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The Corporate Finance of Multinational Firms  
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**ABSTRACT**

An increasing fraction of firms worldwide operate in multiple countries. We study the costs and benefits of being multinational in firms' corporate financial decisions and survey the related academic evidence. We document that, among U.S. publicly traded firms, the prevalence of multinationals is approximately the same as domestic firms, using classification schemes relying on both income-based and a sales-based metrics. Outside the U.S., the fraction is lower but has been growing. Multinational firms are exposed to additional risks beyond those facing domestic firms coming from political factors and exchange rates. However, they are likely to benefit from diversification of cash flows and flexibility in capital sources. We show that multinational firms, indeed, have a better access to foreign capital markets and a lower cost of debt than otherwise identical domestic firms, but the evidence on the cost of equity is mixed.

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## **1. Introduction**

As the world economy has become more integrated, there has been an increase in the number of multinational firms. As of 2017, about half of the publicly-traded firms in the U.S. are multinationals. For the average multinational firm, foreign income (sales) represent about 40% of aggregate income (sales). The extent of international operations of multinational firms is similar for international firms in MSCI World developed countries. As the global economy becomes more integrated, the fraction of firms with foreign sales also rose rapidly in emerging markets. Given that multinational firms are such significant players in the world economy, understanding their financial policies is an important task.

Operating in more than one country can affect a firm's financial decisions in a number of ways. Most importantly, being multinational appears to affect both firms' cost of finance and their access to capital during poor economic times. An important reason for financing advantages of multinational firms is that they have more flexibility in their potential sources of financing than domestic firms.

In principle, any firm could borrow from any bank in the world or issue public equity or debt in any country. However, for a number of reasons, it is usually much more cost-effective for firms to raise capital in locations where they have operations (see Jang (2017)). Financing international activities from local capital provides a natural hedge against currency risks. Furthermore, additional choices of where to raise capital can allow a firm to better optimize over rates, and also to diversify its sources of financing, which can be valuable when financing becomes scarce in one part of the world.

In addition, being multinational diversifies a firm's cash flows across countries and minimizes the impact of country-specific shocks. Therefore, multinational firms have lower cash-

flow volatility than otherwise similar domestic firms. This lower cash-flow volatility is likely to reduce a firm's credit risk and cost of financing, and to increase its overall debt capacity. Consistent with the choice of location of borrowing and diversification across countries lowering the cost of debt, we document empirically that multinational firms pay lower spreads on their bank loans, holding other factors constant. However, the results on the cost of equity are mixed, with some studies finding that being multinational lowers the cost of equity while others find that it raises the cost of equity.

While being a multinational incurs benefits through diversification of capital sources and by allowing for tax arbitrage across countries, it also entails costs. Firms operating in multiple countries face political risks that are likely to be larger than those faced by domestic companies. A multinational company is a "foreign" company in at least one country, and foreign companies are often discriminated against by regulatory authorities. Dinc and Erel (2013) provide empirical evidence on how economic nationalism, which is defined as preference for the native and against the foreigner, has both direct and indirect economic impact on acquisitions and impedes international capital flows. The authors show that governments implement national policies against foreign acquisition bids through a number of methods, including playing for time by delaying approvals by regulatory agencies, using golden shares in previously privatized companies, moral persuasion by publicly opposing the deals, and providing financing to the rival bidders from national bank. Even if a multinational firm is operating in a country in which it is treated well by the government, there is always risk of a policy shift, potentially occurring when the government changes, that could affect the multinational firm. This political risk is an incremental cost faced by multinational firms but not by domestic ones.

Multinational firms also face exchange-rate risk. They receive revenues in a mix of currencies and have liabilities, both in terms of production costs and interest payments, which are likely in a different mix of currencies. Therefore, movements in exchange rates create a mismatch between the income the company receives and its liabilities, creating a demand for hedging foreign exchange risk.

This paper surveys the academic literature on the costs and benefits of multinational firms relative to domestic ones with respect to their corporate financial decisions. Section 2 characterizes multinational firms and presents detailed characteristics of multinationals in the U.S. and overseas. In Section 3, we provide detailed summary statistics on the capital structure of multinational firms and compare their capital structure with the capital structure of domestic firms. Section 4 discusses the way in which firms diversify their sources of financing and the impact of this diversification plays on multinational firms' costs of financing. Section 5 discusses the additional risks faced by multinational firms in comparison to the domestic counterparts. Section 6 provides a short summary.

## **2. Characteristics of Multinational Firms**

There are a number of ways in which one could define a multinational firm. Since none of these definitions are perfect, we utilize two different approaches. First, we use foreign pretax income to characterize multinational firms. Following Jang (2017), we create a dummy variable that takes on a value of one when a firm reports non-zero foreign income in the previous three years as a measure of whether a firm is multinational.<sup>1</sup> However, this approach could

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<sup>1</sup> We use pre-tax foreign income (PIFO) in *Compustat* and international operating income (WC07126) in *Worldscope*. Although Jang (2017) complements this definition using information on the location of subsidiaries from firms' 10K filings, we concentrate on this definition based on non-zero foreign income definition due to data constraints.

mischaracterize firms that do not report foreign income when the percentage of foreign income is relatively low compared to overall income or when it is negative. Therefore, as a second measure, following Denis, Denis, and Yost (2002), we use information on foreign sales from the *Compustat Geographic Segment* database in the U.S. or *Worldscope* for foreign firms to define internationally diversified firms.<sup>2</sup> Specifically, a firm is defined as multinational if at least 5% of its sales are from outside of its home country. According to this definition, however, a firm that exports goods to other countries would be defined as a multinational firm even if it does not have any assets outside its home country.<sup>3</sup>

Panel A of Table 1 presents statistics on the number of multinational and domestic public firms in the U.S. between 1986 and 2017 using both definitions. The percentage of multinational firms defined using foreign income (sales) increased from 20% (18%) to 48% (40%) over the last 32 years. Interestingly, Figure 1 documents the increase in the ratio of multinational firms despite the significant decline in the number of U.S. public firms over time (see Doidge, Karolyi and Stulz (2017)). The number of public firms in the U.S. decreased almost by half over the 32 years in our sample, with surviving firms being more than twice as likely to be multinational.

There are a number of reasons for the sharp decline in the number of public firms in the early 2000s, but a particularly important one is the increasing role of private capital markets during this period. Many public firms had leveraged buyouts and went private, IPOs were rare despite the strong economy, and private capital markets allowed startups to remain private for a very long

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<sup>2</sup> We use international sales (WC07101) in *Worldscope*.

<sup>3</sup> The definitions for multinational firms in both approaches might not be comparable across countries as reporting requirements for foreign income or foreign sales might vary by country. In case of U.S., all publicly traded firms are required to disclose foreign income or foreign sales separately for material foreign operations or sales. For example, SEC Regulation §210.4-08(h) requires any U.S. public firms to separately disclose pre-tax income and income tax expenses for domestic and foreign operations, if any of these measures for non-U.S. operations exceed 5% of the consolidated total. Under SFAS No. 131, any U.S. public firms must report separately information about an operating segment if its reported revenue is 10% or more of the combined revenue of all reported operating segments.

time. For example, Uber, one of the most successful startups of this time period was founded in 2009 and remained private until 2019, raising \$24.7 billion privately over that period.<sup>4</sup> Moreover, as shown by Doidge, Karolyi and Stulz (2017), there has been a significant increase in the delisting rate in the last twenty years, largely due to increased pace of acquisitions of public firms by other public firms. These acquisitions have also increased the average size of remaining public firms.

Currently, U.S. public firms are fairly evenly split between domestic and multinational, with 1,257 firms classified as multinational firms and 1,390 as domestic firms using the definition based on the existence of foreign income in the previous three years. The split is similar when we concentrate on foreign sales as a measure of being multinational (with 1,061 multinational and 1,586 domestic firms). For a typical U.S. multinational firm, 40% of sales are attributed to foreign sales in 2017, and we get a similar ratio (38%) when we use foreign income relative to total income.

Panel B of Table 1 presents frequencies for an international sample of firms. We report results using both the definition based on foreign income and the one based on foreign sales. We first report statistics for the 22 developed countries included in the *MSCI World Index* and then for 19 emerging countries included in the *MSCI Emerging Markets Index* (except Egypt, Pakistan, Peru, Qatar, and UAE).<sup>5</sup> This panel indicates that the ratio of multinational firms has been stable between 30-40% over the 18 years of our sample when we use foreign sales to identify multinational firms. As of 2017, 34% of firms from MSCI developed countries and 33% of firms from MSCI emerging countries are multinational firms. In 2017, the average multinational firm in developed (emerging) countries attributed 58% (44%) of sales to foreign sales, slightly higher than the 40% average for U.S. multinational firms. These differences in the fraction of firms that are

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<sup>4</sup> See Crunchbase for details of Uber's financing history.

<sup>5</sup> We drop five countries – Egypt, Pakistan, Peru, Qatar, and UAE – because of poor coverage of foreign sales or foreign income variables in *Worldscope*.

multinational likely reflect differences in the nature of firms in different countries and also the likelihood that firms in different countries go public.

Using foreign income to identify multinational firms in countries other than the U.S. could be problematic due to variations in reporting requirements across countries. In addition, as we noted above, it is possible for firms not to report foreign income when the percentage of foreign income is relatively low compared to overall income or when it is negative. According to this definition, percent of firms that were multinationals was 17% (8%) in 2000 and 5% (3%) in 2017 in MSCI developed (emerging) markets. However, we know that, among firms that report foreign income in the past three years, on average, 38% (26%) of their income was foreign in 2017.

Panel C presents the same numbers across individual countries averaged over 2000-2017. While U.S., Ireland, U.K, Hong Kong and Netherlands have the highest ratio of multinational firms (classified using the foreign income definition), China, Columbia, Russia, India, and Brazil have the lowest ratios of such firms. Panel C also reports debt-to-assets and cash-to-assets ratios of multinational and domestic firms in these countries. In Figure 2, we visualize the differences in these ratios between multinational firms and domestic firms. The reference line identifies the zero difference in leverage or cash ratios for multinational and domestic firms. Consistent with the idea that multinational activity increases a firm's debt capacity, many countries are located above the reference line, showing that the leverage ratio of multinational firms tends to be higher than that of domestic firms, especially in emerging markets. We also find that, with a few exceptions of emerging countries such as Czech Republic, India, and Brazil, multinational firms have much lower cash holdings than domestic firms. One exceptional case is the U.S., where multinational firms hold more cash than domestic firms on average, consistent with the evidence documented by Pinkowitz, Stulz and Williamson (2016).

Next, we characterize the industry distribution of multinational firms. Table 2 presents the percentage of multinational firms across industries in the U.S. (Panel A), and in MSCI developed and emerging countries (Panels B and C) across twelve Fama-French industries.<sup>6</sup> As also shown in Figure 3, some industries stand out in terms of the fraction of multinational firms in the U.S.: Chemical and Allied Products (61%), Manufacturing (49%), Business Equipment (48%), and Consumer Durables (48%). The other U.S. industries have much lower percentages, with 33% or much less of their firms being multinational. Differences across industries are less evident in both other developed countries and emerging countries. While Finance and Utilities have the lowest fraction of multinational firms in the U.S. (1-5%), firms in those industries are much more globalized in other developed countries (about 12-13%). In addition, compared with multinational firms in emerging countries, the ones in developed countries rely more on foreign income, in particular, in Oil, Gas, and Coal Extraction and Chemical and Allied Products industries (40-44% in the U.S. and 31-40% in other developed countries). While the fraction of multinational firms in the U.S. is relatively low, multinational firms in Utilities and Finance generate 17-29% of income overseas.

Multinational firms are likely to differ from domestic firms in a number of ways. In Table 3, we present firm-level characteristics of multinational firms and domestic ones. Panel A contains statistics for the U.S. sample, covering 1986-2017. This panel indicates that multinational firms tend to be larger and more stable than domestic firms. Average total assets are almost twice as high for multinationals as for domestic firms, and multinationals' average market capitalization is almost four times as high. Cash flows are also much higher, and importantly, the standard deviation of cash flows is statistically significantly lower for multinationals, possibly because of

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<sup>6</sup> We rely on the foreign-income-based definition of multinational firms here, and throughout the rest of the paper. Similar tables created based on foreign-sales-based definition are available upon request from the authors.

multinationals' cash flows being diversified across countries. In addition, multinational firms have a higher likelihood of being rated. Finally, compared with domestic firms, multinational firms hold more cash, carry less leverage as a ratio of their asset size, and they are more likely to have zero debt.

In Panel B, we present the average statistics for MSCI World (developed) vs MSCI emerging countries for 2000-2017. Multinationals from developed countries, with mean total assets of \$4.8 billion, are on average smaller than U.S. multinationals, with \$6.3 billion in average total assets. Multinationals from emerging countries are, on average, much smaller, with \$2.6 billion in total assets. The average market capitalization follows the same rankings, with multinationals from the U.S. at \$4.9 billion, developed countries at \$2.9 billion, and emerging countries having \$1.6 billion of average market capitalization.

When we compare multinational firms with domestic firms, we see that multinationals are larger than their respective domestic firms in terms of both total assets and market capitalization. Like U.S. multinational firms, foreign multinationals have higher cash flows and enjoy lower volatility of their cash flows. Consistent with the pattern observed in Figure 2, unlike U.S., foreign multinationals in other developed countries keep lower cash in reserve than domestic firms. While multinational firms in developed countries have a lower debt ratio, MNCs in emerging markets tend to have a slightly higher debt ratio and are less likely to carry zero debt than domestic firms. This pattern potentially reflects the higher debt capacity of multinationals, especially in emerging countries with weak external financial markets.

### **3. The Capital Structure of Multinational Firms**

#### **3.1. Capital Structure of U.S. Multinationals**

In Table 4, we provide detailed summary statistics for capital structures of U.S. multinational firms, first for the entire universe of public firms and then for firms of differing credit quality. We start by reporting detailed characteristics for all firms, where the majority of firms are unrated. To compare similarly rated firms, we analyze investment-grade rated (Panel B) and speculative-grade rated (Panel C) separately.

