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# Two Essays on Attracting Foreign Direct Investment: From Both a National and Firm Level Perspective

Ryan Lawrence Mason  
*Old Dominion University*

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**TWO ESSAYS ON ATTRACTING FOREIGN DIRECT INVESTMENT:  
FROM BOTH A NATIONAL AND FIRM LEVEL PERSPECTIVE**

by

**Ryan Lawrence Mason  
B.A May 2007, Anderson University  
MBA May 2008, Anderson University**

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Approved by:

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**Mohammad Najand (Director)**

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**John Griffith (Member)**

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**David Selover (Member)**

## ABSTRACT

### TWO ESSAYS ON ATTRACTING FOREIGN DIRECT INVESTMENT: FROM BOTH A NATIONAL AND FIRM LEVEL PERSPECTIVE

Ryan Lawrence Mason  
Old Dominion University, 2014  
Director: Dr. Mohammad Najand  
Co-Directors: Dr. John Griffith  
Dr. David Selover

Countless studies with a wide variety of financial and economic indicators have been conducted over the years within the context of international business research, all searching for hints or signals as to what makes the never ending process of globalization progress. Our research follows these efforts while focusing specifically on Foreign Direct Investment (FDI). Our first study sets out to empirically test if nations adopting the inflation targeting (IT) monetary policy are more successful in attracting inbound and outbound FDI cash flows than those nations utilizing alternative monetary policies. IT is a relatively new policy which was first put into action by New Zealand in 1990. We expand the original regression to inquire if the up and coming monetary policy is more successful for developing or developed nations, as well as using alternative dependent variables of imports and exports.

Investigating FDI from the firm level, we next study the impact of cross-listed target firms on cross-border merger and acquisition (M&A) activity. Specifically, we investigate whether there is a direct link between a target firm being cross-listed in the acquirer's home nation with the short- and long-run stock market returns of the acquiring firms. The sample includes cross-border acquisitions (United States acquirer with a non-US target) from 1990-2010. Motivated by the Bonding Hypothesis, which suggests that by way of a US exchange listing, managers and controlling shareholders from countries with weaker investor protection commit themselves to protect minority shareholders' interests (Coffee 1999; Stulz 1999), we test the influence of a foreign cross-listed target firm versus that of a non-cross-listed target firms.

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## INTRDUCTION

Foreign Direct Investment (FDI) is critical to national economic growth and international trade competitiveness. Previous research has explored the impact of the Inflation Targeting monetary policy on controlling inflation levels and numerous gross domestic product (GDP) statistics; however, to the best of our knowledge, no study has examined its influence on FDI directly. The first essay sets out to empirically test if nations adopting the inflation targeting monetary policy are more successful in attracting FDI cash flows than those nations utilizing alternative monetary policies. Inflation targeting is a relatively new policy which was first put into action in 1990; it is an extension of the floating exchange rate regime. Our largest regression sample consists of 809 country year observations. We test for significance in regards to FDI as a percentage of GDP, both inflows and outflows, as well as growth of imports and exports. We expand the original regression to inquire if the up and coming monetary policy is more successful for developing or developed nations. Our results provide four contributions to the inflation targeting literature: (i) adoption of the inflation targeting monetary policy has a positive impact on FDI; (ii) when isolating developing nations, that impact loses some significance; (iii) the impact is larger for FDI inflows than FDI outflows; (iv) the relationship between FDI and imports/exports is that of a substitute, not of a compliment.

The second essay examines the impact of cross-listed target firms on cross-border merger and acquisition (M&A) activity. Specifically, we investigate whether there is a direct link between an acquired target firm being cross-listed in the bidder's home nation and the short run and long run shareholder returns of the bidding firm. From a sample of

130 cross-border acquisitions (United States bidder with a non-US target) from 1990-2010 we find that in the short run there is a negative, but non-significant impact to a bidder's shareholder value when the target firm is cross-listed in the United States at the time of the acquisition announcement. Long run results are also not significant, however the relationship is found to be positive. Our results also show targets with higher levels of recent growth as well as larger amounts of free cash flows are found to decrease stock returns of the bidding firm. Increased distance between the partnering nations, as well as higher accounting standards in the target nation also lead to lower bidder stock returns.

