_i | \text{Vehicle}_i = 1) = \gamma_0 + \gamma_1 \text{Opacity}_i + \gamma_2 \text{Politicians}_i + \gamma_3 \text{StrategicIndustry}_i + \gamma_4 \text{Majority}_i + \gamma_5 \text{BilateralTradeAgreement}_i + \eta V + \varepsilon_i \quad (\text{III})$$

*Third-Country Vehicle* is a dummy variable that equals one if the vehicle is not located in the target country, i.e. a country which is different from the home and the host one. Results are shown in Table 7. As to our hypotheses, the statistically significant results are the following. First, when using vehicles, politicized foreign SWFs are more likely to invest through a vehicle located in a country which is different than the target country: the marginal effect is +23.5% (significant at 5%). Second, when using an investment vehicle and targeting strategic industries, foreign SWFs prefer to invest by means of a vehicle which is located in the target country. The marginal effect is −30.3% and it is significant at 1% confidence level. Finally, as to the control variables, the higher the corruption in the target country, the higher is the likelihood that foreign SWFs invest in vehicles that are not located in the target country.

### 5.3. Robustness checks

To test the robustness of our results, we perform several checks. First, as to the variable *Opacity*, we follow Drezner (2008), who highlights a lower transparency degree of SWFs when compared to mutual funds or pension funds. Thus, we tried a different threshold provided by Bagnall and Truman (2013), i.e. the average score of the SWFs alone (excluding SPRFs), which is equal to 54. Results are fully in line with those shown in Section 5, and are available upon request from the authors. Second, even though the variable *Bilateral Trade Agreement* could represent a good proxy for the political relations between country pairs (Hoekman and Kostecki, 2009), such variable does not match that used by Knill et al. (2012a). In unreported regressions, we inserted the Gartzke's "S" measure as suggested by Gupta and Yu (2009) and calculated using United Nations voting records (source: United Nations General Assembly Voting Data).<sup>15</sup> More specifically, we used the most updated source of data (Voeten, 2013; Bailey et al., in press) and built the political relations variable according to the Eq. (1) as shown in Knill et al. (2012a). Results are fully in line with those shown in Section 5, and are available upon request from the authors. Third, even though Drezner (2008) claimed that SPRFs and sovereign funds seem to have a similar asset allocation – and thus a similar balancing between financial and strategic objectives – we substitute the variable *SPRF* with another dummy variable (*Strategic Goal*) that equals one if the fund is strategic. In this paper, we replicate the same criterion used by Bernstein et al. (2013, p. 224). The authors categorize a SWF as "strategic if its stated investment goals are the management of the government's physical assets, the acquisition of strategic assets, or domestic development", and as "nonstrategic if its stated goals are investment of oil/commodity revenues, currency reserve management, or pension funding". To this extent, we check the information on the SWF profiles provided by the report of J.P. Morgan (Fernandez and Eschweiler, 2008). Results are fully in line, and are available upon request from the authors.

<sup>15</sup> For more details see the website:

<https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/12379>. The authors are grateful to an anonymous reviewer for this suggestion.

Fourth, SWFs that are less sophisticated and/or more recently created are less likely to have the internal human capital to manage all of their investments, and especially in the alternative investments asset class (e.g. private equity, venture capital, hedge funds, real estate). These SWFs are also more likely to be less transparent for straightforward reasons. Thus, transparency in this context might actually be an endogenous proxy for how sophisticated the SWF is. To limit this potential concern, we add to our model specifications a variable capturing the reliance of SWFs on external managers (similarly to the variable *External Managers* used by Bernstein et al., 2013), who might increase the likelihood of SWFs to leverage potential opportunities available on the global capital markets. This variable is a dummy that equals one if the focal fund relies on external managers or advisors. We collected this information through several sources: Lexis Nexis, funds' websites, news sources, and the SWF profiles provided by the report of J.P. Morgan (Fernandez and Eschweiler, 2008). Results are fully in line with those shown in Section 5, and are available upon request from the authors. There is no effect of the variable *External Managers* on funds' cross-border strategies. However, the variable *External Managers* might not fully capture how sophisticated the SWF is, or how much it has to resort to external managers for a specific investment. Thus, we also control for fund size (total assets or foreign assets; source: Truman, 2009). Also in this case, results are fully in line with those shown in Section 5, and are available upon request from the authors. Fifth, using the period 2008–2013 as crisis years may be viewed as arbitrary. Therefore, we tried several thresholds and the results are fully in line with those shown in Section 5. Sixth, some SWFs might own (and use) many financial vehicles (e.g. banks) also because the financial industry typically provides a good hedge against oil's price fluctuations (Bertoni and Lugo, 2013). Hence, we include a control dummy for whether the SWF is oil-based. Results are fully in line with those shown in Section 5, and are available upon request from the authors. Finally, we re-estimated the standard errors of the variables included in our probit and multinomial logit models through a clustering by deal, SWFs' country, SWFs' world region (North America, Europe, Asia-Pacific, Middle East and North Africa), and year. Results are in line with those shown in Section 5, and are available upon request from the authors.