Table 4 indicates that U.S. multinational firms are more likely to hold cash, as a percentage of their assets, but less likely to borrow in the debt market. The average cash-to-assets ratio is 16.7% for multinationals while it is only 13.5% for domestic firms in the U.S. However, the mean total debt-to-asset ratio is 23.7% for multinationals and 26.5% for domestic firms (although median ratios are both 21%). Larger cash holdings likely reflect tax effects as multinationals have incentives to hold cash earned overseas rather than pay repatriation taxes for cash returned to domestic shareholders. The differences in debt ratios would occur if these firms followed the “pecking order” theory of capital (Myers and Majluf (1984)). Since multinationals are likely to have been historically successful in generating cash flows and diversifying internationally, they would not have had to go down the pecking order as often as similar domestic firms would. Thus, compared with domestic firms, multinational firms would carry less debt on their balance sheets.

When we examine the details of the debt structure (i.e., senior bonds, subordinated bonds, commercial paper or bank debt), we see that the lower total debt ratio for multinational firms occurs because of multinationals’ bank loans being lower as a ratio of total debt. Term bank loans, on average, form 20% of total debt for domestic firms but only 14% for multinational firms, with the difference being statistically significant at the 1% level. Compared with domestic firms, an

average multinational firm relies more on senior bonds or notes (30% of total debt vs. 19.3% of total debt). They are also more likely to issue convertible debt and commercial paper. On the other hand, domestic firms, since they tend to be less credit-worthy, are 11% more likely to borrow with collateral (38% vs. 27%).

Next, we compare capital structures of U.S. multinational and domestic firms grouped by credit ratings. We first compare investment-grade rated firms (Panel B of Table 4) and then speculative-grade rated ones (Panel C of Table 4). Rated multinational firms, investment grade or speculative grade, hold more cash but have less total debt, especially long-term debt, compared with respective domestic firms. As expected, investment-grade firms rely more on senior bonds or notes and less on bank debt. The ratio of senior bonds or notes, as a fraction of debt, increases to 58.4% for investment-grade-rated multinational firms from 30% overall and the ratio of bank term loans, as a fraction of debt, drops to 3% for investment-grade-rated multinational firms from 14% overall. For speculative-grade firms, we see different patterns in the details of debt structure for multinationals in comparison to domestic firms: the average multinational firm has more term loans, as a fraction of its total debt, than the average domestic firm (21% vs 16%) while the ratio of senior bonds and notes is weakly different from each other for speculative-grade firms.

Holding credit ratings constant is one way to limit the sample to comparable multinational and domestic firms. Another way is to focus on firms with similar asset sizes. Next, in Table 5, we analyze multinationals' capital structures relative to those of domestic firms within different size buckets. We first compare large multinational firms with similarly-sized domestic firms (Panel A). These large domestic firms have total assets larger than or equal to the median total assets of multinational firms, with the median estimated each year. The match creates relatively similar firms in terms of total assets, with mean total assets of \$19.64 billion for multinational firms and

mean total assets of \$15.53 billion for large domestic firms. Grouping by asset size, the difference in market capitalization is still substantial, about \$14 billion for multinational firms compared to \$4.7 billion for domestic firms of similar asset size. Although large multinational firms carry lower leverage than large domestic firms, they are more likely to issue long-term debt, which is dominated by senior bonds and notes (44% vs. 28%). The cash ratio for these large multinational firms is, on average, 12.5%, which is almost double the ratio for large domestic firms (6.7%). Large multinationals tend to have a higher leverage than a typical multinational firm (28% vs. 24%), and again, lower than the leverage of similar domestic firms.

In Panel B, we compare smaller-than-median domestic firms with multinational firms whose assets are smaller than or equal to the median asset of the domestic firms, with the median estimated each year. Average total assets (market capitalization) for this subsample of multinational firms is \$252 (\$401) million. Again, cash ratios are larger, and leverage is lower, for multinational firms than for domestic firms. However, for these smaller multinational firms, bank loans are relatively more important than senior bonds or notes (35% bank debt vs 12% senior bonds and notes, as a percentage of total debt).

In summary, these tables show that there are clear differences in cash holdings, debt ratios, or capital structure details between U.S. multinational and domestic firms. These differences exist within size and credit rating categories.

### **3.2. Capital Structures of Non-U.S. Multinational Firms**

In Table 6, we tabulate details of capital structures for international multinationals in comparison to their domestic counterparts, first for MSCI developed countries (Panel A) and then for MSCI emerging countries (Panel B). An important difference with the U.S. sample is that

foreign multinational firms in developed countries, compared with domestic firms in their respective regions, hold less cash as a fraction of their total assets (14.6% vs. 16.6%). Also, even though their leverage ratio is similar to U.S. counterparts, non-U.S. multinational firms rely less on the senior bond market for financing, but more on the bank debt market. For example, as discussed above, bank debt is on average 26% of total debt for U.S multinational firms (and 20% of total debt for large U.S. multinationals, which are similar in size to the multinationals from other developed countries). However, for multinationals from MSCI developed or emerging countries, this ratio is over 50%.

#### **4. Capital Raising by Multinational Firms**

##### **4.1. Where do Multinationals Get Financing?**

An important consideration when a firm raises capital is the location of the capital provider. Being geographically closer to the capital provider reduces information asymmetry between the lenders and the borrowers (see, e.g., Sufi (2007)). Given that they have assets in multiple countries, multinationals can more easily raise capital from multiple countries. The location of where to raise capital represents an important corporate financial decision faced by multinational firms.

##### **4.1.1. Debt Financing**

The two most important forms of debt finance are publicly traded bonds and bank debt. Henderson, Jegadeesh, and Weisbach (2006) document that in their sample period (1990-2001), about 20% of all capital raised through bond issues comes from outside the issuing firm's home

country. The most common places of issue of international bonds are the U.S. and Europe, and many issuers are multinationals from countries with less liquid capital markets.<sup>7</sup>

Most large bank loans are syndicated across multiple banks, and the participating banks often come from different countries. Therefore, loans are often made up of capital from multiple countries. Table 7 summarizes these patterns for syndicated loans made to U.S. firms during the period 1990 to 2018. For multinationals, 33% of loans had at least one participating bank from Canada and 32% had at least one from the U.K. Domestic firms also have syndicated loans with foreign banks participating, but to a lesser degree: 23% of syndicated loans to domestic firms had at least one lender from Canada and 16% had at least one lender from the U.K.

Next, we examine the difference in bank loan sources between multinational firms and domestic firms in a regression setting. The sample includes syndicated loans issued to U.S. public firms during the period of 1990-2018 obtained from *Dealscan*, aggregated at the loan package level. We estimate OLS regressions, where the dependent variable is the indicator for including at least one foreign lender in its syndicate in columns (1) and (2), and the percentage of foreign lender as the total number of syndicate members in columns (3) and (4). The main independent variables are the multinational indicator based on non-zero foreign income in past three years and the percentage of foreign income. The regressions include controls of loan features and borrower characteristics and year, industry, borrower rating, and deal purpose fixed effects.

Table 8 presents the results that examine the differences in the sources of loans between multinational and domestic firms, with controls for a number of variables that could potentially affect the structure of the loan. This table illustrates that multinationals are 5% more likely to have at least one foreign lender in the syndicate. In addition, they have 3.5% higher fraction of foreign

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<sup>7</sup> See Henderson, Jegadeesh and Weisbach (2006), Appendix C, for details on the amount of different types of capital that firms from a number of countries receive from each other country.

lenders in the syndicate, which is equivalent to a 16% increase at the mean (0.22). The fraction of a firm's foreign income positively and significantly affects both of these variables. The effects are economically large: they imply that a one-standard-deviation of foreign income (0.245) would increase the fraction of foreign lenders in the syndicate by 2.2 percentage points, which is equivalent to a 10% increase.

#### **4.1.2. Equity Financing**

Firms can also issue equity outside their own country. Henderson, Jegadeesh, and Weisbach (2006) document that about 12% of capital raised by equity issues come from sources outside a firm's home country. While international equity issues are less common than debt issues, they still represent an important consideration in multinational firms' financial decisions.

The most common way to issue equity in other countries is to cross-list the stock on a local exchange.<sup>8</sup> International equity issues through cross-listings are more common for multinational firms than for domestic ones (see Doidge et al. (2009)). In addition, foreign institutional ownership increases with foreign sales (Ferreira and Matos (2008)).

Table 9 compares foreign ownership and the incidence of equity offers from other countries across multinationals and domestic U.S. firms. It is evident from this table that multinational firms have more foreign ownership (4.3% for multinationals vs. 1.8% for domestic firms) than domestic firms. Foreign institutional ownership has constantly increased since 2000 and, as of 2017, 8.4% of equity of multinational firms and 4.0% of domestic firms are held by institutional investors outside U.S. Despite the increase in capital flow overseas, the difference in foreign ownership

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<sup>8</sup> Issuing capital through a cross-listing rather than a private placement or a sale on the local exchange allows for investors to receive communications in their home language and bonds the issuing firm to comply with local securities laws. For a detailed discussion of the way cross-listings work and the regulations that affect them, see Karolyi (1998).

between multinational and domestic firms still remains significant. Like debt, the decision to raise equity overseas is a financial decision that is usually made by multinational firms rather than domestic ones.

#### **4.2. Why Multinational Firms Have a Financing Advantage**

Jang (2017) addresses one way in which multinational firms have a financing advantage over domestic firms. She considers the issue of whether the presence of an operation can facilitate capital-raising in the country where the operation is located. Presumably, the foreign operations can lower information asymmetry and monitoring costs to a capital provider. Jang (2017) documents that firms are more likely to receive bank loans from foreign lenders in countries where foreign subsidiaries are located. In addition, this better access to foreign capital markets can help multinationals raise capital if there are financial market disruptions in one part of the world.

For example, during the Financial Crisis of 2008, capital raising in the U.S. and Europe became extremely difficult. Firms with Asian operations, where capital markets continued to function more or less normally, consequently had an advantage in raising capital so were better able to weather the Crisis. This funding advantage makes multinational firms' income more stable than domestic firms' income. Consistent with this idea, Figure 4 documents that U.S. multinationals' foreign income as a percentage of sales has been growing irrespective of business cycles, while their domestic income declines during down cycles.

Another way in which a multinational firm can take advantage of its foreign presence is by taking advantage of interest rate differences across countries. If rates differ in countries and firms do not perceive that the differences are offset by changes in expected currency movements, then firms can benefit by issuing debt in countries with lower rates. In principle, domestic firms could

raise debt in any country. However, in practice it is much more likely that multinational firms raise capital outside their own country, and as Jang (2017) documents, they are especially likely to raise debt in countries where their foreign operations are located. Consistent with this idea, Henderson, Jegadeesh, and Weisbach (2006) and McBrady, Mortal, and Schill (2010) find that firms are more likely to issue bonds in countries with lower rates, and Keloharju and Niskanen (2001) find that a sample of Finnish companies are more likely to issue foreign bank debt when interest rates in Finland are relatively high. Allen (2019) links these decisions directly to monetary policy; he finds that when the central bank lowers rates in one country, multinational firms in other countries become more likely to raise debt in that country's currency.

Multinational firms, even if they focus on one industry, are much like a multidivisional firm in that each country's operation usually operates separately from the others and thus have different exposures to country-specific shocks. Consequently, much of the analysis in the internal capital markets literature is relevant to multinational firms as well. Diversifying operations and using internal capital markets could in principle lead to cross-subsidization that lowers financial constraints (see e.g., Stein (1997, 2003)). Since a firm's cash flows in different countries are exposed to different shocks, international diversification could reduce the overall volatility of cash flows and lower default risk through cross-subsidization across countries. The diversification of cash flows across countries provides multinationals with a financing advantage over domestic firms even if their marginal source of finance is from domestic sources.

To examine the importance of the cross-country internal capital markets generated by multinational firms, Desai, Foley, and Forbes (2008) compare the way in which large currency depreciations affect multinational and domestic firms. Consistent with the notion that being multinational helps diversify sources of capital, these authors find that U.S. multinational

corporations increase sales, assets, and investment significantly more than domestic firms during and after these currency crises. They also provide direct evidence suggesting that one reason why multinationals are better able to weather large currency depreciations is their ability to use their internal capital markets to capitalize on the competitiveness benefits of large currency depreciations. These results support the notion that multinationals are able to benefit from the cross-country internal capital markets created by their operations in multiple countries.

### **4.3. Estimates of the Multinationals' Cost of Finance**

#### **4.3.1. The Cost of Debt**

Multinationals have a number of advantages over domestic firms in terms of financing costs. Because they are diversified across multiple countries, shocks that affect one country but not others have limited impact, lowering the volatility of their cash flows and decreasing the likelihood of a default. In addition, a multinational can cross-subsidize across countries, allowing it to take advantage of short-term borrowing opportunities and to retain access to external capital if there is a “credit crunch” in one part of the world. However, as is discussed below, multinationals also face additional costs not borne by domestic firms from political risk and exchange rate risk, so it is not obvious whether, on net, multinationals' cost of capital should be higher or lower than domestic firms.

Reeb, Mansi, and Allee (2001) estimate the cost of debt for multinationals, focusing on corporate bond markets. These authors compare the rates paid on newly issued bonds by multinationals and domestic firms. They find that firms with international operations tend to have better credit ratings and therefore higher debt capacities. This finding suggests that, consistent with the diversification arguments, *ceteris paribus*, multinational firms have lower costs of debt than

otherwise identical domestic firms. In addition, the evidence in Reeb, Mansi and Allee (2011) suggests that the lower cost of debt goes beyond what is conveyed by debt ratings, so that the market incorporates the international aspects of firms' operations even more than analysts.

Houston, Itzkowitz, and Naranjo (2007) analyze the time series of syndicated loans in ten countries. These authors find that loans to European firms carry significantly lower spreads than loans to North American firms. They find that multinationals enjoy this cheaper bank funding only by using lead arrangers in Europe. They also find that larger firms on average pay lower spreads on their loans when they borrow from a foreign lender. This evidence suggests that global competition has helped reduce borrowing costs for multinational firms with greater access to lending markets around the world.

We present our own analysis of whether multinationals have a lower cost of debt than domestic firms in Table 10. This analysis uses data from the *Dealscan* database, and presents estimates of equations predicting loan spreads as a function of whether the firm is multinational, as well as a host of other firm-level and loan-level factors that potentially affect spreads. In Column (1), the coefficient on the multinational dummy is -4.4 and is statistically significantly different from zero. This estimate implies that multinational firms pay about 4.4 basis points less on their debt than an otherwise identical domestic firm. In Column (2), we replace the multinational dummy with the fraction of foreign income; the coefficient is also negative (-8.2) and statistically significantly different from zero. Overall, these equations suggest that when firms are more diverse geographically, they pay lower lending rates.

An important issue in interpreting these results is that of causality. The literature finds that multinational firms pay lower lending rates than domestic firms, holding other things constant. However, it is possible that there are other factors that are related both to a firm being multinational

and also to its lending rates that could potentially lead to a spurious correlation between multinationality and lower rates. For example, if more profitable firms with more stable cash flows are more likely to diversify internationally, then these firms would likely borrow at lower rates regardless of the marginal impact of their being multinational. While the correlation between being multinational and lending rates appears to be robust, we cannot definitively say that the causal interpretation is appropriate. Identifying this relation more precisely would be an excellent topic for future research.

#### **4.3.2. The Cost of Equity**

Measuring the cost of equity is typically more difficult than measuring the cost of debt since equity does not have an observable promised yield that equals the amount of interest the firm will pay if it does not default. Perhaps for this reason, the literature's conclusion on the impact of multinationality on the cost of equity is not as clear as it is for the cost of debt, with the results varying depending on the method used.

Baker, Foley, and Wurgler (2009) study the effect of domestic stock market valuations on firms' foreign direct investment (FDI) decisions. The idea is that when valuations are unusually high, the firm faces a particularly low cost of equity, so they have an incentive to use this low cost of equity to make investments. The authors find that when multinationals appear to be overvalued in their home country, they take advantage of their valuation and act as cross-border arbitragers by investing overseas in Foreign Direct Investment. At least some of the time, Baker, Foley, and Wurgler's results suggest that multinationals have a relatively low cost of equity.

A more direct way to estimate the impact of multinationality on the cost of equity is by considering the returns that are earned by multinationals relative to the returns on otherwise

identical domestic firms. Both Fillat and Garetto (2015) and Jang, Wang, and Zhang (2018) use this approach. Both papers document that multinationals have return premiums relative to domestic firms of about 23 basis point per month after controlling for local and global pricing factors. These papers attribute multinationals' higher cost of equity to foreign operational risks that cannot be easily reversed when hit by global downturn. Consistent with this idea, Fillat, Garetto, and Oldenski (2015) and Jang, Wang, and Zhang (2018) find evidence that risk premia are higher for firms operating in countries with higher entry and operational costs coming from factors such as tax rates, development of financial markets, and property rights. Other papers focus on the information costs investors have to pay to obtain and to process information as an explanation of multinational firms' higher cost of equity. For example, Huang (2015) document that there is a delay in the incorporation of global news into multinational firms' stock prices.

This financing discussion does not include tax considerations. There is ample evidence that taxes are an important factor affecting financing in multinationals, perhaps more than domestic firms because of the possibility of tax arbitrage across countries. More detail on the way in which taxes affect the corporate finance of multinational firms is other chapters of this volume.

## **5. Risk Profiles**

As companies operate more globally, they face a number of additional risks beyond those faced by domestic firms. In this section, we discuss two such sources of risk to which multinationals are exposed: *country risk* (including *political risk*) and *foreign exchange risk*.

## 5.1. Country Risk

The term *Country Risk* refers to any factor that varies by country (see Damodaran (2018) for an extensive discussion). Country-level risk could occur because of uncertainty about economic conditions that vary across countries – about the country’s economic growth, the development and stability of a country’s political and legal institutions, and the extent to which the political system favors local firms over foreign ones. Damodaran (2018) concludes that a firm’s exposure to country risk is not determined by where the firm is incorporated or traded; it is determined by where a firm operates. Because multinational firms operate across many different countries, multinational firms can face substantial country risk.

Desai, Foley, and Hines (2008) study the effects of country-specific political risk on U.S. multinational firms’ capital structure. Investment returns for subsidiaries from the same parent have different levels of risk in different countries. These returns are more volatile in countries with greater political risk, and these volatile returns are reflected in aggregate foreign returns of the multinational corporations. Desai, Foley and Hines document that parent companies adjust their capital structure in response to this political risk by increasing leverage in subsidiaries operating in politically risky countries. Therefore, to limit their aggregate leverage, they also end up reducing their domestic leverage. In other words, multinationals mitigate country-level risks by passing these risks to foreign capital providers for whom it is relatively less costly. They adjust their operations accordingly as well. For example, U.S. MNCs serving customers in politically risky countries are more likely to serve these customers through exports from the United States rather than producing locally.

Multinational firms often enter foreign markets through acquisitions. It is possible that political and cultural differences can affect cross-border acquisitions, since there is often political

pressure to favor local companies over foreign acquirers. The possibility that this pressure will affect the acquiring companies represents an important risk facing multinational firms.

Dinc and Erel (2013) evaluate this risk by studying governments' reactions to merger and acquisition (M&A) bids by foreign and domestic firms. They provide strong evidence on economic nationalism in the M&A markets, in that many local governments prefer the target companies to remain domestically-owned rather than foreign-owned. The authors show that governments implement national policies against foreign acquisition bids through a number of methods, including playing for time by delaying approvals by regulatory agencies, using golden shares in previously privatized companies, moral persuasion by publicly opposing the deals, and providing financing to the rival bidders from national bank. These nationalistic reactions by the governments have both direct and indirect economic impacts on the functioning of the M&A markets. They not only lead to active cross-border acquisition bids failing but also deter foreign companies from bidding for other companies in that country in the future. Consequently, this type of political risk can impede international capital flows.<sup>9</sup>

## **5.2. Foreign Exchange Risk**

*Foreign exchange risk* can affect multinational firms because of the possibility that currency fluctuations will affect the value of a firm's foreign earnings.<sup>10</sup> Adler and Dumas (1984) and Dumas and Solnik (1995) show that, all firms, either domestic or multinational, are exposed to currency risk to some extent. However, this risk tends to be larger for multinational firms because a substantial fraction of their cash flows and costs are in foreign currencies. Consistent

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<sup>9</sup> See also Ahern, Daminelli, and Fracassi (2015), which documents that the volume of cross-border mergers is lower when countries of merging firms are culturally more distant.

<sup>10</sup> Shapiro (1975) presents a formal model of exposure to exchange rate changes for multinational firms.

with this idea, Jorion (1990) documents that exposure of U.S. multinationals to foreign exchange risk increases with the fraction of their foreign operations.

Dewenter, Schrand, and Wang (2016) study U.S. multinationals' net exposure to currency risk by analyzing 23 countries that shifted from fixed to floating exchange rate regimes. Fifteen of these currencies were tied to the U.S. dollars and eight were tied to other currencies. The authors observe whether multinationals exposed to these currency regime shifts were hedging their FX exposure either operationally or financially. Using a difference-in-differences design, which exploits changes for currencies tied to the U.S. dollars *versus* other currencies for hedgers and non-hedgers, the authors conclude that the net exposure to currency risk is significant for U.S. multinational firms. While hedging offsets the exposure, the net currency risk positions are value-relevant. However, factors such as strategic considerations appear to be dominating currency-risk considerations in the multinationals' cross-border investment decisions.

## **6. Summary**

Multinational firms are becoming the predominate type of public corporation. They amount to about half of publicly-traded firms in the U.S. and substantial fraction worldwide as well. Value-weighted, the numbers are even higher, with multinationals accounting for 57% of the U.S. public equity market. Understanding how multinational factors affect corporate financial decisions seems to be an important task.

Being multinational creates opportunities for a financial manager because multinational firms can better access capital markets outside their home countries. They can take advantage of interest rate differentials in different parts of the world when raising debt and equity externally.

However, multinational firms also face costs not borne by domestic firms: they face both country risk and foreign exchange risk.

As global markets become more integrated and firms become even more multinational, the financial issues facing these firms are likely to become increasingly important. The ability of financial managers to choose between alternative capital markets will increase, and capital markets will become more competitive internationally. Unfortunately, the rise of nationalism is likely to adversely affect multinational firms as well. Consequently, it seems evident that the issues raised in this chapter will be increasingly important over time, so they should demand attention both from practitioners seeking to manage their balance sheets and from academics wishing to study financial management practices.

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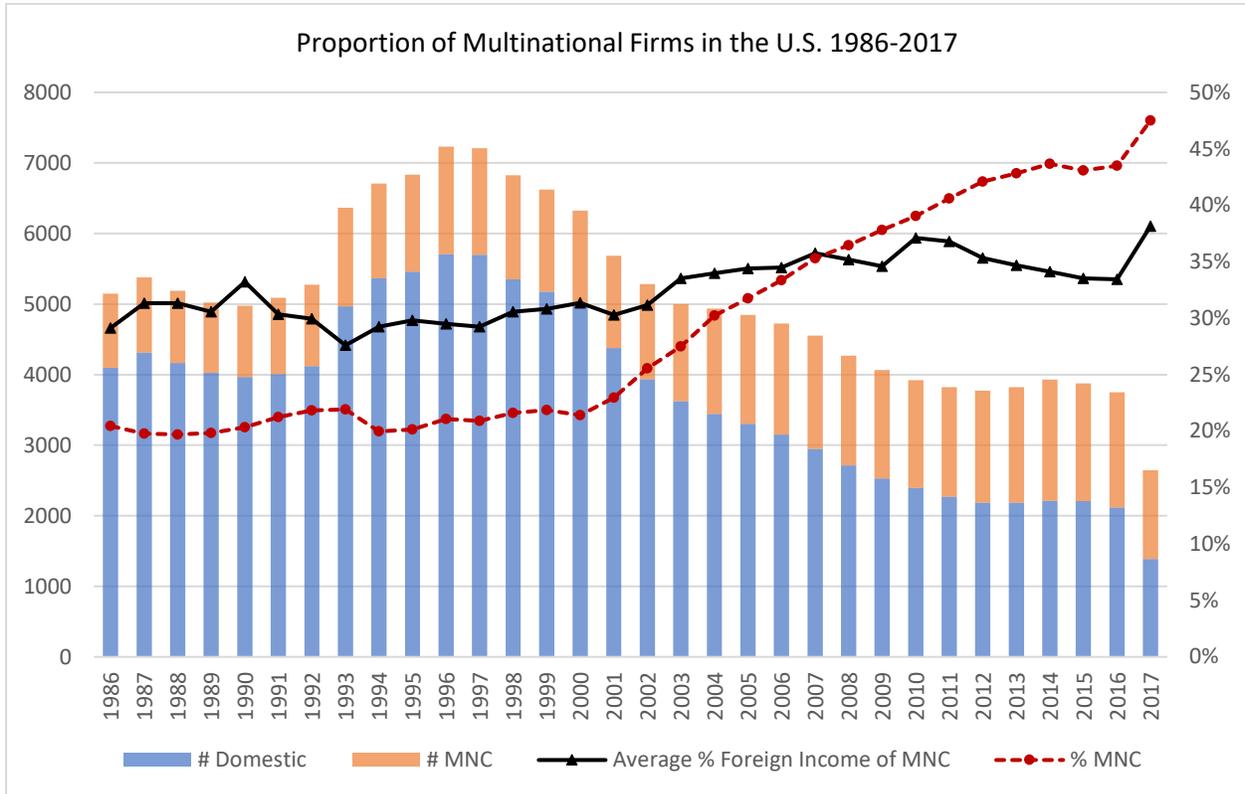
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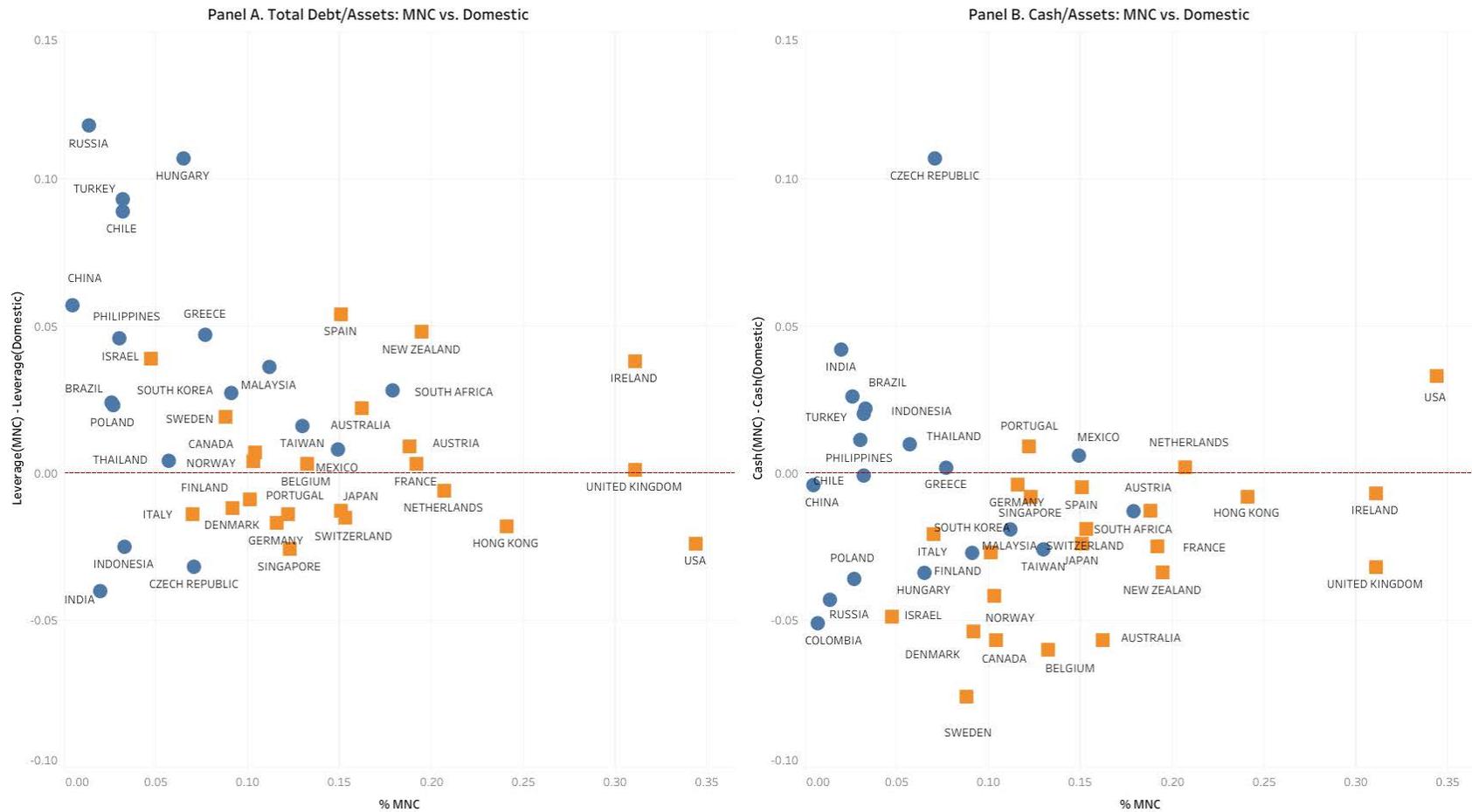
**Figure 1: Number of Multinational Firms in the U.S.**