## 6. Discussion and conclusions

In this study, we have investigated the strategies driving cross-border SWF investments worldwide. In particular, we have focused on how SWFs internationalize their activities through cross-border acquisitions. To study the entry mode of SWFs in foreign markets we have analyzed the use of investment vehicles – in the form of financial or corporate companies, or SWF majority-owned firms/subsidiaries. Given that SWF investments often face hostility due to their opaque nature and potential political influence (Bernstein et al., 2013; Bortolotti et al., 2015), they may strategically choose ad-hoc entry mode strategies to minimize the target country's risk perception. In particular, we argue that, by signaling the passive nature of their cross-border investments, SWFs can reduce the likelihood of hostility when entering foreign countries. In fact, the use of investment vehicles enables them to more directly signal the passive investment intent. On the one hand, investment vehicles add a “tangible” organizational layer between the SWF (and its politicians) and the target foreign firm. On the other hand, the use of an investment vehicle limits the ability of the SWF to directly influence the target firm's choices, and monitor the local managers.

Building on the above arguments, we proposed a multi-level set of potential determinants of the use of investment vehicles in SWF cross-border acquisitions. We argued that some characteristics of the SWF, such as its opacity and politicization, represent additional obstacles for the target country to clearly distinguish the strategic investment goal from the political agenda of the SWF's country government. Moreover, also deal-specific characteristics can drive the use of an investment vehicle in order to more directly show the passive investment approach. When SWFs target a strategic industry or acquire majority equity stakes, the concerns of the target country's government and the public opinion can be more severe as the risk of political interference becomes concrete; therefore, this urges the need to signal a hands-off approach. Instead, at country level, the existence of bilateral trade agreements between the SWFs and target country diminishes the likelihood of using strategic vehicles, because such relations act as bridges between countries and governments, and mitigate the fear related to the potential political interference of the SWF.

Using a new dataset on SWF investments, we empirically tested our hypotheses and the results confirm that fund opacity, fund politicization, strategic industry targets, and majority ownership choices lead to the likelihood of greater use of vehicles, while pre-existing bilateral trade agreements negatively affect such investment strategy. To complement our main results, we presented additional evidence showing how the SWF-, deal- and country-level determinants also influence the choice of vehicle used to invest cross border and its geographical location. Specifically, when we distinguish among the different types of vehicles, fund opacity increases the likelihood to use SWF majority-owned vehicles, while fund politicization, strategic industry targets and majority ownership choices increase the likelihood to use a corporate vehicle. Bilateral trade agreements reduce the use of corporate vehicles. As to the geographical location of the vehicle, politicized SWFs are more likely to invest cross-border through a vehicle located in a third country, i.e. a country which is different from the home and the host one. This location choice may signal an even more passive investment approach. Instead, targeting foreign strategic industries leads to invest by means of a vehicle which is more likely located in the target country. On the one hand, the SWF wants to signal a passive intent through the use of an investment vehicle. On the other hand, a vehicle located in the target country allows for better monitoring of the portfolio company, because geographical distance between the SWF and the portfolio company leads to a more difficult and costly monitoring.