This figure shows the proportion of multinational firms in the U.S. over the period of 1986 to 2017. The sample includes all publicly traded firms in Compustat that are headquartered and incorporated in the U.S. and that have positive total assets and positive sales. In a given year, a firm is defined as a multinational firm (MNC) if it reports pre-tax foreign income (Compustat item: *PIFO*) at any point in the last three years, and as a domestic firm, otherwise. The blue bar depicts the number of domestic firms and the orange bar the number of multinational firms each year. The red dotted line shows the percentage of multinational firms, and the black solid line shows the average ratio of foreign income to total income of multinational firms. The ratio of foreign income is calculated as the absolute value of foreign income, divided by the sum of absolute values of domestic and foreign income.



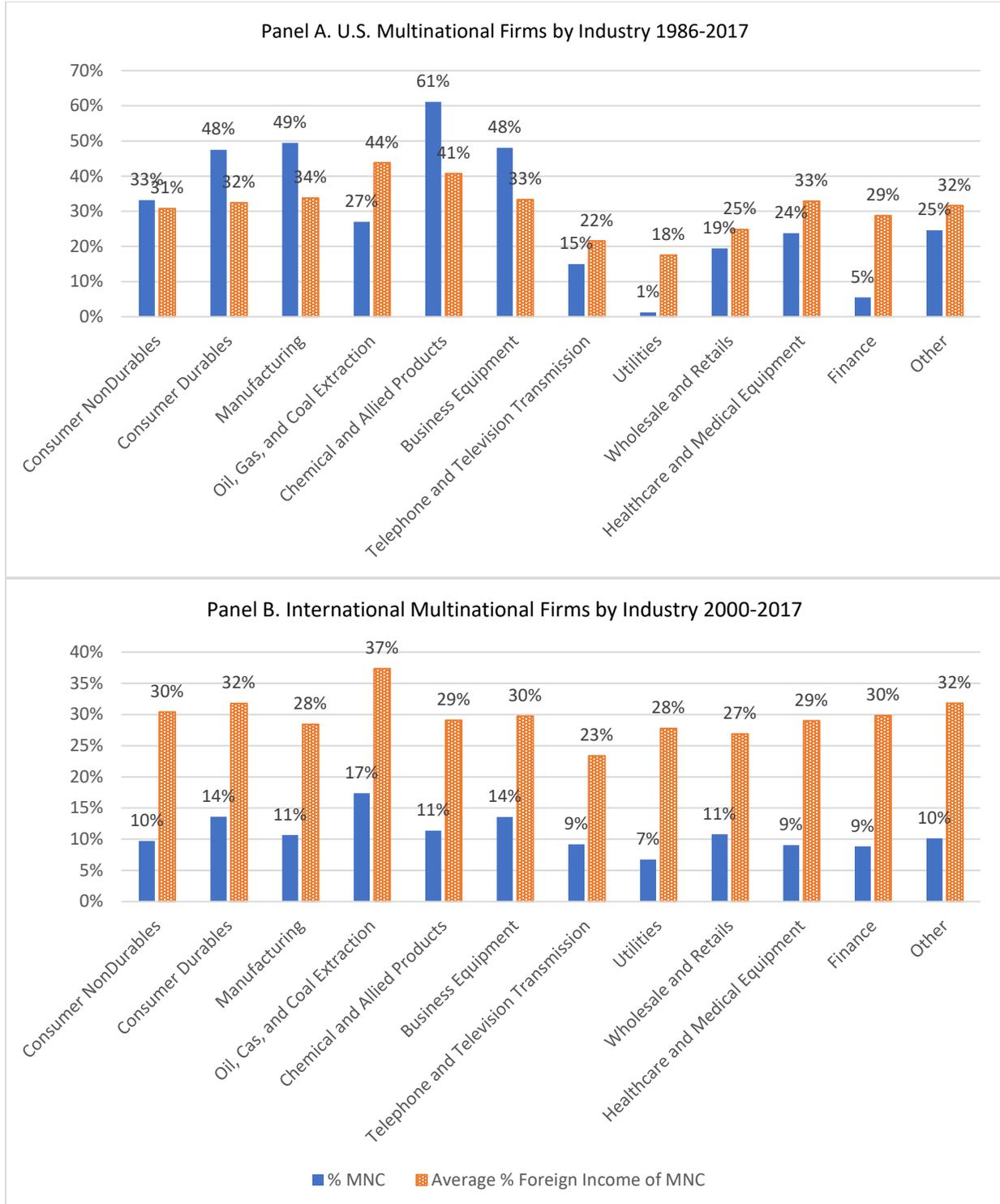
**Figure 2. Leverage and Cash Holding: Multinational vs. Domestic Firms**

These scatter plots show the percentage of multinational firms and the differences in debt-to-asset ratio and cash-to-asset ratio of multinational firms and domestic firms by country. In a given year, a firm is defined as a multinational firm (MNC) if it reports non-zero foreign income at any point in the last three years, and as a domestic firm, otherwise. Each point represents a country. The x-axis represents the average percentage of multinational firms of each country based on the foreign-income-based definition. The y-axis represents the differences in debt-to-asset ratios (Panel A) and cash-to-asset ratios (Panel B), which are calculated as the average of debt-to-asset ratios (cash-to-asset ratios) of multinational firms minus that of domestic firms over 2000-2017. Developed countries are in orange squares and emerging countries in blue circles. The red dotted line is the reference point where the ratios of multinational are equal to those of domestic firms.



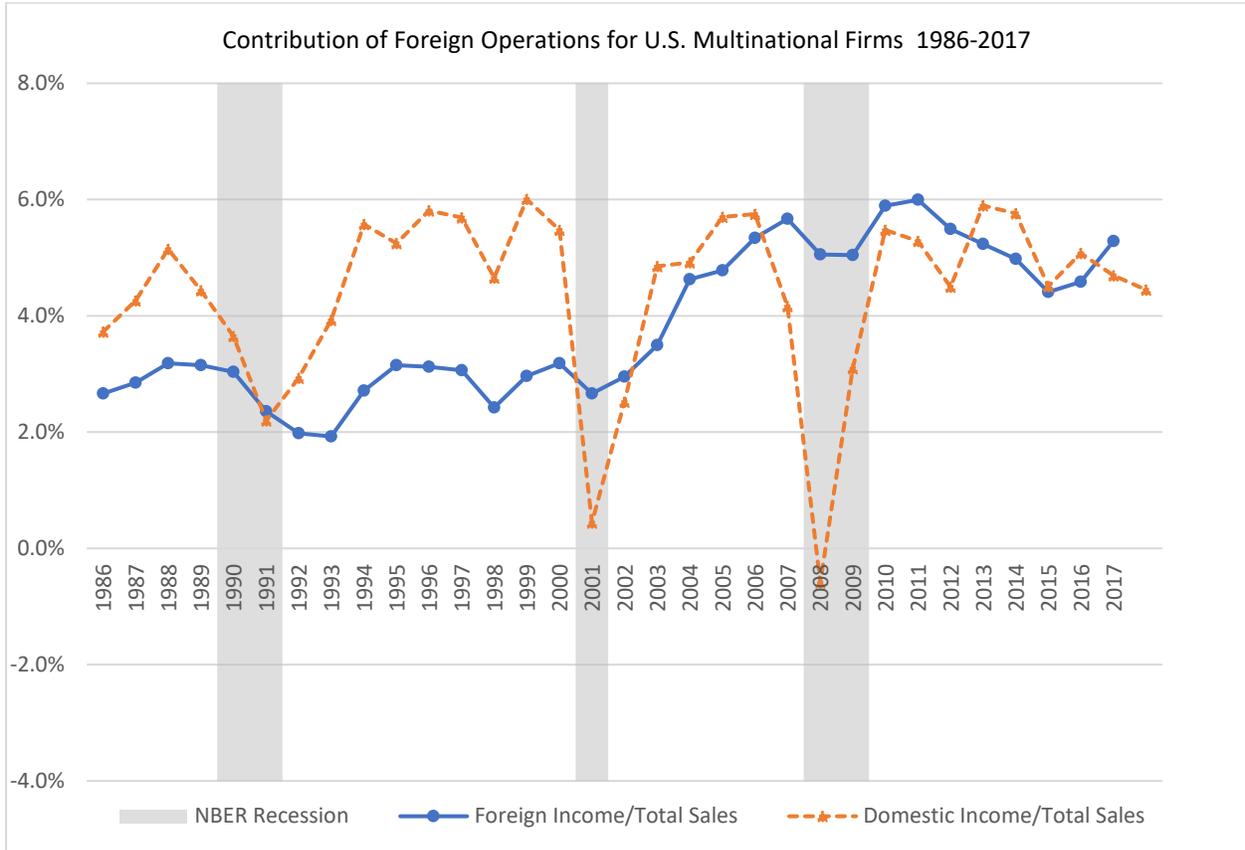
**Figure 3: Number of Multinational Firms by Industry**

This figure shows the percentage of multinationals (MNC) and the average percentage of foreign income of multinationals across industries in the U.S. (Panel A) and non-U.S. MSCI developed and emerging countries (Panel B). In a given year, a firm is defined as a multinational firm (MNC) if it reports pre-tax foreign income at any point in the last three years, and as a domestic firm, otherwise. Industries are based on the Fama-French 12 industry classification.



**Figure 4: Domestic Income vs. Foreign Income for U.S. Multinational Firms over NBER Business Cycles**

This figure documents the domestic income and foreign income for the U.S. multinational firms over the period of 1986 to 2017. The sample includes the U.S. multinational firms that report pre-tax foreign income at any point in the last three years. The blue solid line depicts the average of the ratio of foreign income to sales and the orange dotted line depicts the average of the ratio of domestic income to sales. The grey areas denote the NBER recession years.



**Table 1. Descriptive Statistics: Distribution of multinational firms**

Tables show the descriptive statistics of multinational firms around the world. In Panel A, the sample covers 1986-2017 for U.S. publicly-traded firms with positive total assets and sales in *Compustat* (U.S. firms). In Panel B, the sample covers 2000-2017 for publicly-traded firms in 40 countries with positive total assets and sales in *Worldscope* (international firms). We report statistics for 21 developed countries included in the MSCI World index (except U.S.) as well as for 19 emerging countries in the MSCI Emerging Markets index (except Egypt, Pakistan, Peru, Qatar, and UAE). We use two ways to identify multinational firms (MNC). In the first definition (1), a firm is defined as *Multinational* if it reports non-zero foreign income (Compustat item: PIFO; Worldscope item: WC07126) at any point in the last three years, and as *Domestic* otherwise. In the second definition (2), a firm is flagged as a *Multinational* if it has foreign sales (Geographic Segment data in Compustat; Worldscope item: WC07101) larger than or equal to 5% of its total sales. In Panels A and B, the table shows the total number of firms, the percentage of multinational firms based on two definitions, the average ratio of foreign sales to total sales, and the average ratio of foreign income to total income across multinational firms by fiscal year. The ratio of foreign income is calculated as the absolute value of foreign income, divided by the sum of absolute values of domestic and foreign income. In Panel C, we list the percentage of multinationals across 41 countries including the U.S. based on two definitions. In the last four columns, the averages of debt-to-asset and cash-to-asset ratios are reported separately for multinationals and domestic firms. Statistics are averaged over the 2000-2017 time period.

**Panel A: Number of Multinational Firms in the U.S.**

| Definition of MNC: |         | (1) Non-missing foreign income in past 3 years |                                 | (2) Foreign sales $\geq 5\%$ total sales |                                |
|--------------------|---------|--|---------------------------------|--|--------------------------------|
| Year               | # Firms | % MNC  | Average % Foreign Income of MNC | % MNC                                    | Average % Foreign Sales of MNC |
| 1986               | 5149    | 20%  | 29%                             | 18%                                      | 27%                            |
| 1987               | 5376    | 20%  | 31%                             | 19%                                      | 29%                            |
| 1988               | 5189    | 20%  | 31%                             | 19%                                      | 30%                            |
| 1989               | 5024    | 20%  | 31%                             | 20%                                      | 31%                            |
| 1990               | 4979    | 20%  | 33%                             | 20%                                      | 32%                            |
| 1991               | 5090    | 21%  | 30%                             | 21%                                      | 32%                            |
| 1992               | 5273    | 22%  | 30%                             | 22%                                      | 32%                            |
| 1993               | 6364    | 22%  | 28%                             | 20%                                      | 30%                            |
| 1994               | 6707    | 20%  | 29%                             | 21%                                      | 30%                            |
| 1995               | 6834    | 20%  | 30%                             | 22%                                      | 32%                            |
| 1996               | 7233    | 21%  | 30%                             | 23%                                      | 32%                            |
| 1997               | 7208    | 21%  | 29%                             | 24%                                      | 33%                            |
| 1998               | 6824    | 22%  | 31%                             | 26%                                      | 33%                            |
| 1999               | 6625    | 22%  | 31%                             | 29%                                      | 35%                            |
| 2000               | 6323    | 21%  | 31%                             | 31%                                      | 35%                            |
| 2001               | 5683    | 23%  | 30%                             | 33%                                      | 35%                            |
| 2002               | 5284    | 26%  | 31%                             | 34%                                      | 37%                            |
| 2003               | 4998    | 27%  | 34%                             | 35%                                      | 38%                            |
| 2004               | 4936    | 30%  | 34%                             | 36%                                      | 39%                            |
| 2005               | 4844    | 32%  | 34%                             | 36%                                      | 40%                            |
| 2006               | 4726    | 33%  | 35%                             | 36%                                      | 40%                            |
| 2007               | 4554    | 35%  | 36%                             | 36%                                      | 42%                            |
| 2008               | 4271    | 36%  | 35%                             | 37%                                      | 43%                            |
| 2009               | 4065    | 38%  | 35%                             | 38%                                      | 42%                            |
| 2010               | 3923    | 39%  | 37%                             | 38%                                      | 43%                            |
| 2011               | 3822    | 41%  | 37%                             | 39%                                      | 44%                            |

|      |      |     |     |     |     |
|------|------|-----|-----|-----|-----|
| 2012 | 3771 | 42% | 35% | 39% | 42% |
| 2013 | 3824 | 43% | 35% | 39% | 42% |
| 2014 | 3929 | 44% | 34% | 39% | 41% |
| 2015 | 3878 | 43% | 34% | 38% | 39% |
| 2016 | 3752 | 44% | 33% | 39% | 39% |
| 2017 | 2647 | 48% | 38% | 40% | 40% |

**Panel B: Number of Multinational Firms around the World**

| Sample:            | MSCI World (Developed) Countries |                             |       |                            |       | MSCI Emerging Market Countries |                             |       |                            |       |
|--------------------|----------------------------------|-----------------------------|-------|----------------------------|-------|--------------------------------|-----------------------------|-------|----------------------------|-------|
| Definition of MNC: |                                  | (1) Foreign Income          |       | (2) Foreign Sales          |       |                                | (1) Foreign Income          |       | (2) Foreign Sales          |       |
|                    |                                  | Average % Foreign Income of |       | Average % Foreign Sales of |       |                                | Average % Foreign Income of |       | Average % Foreign Sales of |       |
| Year               | # Firms                          | % MNC                       | % MNC | % MNC                      | % MNC | # Firms                        | % MNC                       | % MNC | % MNC                      | % MNC |
| 2000               | 8767                             | 17%                         | 35%   | 39%                        | 47%   | 3601                           | 8%                          | 28%   | 10%                        | 39%   |
| 2001               | 9221                             | 19%                         | 33%   | 40%                        | 48%   | 3979                           | 9%                          | 28%   | 13%                        | 39%   |
| 2002               | 9330                             | 20%                         | 32%   | 40%                        | 48%   | 5259                           | 10%                         | 23%   | 14%                        | 39%   |
| 2003               | 9691                             | 20%                         | 32%   | 40%                        | 49%   | 6054                           | 9%                          | 23%   | 14%                        | 40%   |
| 2004               | 10248                            | 20%                         | 33%   | 39%                        | 49%   | 6615                           | 7%                          | 27%   | 13%                        | 42%   |
| 2005               | 10814                            | 21%                         | 31%   | 37%                        | 49%   | 8061                           | 7%                          | 31%   | 13%                        | 42%   |
| 2006               | 11094                            | 21%                         | 31%   | 36%                        | 51%   | 8494                           | 7%                          | 30%   | 13%                        | 44%   |
| 2007               | 11116                            | 20%                         | 33%   | 36%                        | 51%   | 8962                           | 6%                          | 30%   | 13%                        | 43%   |
| 2008               | 10928                            | 20%                         | 35%   | 36%                        | 52%   | 9562                           | 7%                          | 32%   | 13%                        | 45%   |
| 2009               | 10742                            | 20%                         | 33%   | 37%                        | 54%   | 10069                          | 7%                          | 32%   | 14%                        | 43%   |
| 2010               | 10718                            | 19%                         | 26%   | 37%                        | 56%   | 10557                          | 7%                          | 23%   | 15%                        | 47%   |
| 2011               | 10709                            | 18%                         | 27%   | 37%                        | 57%   | 11415                          | 6%                          | 13%   | 18%                        | 48%   |
| 2012               | 10999                            | 13%                         | 35%   | 41%                        | 56%   | 11844                          | 5%                          | 19%   | 28%                        | 44%   |
| 2013               | 11020                            | 12%                         | 28%   | 41%                        | 55%   | 12283                          | 4%                          | 23%   | 36%                        | 45%   |
| 2014               | 10981                            | 11%                         | 29%   | 40%                        | 57%   | 12711                          | 4%                          | 22%   | 35%                        | 45%   |
| 2015               | 10890                            | 8%                          | 31%   | 36%                        | 57%   | 12769                          | 3%                          | 24%   | 32%                        | 44%   |
| 2016               | 10717                            | 7%                          | 33%   | 35%                        | 57%   | 12732                          | 3%                          | 25%   | 32%                        | 44%   |
| 2017               | 10473                            | 5%                          | 38%   | 34%                        | 58%   | 12583                          | 3%                          | 26%   | 33%                        | 44%   |

### Panel C: Number of Multinational Firms across Countries

| Definition of MNC: |             | (1) Foreign Income |                                 | (2) Foreign Sales |                                |                              |       |                              |       |
|--------------------|-------------|--------------------|---------------------------------|-------------------|--------------------------------|------------------------------|-------|------------------------------|-------|
| Country            | # Firm-year | % MNC              | Average % Foreign Income of MNC | % MNC             | Average % Foreign Sales of MNC | Debt/Assets MNC vs. Domestic |       | Cash/Assets MNC vs. Domestic |       |
| AUSTRALIA          | 23851       | 16.2%              | 27.2%                           | 18.3%             | 53.0%                          | 0.164                        | 0.143 | 0.225                        | 0.282 |
| AUSTRIA            | 1141        | 18.8%              | 38.4%                           | 70.9%             | 64.0%                          | 0.249                        | 0.240 | 0.118                        | 0.131 |
| BELGIUM            | 1682        | 13.2%              | 40.4%                           | 54.8%             | 60.1%                          | 0.248                        | 0.245 | 0.098                        | 0.157 |
| BRAZIL             | 4182        | 2.6%               | 25.6%                           | 14.5%             | 36.9%                          | 0.346                        | 0.322 | 0.147                        | 0.121 |
| CANADA             | 21795       | 10.4%              | 35.6%                           | 25.1%             | 64.6%                          | 0.205                        | 0.197 | 0.142                        | 0.199 |
| CHILE              | 2404        | 3.2%               | 40.4%                           | 14.2%             | 50.1%                          | 0.326                        | 0.237 | 0.069                        | 0.069 |
| CHINA              | 38197       | 0.4%               | 24.5%                           | 22.3%             | 33.7%                          | 0.255                        | 0.198 | 0.203                        | 0.208 |
| COLOMBIA           | 448         | 0.7%               | 8.4%                            | 15.2%             | 40.4%                          | 0.410                        | 0.173 | 0.033                        | 0.084 |
| CZECH REPUBLIC     | 257         | 7.1%               | 16.1%                           | 20.4%             | 29.9%                          | 0.124                        | 0.157 | 0.210                        | 0.103 |
| DENMARK            | 2010        | 9.2%               | 36.3%                           | 46.5%             | 68.4%                          | 0.234                        | 0.246 | 0.113                        | 0.167 |
| FINLAND            | 2162        | 10.1%              | 37.7%                           | 66.7%             | 61.6%                          | 0.243                        | 0.251 | 0.116                        | 0.143 |
| FRANCE             | 10824       | 19.2%              | 35.5%                           | 55.4%             | 49.2%                          | 0.222                        | 0.219 | 0.147                        | 0.172 |
| GERMANY            | 10650       | 11.6%              | 35.3%                           | 52.8%             | 51.5%                          | 0.180                        | 0.198 | 0.169                        | 0.173 |
| GREECE             | 3180        | 7.7%               | 29.5%                           | 22.9%             | 44.7%                          | 0.389                        | 0.343 | 0.088                        | 0.085 |
| HONG KONG          | 2293        | 24.1%              | 30.6%                           | 56.7%             | 66.4%                          | 0.170                        | 0.189 | 0.199                        | 0.207 |
| HUNGARY            | 331         | 6.5%               | 38.0%                           | 45.3%             | 50.2%                          | 0.269                        | 0.162 | 0.057                        | 0.090 |
| INDIA              | 32059       | 2.0%               | 37.0%                           | 14.9%             | 47.1%                          | 0.266                        | 0.307 | 0.124                        | 0.083 |
| INDONESIA          | 5500        | 3.3%               | 17.1%                           | 14.3%             | 43.8%                          | 0.286                        | 0.311 | 0.131                        | 0.109 |
| IRELAND            | 965         | 31.1%              | 43.3%                           | 65.5%             | 67.2%                          | 0.228                        | 0.190 | 0.179                        | 0.185 |
| ISRAEL             | 4109        | 4.7%               | 31.7%                           | 27.0%             | 70.2%                          | 0.291                        | 0.252 | 0.200                        | 0.250 |
| ITALY              | 4061        | 7.0%               | 35.2%                           | 48.9%             | 55.3%                          | 0.263                        | 0.277 | 0.096                        | 0.118 |
| JAPAN              | 51288       | 15.1%              | 23.8%                           | 28.2%             | 35.2%                          | 0.200                        | 0.212 | 0.167                        | 0.191 |
| MALAYSIA           | 14095       | 11.2%              | 21.7%                           | 27.1%             | 41.4%                          | 0.246                        | 0.210 | 0.128                        | 0.147 |
| MEXICO             | 1513        | 14.9%              | 24.5%                           | 36.9%             | 40.0%                          | 0.237                        | 0.229 | 0.098                        | 0.092 |
| NETHERLANDS        | 2193        | 20.7%              | 41.5%                           | 72.0%             | 63.1%                          | 0.230                        | 0.237 | 0.134                        | 0.132 |
| NEW ZEALAND        | 1864        | 19.5%              | 24.2%                           | 28.1%             | 49.8%                          | 0.281                        | 0.232 | 0.085                        | 0.119 |
| NORWAY             | 2816        | 10.3%              | 37.0%                           | 45.9%             | 63.7%                          | 0.277                        | 0.274 | 0.152                        | 0.193 |
| PHILIPPINES        | 2706        | 3.0%               | 23.6%                           | 10.1%             | 35.8%                          | 0.275                        | 0.229 | 0.157                        | 0.146 |
| POLAND             | 5488        | 2.7%               | 28.2%                           | 21.9%             | 38.2%                          | 0.204                        | 0.181 | 0.079                        | 0.114 |
| PORTUGAL           | 805         | 12.2%              | 38.8%                           | 48.6%             | 47.5%                          | 0.379                        | 0.392 | 0.078                        | 0.069 |
| RUSSIA             | 2882        | 1.4%               | 17.0%                           | 15.1%             | 42.4%                          | 0.382                        | 0.264 | 0.056                        | 0.099 |
| SINGAPORE          | 8467        | 12.3%              | 35.6%                           | 56.1%             | 58.0%                          | 0.180                        | 0.206 | 0.196                        | 0.205 |
| SOUTH AFRICA       | 4063        | 17.9%              | 24.1%                           | 30.3%             | 36.8%                          | 0.204                        | 0.176 | 0.126                        | 0.139 |
| SOUTH KOREA        | 14891       | 9.1%               | 17.1%                           | 28.0%             | 40.9%                          | 0.279                        | 0.252 | 0.138                        | 0.165 |
| SPAIN              | 2148        | 15.1%              | 37.1%                           | 61.8%             | 49.2%                          | 0.352                        | 0.298 | 0.096                        | 0.101 |
| SWEDEN             | 7158        | 8.8%               | 35.2%                           | 38.0%             | 62.9%                          | 0.188                        | 0.169 | 0.123                        | 0.200 |
| SWITZERLAND        | 3213        | 15.3%              | 35.7%                           | 73.4%             | 65.1%                          | 0.189                        | 0.204 | 0.165                        | 0.184 |
| TAIWAN             | 24145       | 13.0%              | 28.7%                           | 33.6%             | 58.7%                          | 0.211                        | 0.196 | 0.197                        | 0.223 |
| THAILAND           | 7492        | 5.7%               | 23.1%                           | 15.7%             | 46.0%                          | 0.264                        | 0.261 | 0.125                        | 0.116 |
| TURKEY             | 3717        | 3.2%               | 26.4%                           | 10.5%             | 37.7%                          | 0.318                        | 0.225 | 0.115                        | 0.095 |
| UNITED KINGDOM     | 22963       | 31.1%              | 35.8%                           | 48.4%             | 55.8%                          | 0.181                        | 0.180 | 0.167                        | 0.199 |
| USA                | 79230       | 34.4%              | 34.4%                           | 36.4%             | 39.9%                          | 0.211                        | 0.235 | 0.200                        | 0.167 |