Our theoretical arguments and empirical findings provide an array of contributions to the existing IB and finance literatures, shedding light on the strategies employed by SWFs when investing in a foreign country. From the IB perspective, to the best of our knowledge this study represents the first attempt aimed at analyzing how SWFs internationalize their activities, providing a complementary perspective to the more traditional theoretical approaches based on private multinational enterprises and government-related organizations, i.e. SOEs. Further, from a theoretical point of view we extend the existing literature on entry mode choices by analyzing the determinants of the use of an investment vehicle in cross-border acquisitions. We also provide interesting insights on the

internationalization strategies based on the case of SWFs, which have implications for the more general stream of non-market political strategies. As to the finance and SWF literature, we complement the existing theory about investor activism. While previous studies (Bortolotti et al., 2015; Dewenter et al., 2010; Kotter and Lel, 2011; Chhaochharia and Laeven, 2009; Fernandes, 2014) investigate the relationship between investor activism and firm value, we provide theoretical and empirical insights about the conditions influencing the use of investment intermediaries in the case of SWFs' internationalization strategies. Finally, we offer original theoretical insights about the role played by fund opacity and fund politicization in the international expansion of SWFs.

Our results raise some interesting questions for future research. First, we developed our testable implications under the hypothesis that SWFs use vehicles to signal a passive approach. However, there may be alternative explanations for the observed results. For instance, under exogenous uncertainty – as that related to frictions with home-country governments – investments through vehicles entail a more flexible strategy than direct investments. In fact, a direct investment maximizes the exposure of the SWF in the target country and may attract more hostility by the host-country government. Alternatively, the use of vehicles may be also related to the unique skills and expertise of intermediaries that are useful to maximize investment returns. Second, we showed which are the determinants of the strategic use of vehicles in cross-border SWF investments. However, future studies should test the effect of (different types of) vehicles on the target companies' performance, such as stock returns for listed companies, and operating performances for both listed and unlisted firms. Third, future studies should look at the impact of foreign SWFs on the corporate governance of target companies (Aguilera et al., 2016), and whether this effect is moderated by their investment strategy. As suggested by Strange et al. (2009) and Gilson and Milhaupt (2008), future research should take into account the potential synergies between corporate governance and IB research. To this extent, cross-border SWF investments represent a very interesting context. Fourth, future research should focus on strategies followed by SWFs to indirectly control their target companies. As highlighted by the finance and economics literature (e.g., Villalonga and Amit, 2009), indirect ownership of blockholders – such as SWFs – may be exerted through trusts, foundations, limited partnerships, and other corporations (including the types of vehicles analyzed in this work). Future studies should investigate the sources of wedge between cash-flow and control rights in the form of dual-class stocks, board over-representation, and voting agreements (La Porta et al., 1999; Claessens et al., 2000; Faccio and Lang, 2002). While the passivity of SWFs reduces political risks, it also reduces SWFs' ability to monitor portfolio companies' management and thus raises agency costs. Moreover, when considering horizontal agency costs (Young et al., 2008; Colombo et al., 2014), SWF investments might increase such costs because of their “not purely financial” nature. Fifth, future studies should be aimed at understanding if (and how) SWFs' entry mode strategies differ from other government-related organizations, such as SOEs. Karolyi and Liao (2010), in fact, compare the determinants of cross-border acquisitions undertaken by government- and corporate-related organizations, finding that there is a systematic difference in the motivations of their investments. While the authors demonstrate that the motivations of SWF investments are comparable with the government acquisitions, more needs to be analyzed in terms of investing strategies, especially in cross-border settings. Sixth, future research should investigate FDI and vehicles' location choices of SWFs, which is another strategic decision widely studied in the IB literature. In doing so, future research should incorporate insights from the economic geography literature, which provides important insights on the political dimensions of SWF investments. Seventh, linking the previous point to the classification of the investment vehicles we proposed in this work, it might be worthwhile to relate the location choice of both the target company and the investment vehicle with the type of vehicle, and analyze how the SWF-, deal- and country-specific characteristics may moderate this relationship.<sup>16</sup> Finally, we implicitly assumed that the use of investment vehicles signals a hands-off approach that mitigates hostility and skepticism faced by SWFs in the foreign country. However, this entry mode strategy may be effective only under certain conditions, and future studies should analyze such conditions by pinpointing the actual reactions of the host government and public opinion to the SWF investments.

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