**Table 2: Industry Distribution of Multinational Firms around the World**

Below we list the percentage of multinationals across industries in the U.S. (Panel A), in MSCI developed countries (Panel B), and in MSCI emerging countries (Panel C). A firm is defined as *Multinational* if it reports non-zero foreign income (Compustat item: PIFO; Worldscope item: WC07126) at any point in the last three years, and as *Domestic* otherwise. Industry is based on the Fama-French 12 industry classification. The first column lists the total number of firm-years, the second column lists the percentage of multinational firms, and the third column lists the industry-level average ratio of foreign income for multinational firms. The ratio of foreign income is calculated as the absolute value of foreign income, divided by the sum of absolute values of domestic and foreign income. Statistics are for the 1986-2017 period for the U.S. sample (Panel A) and for the 2000-2017 period for the international sample (Panels B and C).

| Industry                              | Panel A:<br>U.S. |       |                                | Panel B:<br>MSCI World (Developed) Countries |       |                                | Panel C:<br>MSCI Emerging Countries |       |                                |
|---------------------------------------|------------------|-------|--------------------------------|--|-------|--------------------------------|-------------------------------------|-------|--------------------------------|
|                                       | # Firm-<br>year  | % MNC | Average %<br>Foreign<br>Income | # Firm-<br>year                              | % MNC | Average %<br>Foreign<br>Income | # Firm-<br>year                     | % MNC | Average %<br>Foreign<br>Income |
| Consumer Non-Durables                 | 8718             | 33.2% | 30.8%                          | 14173  | 17.4% | 33.5%                          | 22657                               | 4.8%  | 23.1%                          |
| Consumer Durables                     | 3905             | 47.5% | 32.4%                          | 5600   | 27.9% | 32.9%                          | 9715                                | 5.2%  | 27.7%                          |
| Manufacturing                         | 16687            | 49.4% | 33.8%                          | 25115  | 18.7% | 29.9%                          | 38567                               | 5.4%  | 24.9%                          |
| Oil, Gas, and Coal Extraction         | 6238             | 27.0% | 43.8%                          | 6086   | 25.1% | 39.2%                          | 3331                                | 4.7%  | 18.3%                          |
| Chemical and Allied Products          | 3510             | 61.1% | 40.8%                          | 5473   | 24.6% | 31.3%                          | 10863                               | 4.6%  | 22.3%                          |
| Business Equipment                    | 28499            | 48.1% | 33.3%                          | 28062  | 17.9% | 30.1%                          | 27202                               | 9.5%  | 28.9%                          |
| Telephone and Television Transmission | 3960             | 15.0% | 21.5%                          | 3541   | 13.5% | 24.0%                          | 3357                                | 4.8%  | 20.3%                          |
| Utilities                             | 4693             | 1.3%  | 17.5%                          | 2277   | 12.6% | 27.8%                          | 4163                                | 2.4%  | 28.5%                          |
| Wholesale and Retails                 | 16799            | 19.5% | 24.8%                          | 20641  | 13.8% | 28.3%                          | 11927                               | 5.3%  | 20.2%                          |
| Healthcare and Medical Equipment      | 15661            | 23.7% | 32.9%                          | 10574  | 15.1% | 30.0%                          | 8993                                | 2.5%  | 23.6%                          |
| Finance                               | 34768            | 5.5%  | 28.8%                          | 1127   | 12.2% | 28.6%                          | 815                                 | 6.8%  | 19.7%                          |
| Other                                 | 19667            | 24.6% | 31.6%                          | 43714  | 13.5% | 32.2%                          | 25843                               | 4.7%  | 24.9%                          |

**Table 3. Characteristics of Multinationals**

This table reports firm-level statistics for fundamental firm-level characteristics. In Panel A, the sample includes all publicly traded U.S. firms available in Compustat with positive total assets and sales. Sample period covers 1986-2017. We report mean, median, and standard deviation. In Panel B, we report only the means (to save space) for international firms available in Worldscope with positive total assets and sales. The sample covers 2000-2017 period for developed and emerging MSCI countries. A firm is defined as *Multinational* if it reports non-zero foreign income (Compustat item: PIFO; Worldscope item: WC07126) at any point in the last three years, and as *Domestic* otherwise. *Total Assets* and *Market Capitalization* are in US billions of dollars. *Cash Flow* and *Cash* are scaled by total assets. *Std of Cash Flow* is calculated as the standard deviation of *Cash Flow/Total Assets* over previous five years with the minimum 3-year observations. *Rated* is an indicator variable for a firm that has a S&P issuer rating. *Investment Grade* is an indicator of a firm that has a S&P investment grade issuer rating (AAA, AA+, AA, or AA-) and *Speculative Grade* is an indicator of a firm that has a S&P speculative grade issuer rating (A+, A, A-, BBB+, BBB, or BBB-). *Zero Debt* is an indicator for a firm-year with zero or missing long-term debt. Ratio variables are winsorized at 1 and 99%. The difference reported is based on t-test of the mean. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

**Panel A: U.S. Firms**

|                         | Multinational |        |        | Domestic |        |        | Diff. in Mean  |
|-------------------------|---------------|--------|--------|----------|--------|--------|----------------|
|                         | Mean          | Median | Std    | Mean     | Median | Std    | MNC - Domestic |
| Total Assets            | 6.266         | 0.437  | 43.246 | 3.880    | 0.181  | 44.046 | 2.386***       |
| Market Capitalization   | 4.902         | 0.479  | 22.140 | 1.332    | 0.106  | 8.223  | 3.570***       |
| Sales Growth            | 0.108         | 0.075  | 0.267  | 0.132    | 0.082  | 0.321  | -0.024***      |
| Cash Flow/Total Assets  | 0.115         | 0.124  | 0.147  | 0.074    | 0.078  | 0.168  | 0.041***       |
| Std of Cash Flow        | 0.070         | 0.046  | 0.078  | 0.076    | 0.042  | 0.103  | -0.006***      |
| Rated                   | 0.315         | 0.000  | 0.465  | 0.180    | 0.000  | 0.384  | 0.135***       |
| Investment Grade        | 0.152         | 0.000  | 0.359  | 0.080    | 0.000  | 0.272  | 0.071***       |
| Speculative Grade       | 0.135         | 0.000  | 0.341  | 0.082    | 0.000  | 0.274  | 0.053***       |
| Cash/Total Assets       | 0.189         | 0.114  | 0.197  | 0.158    | 0.061  | 0.215  | 0.031***       |
| Total Debt/Total Assets | 0.212         | 0.176  | 0.203  | 0.244    | 0.189  | 0.233  | -0.033***      |
| Zero Debt               | 0.147         | 0.000  | 0.354  | 0.128    | 0.000  | 0.334  | 0.019***       |
| # Firm-year Obs         | 47337         |        |        | 115768   |        |        |                |
| # Unique Firm           | 5367          |        |        | 14736    |        |        |                |

**Panel B: International Firms**

|                         | MSCI World (Developed) Countries |          |                         | MSCI Emerging Countries |          |                                 |
|-------------------------|----------------------------------|----------|-------------------------|-------------------------|----------|---------------------------------|
|                         | Multinational                    | Domestic | Diff.<br>MNC - Domestic | Multinational           | Domestic | Diff. in Mean<br>MNC - Domestic |
| Total Assets            | 4.806                            | 1.640    | 3.166***                | 2.575                   | 0.887    | 1.688***                        |
| Market Capitalization   | 2.944                            | 1.038    | 1.906***                | 1.638                   | 0.771    | 0.867***                        |
| Sales Growth            | 0.070                            | 0.070    | -0.000                  | 0.097                   | 0.115    | -0.018***                       |
| Cash Flow/Total Assets  | 0.077                            | 0.043    | 0.034***                | 0.112                   | 0.102    | 0.010***                        |
| Std of Cash Flow        | 0.110                            | 0.147    | -0.038***               | 0.062                   | 0.078    | -0.016***                       |
| Cash/Total Assets       | 0.167                            | 0.198    | -0.031***               | 0.150                   | 0.151    | -0.000                          |
| Total Debt/Total Assets | 0.197                            | 0.202    | -0.005***               | 0.245                   | 0.239    | 0.006**                         |
| Zero Debt               | 0.140                            | 0.192    | -0.052***               | 0.052                   | 0.114    | -0.062***                       |
| # Firm-year Obs         | 30077                            | 157433   |                         | 9298                    | 157840   |                                 |
| # Unique Firm           | 4126                             | 17273    |                         | 1389                    | 14969    |                                 |

**Table 4. Capital Structure Characteristics (U.S. Sample)**

This table reports details of capital structure for U.S. multinational firms vs. domestic firms. Panel A includes all firms. Panel B is for investment-grade firms while Panel C is for speculative grade firms. The sample covers publicly-traded Compustat firms between 1997-2017 due to data availability in *Capital IQ*. A firm is defined as *Multinational* if it reports non-zero pre-tax foreign income (Compustat item: PIFO) at any point in the last three years, and as *Domestic* otherwise. All debt structure variables are scaled by the total debt. Variables are winsorized at 1 and 99%. The difference reported is based on t-test of the mean. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

| <b>Panel A: All Firms</b>            | Multinational |        |       | Domestic |        |       | Diff in Mean   |
|--------------------------------------|---------------|--------|-------|----------|--------|-------|----------------|
|                                      | Mean          | Median | Std   | Mean     | Median | Std   | MNC - Domestic |
| Cash/Total Assets                    | 0.167         | 0.105  | 0.172 | 0.135    | 0.052  | 0.193 | 0.032***       |
| Total Debt/Total Assets              | 0.237         | 0.211  | 0.200 | 0.265    | 0.208  | 0.235 | -0.028***      |
| Long-Term Debt/Total Debt            | 0.708         | 0.889  | 0.358 | 0.698    | 0.863  | 0.350 | 0.010***       |
| <u>Debt Structure (% Total Debt)</u> |               |        |       |          |        |       |                |
| <i>By type</i>                       |               |        |       |          |        |       |                |
| Sr. Bonds and Notes                  | 0.300         | 0.000  | 0.386 | 0.193    | 0.000  | 0.337 | 0.107***       |
| Sub. Bonds and Notes                 | 0.047         | 0.000  | 0.175 | 0.031    | 0.000  | 0.135 | 0.016***       |
| Commercial Paper                     | 0.009         | 0.000  | 0.056 | 0.003    | 0.000  | 0.029 | 0.006***       |
| Convertible Debt                     | 0.072         | 0.000  | 0.222 | 0.041    | 0.000  | 0.168 | 0.031***       |
| Bank Debt                            | 0.261         | 0.004  | 0.369 | 0.296    | 0.002  | 0.383 | -0.034***      |
| Revolving Credit                     | 0.127         | 0.000  | 0.266 | 0.103    | 0.000  | 0.240 | 0.024***       |
| Term Loans                           | 0.140         | 0.000  | 0.279 | 0.196    | 0.000  | 0.329 | -0.056***      |
| Cap. Leases                          | 0.046         | 0.000  | 0.183 | 0.037    | 0.000  | 0.163 | 0.009***       |
| <i>By interest type</i>              |               |        |       |          |        |       |                |
| Fixed Rate Debt                      | 0.365         | 0.116  | 0.406 | 0.321    | 0.000  | 0.396 | 0.044***       |
| Variable Rate Debt                   | 0.225         | 0.000  | 0.345 | 0.193    | 0.000  | 0.321 | 0.032***       |
| Zero Coupon Debt                     | 0.004         | 0.000  | 0.053 | 0.002    | 0.000  | 0.032 | 0.003***       |
| <i>By priority</i>                   |               |        |       |          |        |       |                |
| Senior Debt                          | 0.620         | 0.987  | 0.462 | 0.560    | 0.848  | 0.466 | 0.060***       |
| Sub. Debt                            | 0.048         | 0.000  | 0.177 | 0.033    | 0.000  | 0.138 | 0.016***       |
| Secured Debt                         | 0.273         | 0.001  | 0.391 | 0.379    | 0.099  | 0.426 | -0.106***      |
| Unsecured Debt                       | 0.404         | 0.133  | 0.440 | 0.247    | 0.000  | 0.364 | 0.157***       |
| # Firm-year Obs                      | 25031         |        |       | 52660    |        |       |                |
| # Unique Firm                        | 3197          |        |       | 7510     |        |       |                |

| <b>Panel B: Investment Grade</b>     | Multinational |        |       | Domestic |        |       | Diff in Mean   |
|--------------------------------------|---------------|--------|-------|----------|--------|-------|----------------|
|                                      | Mean          | Median | Std   | Mean     | Median | Std   | MNC - Domestic |
| Cash/Total Assets                    | 0.105         | 0.068  | 0.109 | 0.056    | 0.027  | 0.086 | 0.049***       |
| Total Debt/Total Assets              | 0.257         | 0.242  | 0.143 | 0.289    | 0.292  | 0.179 | -0.031***      |
| Long-Term Debt/Total Debt            | 0.809         | 0.893  | 0.231 | 0.794    | 0.884  | 0.249 | 0.015**        |
| <u>Debt Structure (% Total Debt)</u> |               |        |       |          |        |       |                |
| <i>By type</i>                       |               |        |       |          |        |       |                |
| Sr. Bonds and Notes                  | 0.584         | 0.744  | 0.388 | 0.459    | 0.536  | 0.400 | 0.125***       |
| Sub. Bonds and Notes                 | 0.012         | 0.000  | 0.074 | 0.025    | 0.000  | 0.079 | -0.013***      |
| Commercial Paper                     | 0.044         | 0.000  | 0.112 | 0.025    | 0.000  | 0.075 | 0.019***       |
| Convertible Debt                     | 0.032         | 0.000  | 0.130 | 0.016    | 0.000  | 0.084 | 0.016***       |
| Bank Debt                            | 0.064         | 0.000  | 0.149 | 0.112    | 0.000  | 0.204 | -0.048***      |
| Revolving Credit                     | 0.034         | 0.000  | 0.109 | 0.047    | 0.000  | 0.117 | -0.013***      |
| Term Loans                           | 0.030         | 0.000  | 0.097 | 0.065    | 0.000  | 0.159 | -0.035***      |
| Cap. Leases                          | 0.008         | 0.000  | 0.037 | 0.006    | 0.000  | 0.034 | 0.002*         |
| <i>By interest type</i>              |               |        |       |          |        |       |                |
| Fixed Rate Debt                      | 0.576         | 0.750  | 0.400 | 0.492    | 0.590  | 0.400 | 0.085***       |
| Variable Rate Debt                   | 0.069         | 0.000  | 0.148 | 0.085    | 0.000  | 0.162 | -0.016***      |
| Zero Coupon Debt                     | 0.005         | 0.000  | 0.048 | 0.002    | 0.000  | 0.023 | 0.003***       |
| <i>By priority</i>                   |               |        |       |          |        |       |                |
| Senior Debt                          | 0.705         | 0.993  | 0.437 | 0.611    | 0.878  | 0.444 | 0.094***       |
| Sub. Debt                            | 0.012         | 0.000  | 0.074 | 0.025    | 0.000  | 0.079 | -0.013***      |
| Secured Debt                         | 0.045         | 0.000  | 0.139 | 0.190    | 0.010  | 0.279 | -0.145***      |
| Unsecured Debt                       | 0.694         | 0.971  | 0.426 | 0.498    | 0.568  | 0.408 | 0.196***       |
| # Firm-year Obs                      | 4527          |        |       | 5074     |        |       |                |
| # Unique Firm                        | 505           |        |       | 629      |        |       |                |

| <b>Panel C: Speculative Grade</b> | Multinational |        |       | Domestic |        |       | Diff in Mean   |
|-----------------------------------|---------------|--------|-------|----------|--------|-------|----------------|
|                                   | Mean          | Median | Std   | Mean     | Median | Std   | MNC - Domestic |
| Cash/Total Assets                 | 0.108         | 0.069  | 0.118 | 0.087    | 0.042  | 0.123 | 0.021***       |
| Total Debt/Total Assets           | 0.394         | 0.369  | 0.200 | 0.478    | 0.459  | 0.225 | -0.084***      |
| Long-Term Debt/Total Debt         | 0.897         | 0.971  | 0.195 | 0.923    | 0.988  | 0.174 | -0.025***      |
| Debt Structure (% Total Debt)     |               |        |       |          |        |       |                |
| <i>By type</i>                    |               |        |       |          |        |       |                |
| Sr. Bonds and Notes               | 0.386         | 0.355  | 0.370 | 0.371    | 0.264  | 0.382 | 0.015*         |
| Sub. Bonds and Notes              | 0.119         | 0.000  | 0.251 | 0.109    | 0.000  | 0.241 | 0.009          |
| Commercial Paper                  | 0.000         | 0.000  | 0.005 | 0.000    | 0.000  | 0.006 | 0.000          |
| Convertible Debt                  | 0.109         | 0.000  | 0.247 | 0.072    | 0.000  | 0.198 | 0.037***       |
| Bank Debt                         | 0.287         | 0.180  | 0.318 | 0.240    | 0.102  | 0.297 | 0.047***       |
| Revolving Credit                  | 0.079         | 0.000  | 0.167 | 0.083    | 0.000  | 0.162 | -0.004         |
| Term Loans                        | 0.211         | 0.016  | 0.297 | 0.158    | 0.000  | 0.271 | 0.052***       |
| Cap. Leases                       | 0.018         | 0.000  | 0.086 | 0.014    | 0.000  | 0.060 | 0.005**        |
| <i>By interest type</i>           |               |        |       |          |        |       |                |
| Fixed Rate Debt                   | 0.513         | 0.562  | 0.373 | 0.483    | 0.539  | 0.384 | 0.030***       |
| Variable Rate Debt                | 0.256         | 0.108  | 0.313 | 0.221    | 0.062  | 0.290 | 0.035***       |
| Zero Coupon Debt                  | 0.004         | 0.000  | 0.053 | 0.001    | 0.000  | 0.020 | 0.003***       |
| <i>By priority</i>                |               |        |       |          |        |       |                |
| Senior Debt                       | 0.675         | 0.933  | 0.400 | 0.595    | 0.783  | 0.430 | 0.081***       |
| Sub. Debt                         | 0.120         | 0.000  | 0.252 | 0.110    | 0.000  | 0.242 | 0.010          |
| Secured Debt                      | 0.351         | 0.253  | 0.358 | 0.316    | 0.175  | 0.351 | 0.035***       |
| Unsecured Debt                    | 0.474         | 0.495  | 0.386 | 0.432    | 0.414  | 0.390 | 0.042***       |
| # Firm-year Obs                   | 4596          |        |       | 5868     |        |       |                |
| # Unique Firm                     | 837           |        |       | 1171     |        |       |                |

**Table 5. Capital Structure Characteristics – Subsamples based on Firm Size (U.S. Sample)**

This table reports details of capital structure for large/small multinational firms vs. domestic firms. Large domestic firms, in Panel A, are identified as with total assets larger than or equal to the median total assets of multinational firms, with the median estimated each year. In Panel B, smaller-than-median domestic firms are compared with multinational firms with assets smaller than or equal to the median asset of the domestic firms, with the median estimated each year. All debt structure variables are scaled by the total debt. The difference reported is based on t-test of the mean. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

| <b>Panel A:</b>                      | <b>Large Multinational</b> |        |       | <b>Large Domestic</b> |        |       | <b>Diff in Mean</b> |
|--------------------------------------|----------------------------|--------|-------|-----------------------|--------|-------|---------------------|
|                                      | Mean                       | Median | Std   | Mean                  | Median | Std   | MNC - Domestic      |
| Cash/Total Assets                    | 0.125                      | 0.079  | 0.131 | 0.067                 | 0.033  | 0.101 | 0.058***            |
| Total Debt/Total Assets              | 0.280                      | 0.260  | 0.184 | 0.312                 | 0.278  | 0.228 | -0.032***           |
| Long-Term Debt/Total Debt            | 0.815                      | 0.934  | 0.270 | 0.786                 | 0.925  | 0.285 | 0.029***            |
| <u>Debt Structure (% Total Debt)</u> |                            |        |       |                       |        |       |                     |
| <i>By type</i>                       |                            |        |       |                       |        |       |                     |
| Sr. Bonds and Notes                  | 0.441                      | 0.461  | 0.396 | 0.283                 | 0.000  | 0.372 | 0.159***            |
| Sub. Bonds and Notes                 | 0.054                      | 0.000  | 0.180 | 0.039                 | 0.000  | 0.139 | 0.015***            |
| Commercial Paper                     | 0.017                      | 0.000  | 0.073 | 0.008                 | 0.000  | 0.043 | 0.009***            |
| Convertible Debt                     | 0.073                      | 0.000  | 0.212 | 0.034                 | 0.000  | 0.140 | 0.039***            |
| Bank Debt                            | 0.201                      | 0.017  | 0.300 | 0.278                 | 0.097  | 0.338 | -0.078***           |
| Revolving Credit                     | 0.084                      | 0.000  | 0.197 | 0.079                 | 0.000  | 0.181 | 0.005*              |
| Term Loans                           | 0.119                      | 0.000  | 0.239 | 0.201                 | 0.000  | 0.308 | -0.082***           |
| Cap. Leases                          | 0.022                      | 0.000  | 0.111 | 0.011                 | 0.000  | 0.073 | 0.010***            |
| <i>By interest type</i>              |                            |        |       |                       |        |       |                     |
| Fixed Rate Debt                      | 0.494                      | 0.556  | 0.398 | 0.443                 | 0.444  | 0.397 | 0.051***            |
| Variable Rate Debt                   | 0.185                      | 0.000  | 0.289 | 0.168                 | 0.026  | 0.262 | 0.017***            |
| Zero Coupon Debt                     | 0.005                      | 0.000  | 0.055 | 0.001                 | 0.000  | 0.023 | 0.004***            |
| <i>By priority</i>                   |                            |        |       |                       |        |       |                     |
| Senior Debt                          | 0.680                      | 0.988  | 0.432 | 0.628                 | 0.879  | 0.431 | 0.052***            |
| Sub. Debt                            | 0.055                      | 0.000  | 0.181 | 0.040                 | 0.000  | 0.141 | 0.015***            |
| Secured Debt                         | 0.188                      | 0.001  | 0.311 | 0.365                 | 0.199  | 0.389 | -0.177***           |
| Unsecured Debt                       | 0.568                      | 0.723  | 0.429 | 0.358                 | 0.187  | 0.384 | 0.210***            |
| # Firm-year Obs                      | 13415                      |        |       | 21904                 |        |       |                     |
| # Unique Firm                        | 1532                       |        |       | 2832                  |        |       |                     |

| Panel B:                             | Small Multinational |        |       | Small Domestic |        |       | Diff in Mean   |
|--------------------------------------|---------------------|--------|-------|----------------|--------|-------|----------------|
|                                      | Mean                | Median | Std   | Mean           | Median | Std   | MNC - Domestic |
| Cash/Total Assets                    | 0.233               | 0.177  | 0.206 | 0.205          | 0.102  | 0.236 | 0.028***       |
| Total Debt/Total Assets              | 0.171               | 0.103  | 0.205 | 0.221          | 0.144  | 0.235 | -0.050***      |
| Long-Term Debt/Total Debt            | 0.537               | 0.652  | 0.409 | 0.595          | 0.729  | 0.387 | -0.057***      |
| <u>Debt Structure (% Total Debt)</u> |                     |        |       |                |        |       |                |
| <i>By type</i>                       |                     |        |       |                |        |       |                |
| Sr. Bonds and Notes                  | 0.120               | 0.000  | 0.283 | 0.131          | 0.000  | 0.295 | -0.011**       |
| Sub. Bonds and Notes                 | 0.027               | 0.000  | 0.138 | 0.022          | 0.000  | 0.118 | 0.005**        |
| Commercial Paper                     | 0.001               | 0.000  | 0.028 | 0.000          | 0.000  | 0.005 | 0.001**        |
| Convertible Debt                     | 0.062               | 0.000  | 0.217 | 0.047          | 0.000  | 0.186 | 0.015***       |
| Bank Debt                            | 0.349               | 0.000  | 0.434 | 0.312          | 0.000  | 0.419 | 0.036***       |
| Revolving Credit                     | 0.179               | 0.000  | 0.325 | 0.126          | 0.000  | 0.282 | 0.053***       |
| Term Loans                           | 0.177               | 0.000  | 0.329 | 0.189          | 0.000  | 0.343 | -0.012**       |
| Cap. Leases                          | 0.089               | 0.000  | 0.260 | 0.063          | 0.000  | 0.217 | 0.025***       |
| <i>By interest type</i>              |                     |        |       |                |        |       |                |
| Fixed Rate Debt                      | 0.198               | 0.000  | 0.351 | 0.219          | 0.000  | 0.365 | -0.021***      |
| Variable Rate Debt                   | 0.283               | 0.000  | 0.405 | 0.219          | 0.000  | 0.366 | 0.064***       |
| Zero Coupon Debt                     | 0.005               | 0.000  | 0.057 | 0.002          | 0.000  | 0.041 | 0.002**        |
| <i>By priority</i>                   |                     |        |       |                |        |       |                |
| Senior Debt                          | 0.571               | 0.994  | 0.483 | 0.523          | 0.814  | 0.485 | 0.048***       |
| Sub. Debt                            | 0.030               | 0.000  | 0.144 | 0.024          | 0.000  | 0.124 | 0.005**        |
| Secured Debt                         | 0.407               | 0.023  | 0.457 | 0.404          | 0.002  | 0.457 | 0.003          |
| Unsecured Debt                       | 0.194               | 0.000  | 0.355 | 0.155          | 0.000  | 0.317 | 0.039***       |
| # Firm-year Obs                      | 8679                |        |       | 23888          |        |       |                |
| # Unique Firm                        | 1792                |        |       | 4739           |        |       |                |

**Table 6. Capital Structure Characteristics (International Sample)**

This table reports details of capital structure for multinational firms vs. domestic firms in MSCI Developed Countries in Panel A and in MSCI Emerging Countries in Panel B. The sample covers publicly-traded firms covered in *Worldscope* and *Capital IQ* between 2000-2017. A firm is defined as *Multinational* if it reports non-zero foreign income at any point in the last three years, and as *Domestic* otherwise. All debt structure variables are scaled by the total debt. We report only the means and the difference in mean between multinational firms and domestic firms. Variables are winsorized at 1 and 99%. The difference reported is based on t-test of the mean. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

**Panel A: MSCI World (Developed) Countries**

|                                      | Multinational | Domestic | Diff.     |
|--------------------------------------|---------------|----------|-----------|
| Cash/Total Assets                    | 0.146         | 0.166    | -0.019*** |
| Total Debt/Total Assets              | 0.217         | 0.234    | -0.017*** |
| Long-Term Debt/Total Debt            | 0.519         | 0.495    | 0.024***  |
| <u>Debt Structure (% Total Debt)</u> |               |          |           |
| <i>By type</i>                       |               |          |           |
| Sr. Bonds and Notes                  | 0.142         | 0.099    | 0.043***  |
| Sub. Bonds and Notes                 | 0.006         | 0.006    | 0.000     |
| Commercial Paper                     | 0.008         | 0.003    | 0.005***  |
| Convertible Debt                     | 0.043         | 0.036    | 0.008***  |
| Bank Debt                            | 0.520         | 0.520    | -0.001    |
| Revolving Credit                     | 0.115         | 0.103    | 0.013***  |
| Term Loans                           | 0.406         | 0.419    | -0.013*** |
| Cap. Leases                          | 0.056         | 0.063    | -0.008*** |
| <i>By interest type</i>              |               |          |           |
| Fixed Rate Debt                      | 0.287         | 0.229    | 0.058***  |
| Variable Rate Debt                   | 0.183         | 0.162    | 0.021***  |
| Zero Coupon Debt                     | 0.008         | 0.010    | -0.002*** |
| <i>By priority</i>                   |               |          |           |
| Senior Debt                          | 0.759         | 0.697    | 0.062***  |
| Sub. Debt                            | 0.008         | 0.009    | -0.001    |
| Secured Debt                         | 0.236         | 0.267    | -0.031*** |
| Unsecured Debt                       | 0.534         | 0.454    | 0.080***  |
| # Firm-year Obs                      | 26799         | 133281   |           |
| # Unique Firm                        | 3862          | 15867    |           |

**Panel B: MSCI Emerging Countries**

|                                      | Multinational | Domestic | Diff.     |
|--------------------------------------|---------------|----------|-----------|
| Cash/Total Assets                    | 0.144         | 0.136    | 0.009***  |
| Total Debt/Total Assets              | 0.251         | 0.258    | -0.006**  |
| Long-Term Debt/Total Debt            | 0.397         | 0.366    | 0.030***  |
| <u>Debt Structure (% Total Debt)</u> |               |          |           |
| <i>By type</i>                       |               |          |           |
| Sr. Bonds and Notes                  | 0.132         | 0.072    | 0.060***  |
| Sub. Bonds and Notes                 | 0.001         | 0.001    | 0.001**   |
| Commercial Paper                     | 0.011         | 0.005    | 0.006***  |
| Convertible Debt                     | 0.035         | 0.019    | 0.015***  |
| Bank Debt                            | 0.564         | 0.579    | -0.015*** |
| Revolving Credit                     | 0.159         | 0.155    | 0.003     |
| Term Loans                           | 0.409         | 0.434    | -0.025*** |
| Cap. Leases                          | 0.028         | 0.030    | -0.002    |
| <i>By interest type</i>              |               |          |           |
| Fixed Rate Debt                      | 0.191         | 0.175    | 0.017***  |
| Variable Rate Debt                   | 0.276         | 0.184    | 0.092***  |
| Zero Coupon Debt                     | 0.019         | 0.015    | 0.004***  |
| <i>By priority</i>                   |               |          |           |
| Senior Debt                          | 0.744         | 0.720    | 0.024***  |
| Sub. Debt                            | 0.002         | 0.001    | 0.001     |
| Secured Debt                         | 0.326         | 0.381    | -0.055*** |
| Unsecured Debt                       | 0.447         | 0.357    | 0.090***  |
| # Firm-year Obs                      | 8921          | 142704   |           |
| # Unique Firm                        | 1364          | 14576    |           |

**Table 7. Sources of Bank Loans**

This table presents the percentage of the number of loans that include at least one lender from each country in loan syndicates. The sample includes syndicated bank loans issued to U.S. public firms in Compustat during the period from 1990 to 2018 from Dealscan. *Multinational* is the indicator denoting a multinational borrower that reports non-zero foreign income (PIFO) at any point in the last three years, and *% Foreign Income* is the absolute value of foreign income (PIFO), divided by the sum of absolute values of domestic (PIDOM) and foreign income (PIFO). Each column shows the percentage of number of loans to multinational firms and domestic firms, respectively, that include at least one lender from each country in a loan syndicate. The list of lender countries is in descending order of loans to multinational firms.

| Lender Country: | Loans to Multinational | Loans to Domestic |
|-----------------|------------------------|-------------------|
| Canada          | 32.56%                 | 22.46%            |
| United Kingdom  | 31.79%                 | 15.76%            |
| Japan           | 28.76%                 | 16.37%            |
| France          | 24.50%                 | 16.31%            |
| Germany         | 22.40%                 | 13.39%            |
| Netherlands     | 16.30%                 | 7.86%             |
| Switzerland     | 14.22%                 | 9.27%             |
| Italy           | 7.34%                  | 1.51%             |
| Australia       | 4.55%                  | 1.60%             |
| Belgium         | 3.83%                  | 2.07%             |
| Spain           | 3.61%                  | 0.90%             |
| China           | 3.26%                  | 0.92%             |
| Norway          | 2.97%                  | 0.94%             |
| Taiwan          | 2.06%                  | 1.90%             |
| Ireland         | 1.64%                  | 0.96%             |
| Sweden          | 1.55%                  | 0.25%             |
| Hong Kong       | 1.50%                  | 0.64%             |
| Israel          | 1.43%                  | 1.30%             |
| Denmark         | 1.35%                  | 0.38%             |
| Singapore       | 1.27%                  | 0.42%             |
| Observations    | 15,051                 | 24,641            |

**Table 8. Regressions: Access to Foreign Bank Loans**

This table presents estimates of the relation between having multinational operations and access to foreign lenders in bank loans. The estimation is from the OLS regression, where the dependent variable is the indicator that a syndicate includes at least one foreign lender in columns (1) to (2) and the percentage of the foreign lenders in the syndicate in columns (3) to (4). The sample includes syndicated bank loans issued to U.S. public firms in Compustat during the period from 1990 to 2018 from Dealscan. All firm-level controls are obtained from Compustat and they are estimated in one year prior to the loan issuance year. *Multinational* is the indicator denoting a multinational borrower that reports non-zero foreign income (PIFO) at any point in the last three years, and *% Foreign Income* is the absolute value of foreign income (PIFO), divided by the sum of absolute values of domestic (PIDOM) and foreign income (PIFO). We define *Loan Size* as log of loan amount in US million dollars, *Maturity* as log of maturity in months, *Secured* as an indicator variable equal to one if the loan package is secured and equal to zero otherwise, *Revolver* as an indicator variable equal to one if the loan package includes a revolver, *Termloan* as an indicator variable equal to one if the loan package includes a term loan, *# Lenders* as log of the number of lenders in the syndicate, *Firm Size* as log of total assets (AT), *Firm Profitability* as operating income before depreciation (OIBDP) scaled by total assets, and *Firm Tangibility* as property, plant and equipment (PPENT) scaled by total assets. S&P rating is based on long-term public bond rating (SPLTCRM) coded into eight categories as AAA, AA, A, BBB, BB, B, CCC+ and below, and unrated. All regressions include loan issuance year fixed effects, industry (measured in SIC 2-digit code) fixed effects, S&P rating fixed effects, and deal purpose fixed effects. Standard errors are corrected for clustering of observations at the firm level and associated t-statistics are in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

| Dep. Var. =        | (1)                                   | (2)                  | (3)                                  | (4)                  |
|--------------------|---------------------------------------|----------------------|--------------------------------------|----------------------|
|                    | <b>Borrow from Foreign Lender = 1</b> |                      | <b>% Foreign Lender in Syndicate</b> |                      |
| Multinational      | 0.050***<br>(7.35)                    |                      | 0.035***<br>(7.19)                   |                      |
| % Foreign Income   |                                       | 0.108***<br>(9.07)   |                                      | 0.092***<br>(10.26)  |
| Loan Size          | 0.015***<br>(4.59)                    | 0.015***<br>(4.64)   | 0.008***<br>(3.09)                   | 0.008***<br>(3.12)   |
| Maturity           | -0.018***<br>(-4.57)                  | -0.018***<br>(-4.55) | -0.010***<br>(-3.56)                 | -0.010***<br>(-3.63) |
| Secured            | 0.012**<br>(2.00)                     | 0.013**<br>(2.05)    | 0.010***<br>(2.67)                   | 0.011***<br>(2.80)   |
| Revolver           | -0.013**<br>(-2.10)                   | -0.014**<br>(-2.19)  | -0.025***<br>(-5.53)                 | -0.025***<br>(-5.50) |
| Termloan           | 0.025***<br>(4.18)                    | 0.024***<br>(4.01)   | 0.026***<br>(6.95)                   | 0.026***<br>(6.83)   |
| # Lenders          | 0.252***<br>(71.30)                   | 0.252***<br>(71.11)  | 0.060***<br>(21.54)                  | 0.059***<br>(21.43)  |
| Firm Size          | 0.029***<br>(9.69)                    | 0.029***<br>(9.71)   | 0.034***<br>(14.63)                  | 0.033***<br>(14.53)  |
| Firm Profitability | 0.007<br>(0.28)                       | 0.008<br>(0.30)      | -0.067***<br>(-3.70)                 | -0.068***<br>(-3.76) |
| Firm Tangibility   | 0.006<br>(0.34)                       | 0.004<br>(0.25)      | -0.002<br>(-0.15)                    | -0.001<br>(-0.11)    |
| Year FE            | Y                                     | Y                    | Y                                    | Y                    |
| Industry FE        | Y                                     | Y                    | Y                                    | Y                    |
| Borrower Rating FE | Y                                     | Y                    | Y                                    | Y                    |
| Deal Purpose FE    | Y                                     | Y                    | Y                                    | Y                    |
| Observations       | 34,135                                | 33,717               | 34,135                               | 33,717               |
| Adj-R2             | 0.499                                 | 0.499                | 0.291                                | 0.294                |

## Table 9. Equity Ownership

This table presents the percentage of foreign institutional ownership of equity of U.S. public firms. The sample includes firm-year panel of publicly-traded U.S. firms in Compustat from 2000 to 2017 with positive total assets and sales reported. A firm is defined as *Multinational* if it reports non-zero foreign income at any point in the last three years, and as *Domestic* otherwise. The institutional holding information is obtained from Factset and we aggregate mutual fund holdings and institutional holdings reported in 13F filings at the firm level to estimate the percentage of number of shares held by foreign institutional investors. When a firm-year observation is not matched to the Factset institutional holding data, we treat missing information as zero. The columns show the average of foreign ownership and the ownership by institutional investors from each country as the percentage of total number of shares outstanding of multinational firms (A) and domestic firms (B). The difference reported is based on t-test of the mean. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

|                      | Multinational (A) | Domestic (B) | Diff. (A) - (B) |
|----------------------|-------------------|--------------|-----------------|
| Foreign Ownership    | 4.27%             | 1.77%        | 2.50***         |
| Ownership by Country |                   |              |                 |
| United Kingdom       | 1.41%             | 0.62%        | 0.79***         |
| Canada               | 0.86%             | 0.44%        | 0.42***         |
| Germany              | 0.41%             | 0.26%        | 0.15***         |
| Norway               | 0.35%             | 0.13%        | 0.22***         |
| China                | 0.24%             | 0.13%        | 0.12***         |
| Japan                | 0.20%             | 0.07%        | 0.13***         |
| Netherlands          | 0.18%             | 0.07%        | 0.12***         |
| France               | 0.16%             | 0.07%        | 0.10***         |
| Sweden               | 0.12%             | 0.06%        | 0.06***         |
| # Firm-year Obs      | 25852             | 49241        |                 |

**Table 10. Cost of Debt**

This table presents estimates of the relation between having multinational operations and cost of debt. The estimation is from the OLS regression, where the dependent variable is the all-in-drawn spread in basis points. The sample includes syndicated bank loans issued to U.S. public firms in Compustat during the period from 1990 to 2018 from Dealscan. All firm-level controls are obtained from Compustat and they are estimated in one year prior to the loan issuance year. *Multinational* is the indicator denoting a multinational borrower that reports non-zero foreign income (PIFO) at any point in the last three years, and *% Foreign Income* is the absolute value of foreign income (PIFO), divided by the sum of absolute values of domestic (PIDOM) and foreign income (PIFO). We define *Loan Size* as log of loan amount in US million dollars, *Maturity* as log of maturity in months, *Secured* as an indicator variable equal to one if the loan package is secured and equal to zero otherwise, *Revolver* as an indicator variable equal to one if the loan package includes a revolver, *Termloan* as an indicator variable equal to one if the loan package includes a term loan, *# Lenders* as log of the number of lenders in the syndicate, *Firm Size* as log of total assets (AT), *Firm Profitability* as operating income before depreciation (OIBDP) scaled by total assets (AT), and *Firm Tangibility* as property, plant and equipment (PPENT) scaled by total assets. S&P rating is based on long-term public bond rating (SPLTCRM) coded into eight categories as AAA, AA, A, BBB, BB, B, CCC+ and below, and unrated. All regressions include loan issuance year fixed effects, industry (measured in SIC 2-digit code) fixed effects, S&P rating fixed effects, and deal purpose fixed effects. Standard errors are corrected for clustering of observations at the firm level and associated t-statistics are in parentheses. The symbols \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels.

| Dep. Var.          | Loan Spread             |                         |
|--------------------|-------------------------|-------------------------|
|                    | (1)                     | (2)                     |
| Multinational      | -4.432**<br>(-2.56)     |                         |
| % Foreign Income   |                         | -8.235***<br>(-2.73)    |
| Loan Size          | -11.137***<br>(-11.29)  | -11.157***<br>(-11.32)  |
| Maturity           | -14.499***<br>(-11.46)  | -14.483***<br>(-11.39)  |
| Secured            | 57.915***<br>(35.20)    | 57.770***<br>(34.95)    |
| Revolver           | 9.255***<br>(4.35)      | 9.443***<br>(4.42)      |
| Termloan           | 54.887***<br>(30.84)    | 54.722***<br>(30.74)    |
| # Lenders          | -7.857***<br>(-8.41)    | -7.885***<br>(-8.45)    |
| Firm Size          | -6.626***<br>(-7.31)    | -6.769***<br>(-7.47)    |
| Firm Profitability | -230.751***<br>(-26.90) | -231.976***<br>(-26.86) |
| Firm Tangibility   | -0.580<br>(-0.13)       | -0.629<br>(-0.14)       |
| Year FE            | Y                       | Y                       |
| Industry FE        | Y                       | Y                       |
| Borrower Rating FE | Y                       | Y                       |
| Deal Purpose FE    | Y                       | Y                       |
| Observations       | 29,016                  | 28,660                  |
| Adj-R <sup>2</sup> | 0.549                   | 0.550                   |