# **ESSAY 1: INFLATION TARGETING'S IMPACT ON ATTRACTING FOREIGN DIRECT INVESTMENT**

## **INTRODUCTION**

In 1990 New Zealand became the first country to implement a floating exchange rate with inflation targeting as the primary focus. Since that time, New Zealand's average annual inflation has been 2.29%. During the 1980's New Zealand's average annual inflation was 11.86%. Comparing the same time frames, average annual gross domestic product (GDP) has increased by 188%, imports by 199%, exports by 209%, and foreign direct investment by 86%. While inflation targeting was not the only factor which contributed to these impressive results, this does suggest that inflation targeting may have a significant influence on national competitiveness. Further illustrating this argument, other developed and developing countries that have followed New Zealand's example by applying the inflation targeting policy have experienced similar results.

There are currently 27 countries representing six continents using the inflation targeting monetary policy (see Table 1) (Hammond, 2012). The new policy first became popular in developed nations. Nine additional developed nations looking to stabilize their economy took on the inflation target framework during the 1990s. Throughout 1999 and 2000 four developing nations also announced implementation of the inflation targeting strategy. To date, 12 developed nations and 15 developing nations have adopted this policy. Regardless of economic classification, the young monetary policy has served well for most participating nations in controlling inflation and increasing international trade (Fraga, Goldfajn and Minella, 2003). Each inflation targeting nation's



**Table I**  
**Inflation Targeting Nations**

This table provides a list of nations that have adopted the inflation targeting monetary policy. Year IT Started is the year that the nation officially adopted inflation targeting according to Hammond (2012). Economic Class is according to the World Bank databank, which provides four levels of income, high income, upper middle income, lower middle income, and low income. Target Range is the 2013 target inflation range for each nation taken from Hammond (2012).

Nation	Year IT Started	World Bank Economic Class	2013 Inflation Target Range (%)	Nation	Year IT Started	World Bank Economic Class	2013 Inflation Target Range (%)
New Zealand	1990	High income: OECD	1 – 3	Hungary	2001	Upper middle income	3
Canada	1991	High income: OECD	1 – 3	Iceland	2001	High income: OECD	2.5
United Kingdom	1992	High income: OECD	2	Mexico	2001	Upper middle income	2 – 4
Australia	1993	High income: OECD	2 – 3	Norway	2001	High income: OECD	2.5
Sweden	1993	High income: OECD	2	Peru	2002	Upper middle income	1 – 3
Czech Republic	1997	High income: OECD	1 – 3	Philippines	2002	Lower middle income	3 – 5
Israel	1997	High income: OECD	1 – 3	Guatemala	2005	Lower middle income	3 – 5
Poland	1998	High income: OECD	1.5 – 3.5	Indonesia	2005	Lower middle income	3.5 – 5.5
Republic of Korea	1998	High income: OECD	2 – 4	Romania	2005	Upper middle income	1.5 – 3.5
Brazil	1999	Upper middle income	2.5 – 6.5	Armenia	2006	Lower middle income	2.5 – 5.5
Chile	1999	High income: OECD	2 – 4	Serbia	2006	Upper middle income	2.5 – 5.5
Colombia	1999	Upper middle income	2 – 4	Turkey	2006	Upper middle income	3 – 7
South Africa	2000	Upper middle income	3 – 6	Ghana	2007	Lower middle income	6 – 10
Thailand	2000	Upper middle income	1.5 – 4.5				

adoption year is provided in Table 1, along with their 2013 inflation target range, each collected from Hammond (2012)<sup>1</sup>.

Through inflation targeting's early years many scholars contributed to the development of the inflation targeting policy. Inflation targeting has become a key feature for conducting monetary policy in which decisions are guided by expectations of future inflation relative to an announced target (Green, 1996). Four main elements have commonly been included to help define the monetary policy (Svensson, 1999; Mishkin, 2004; Heenan, Peter, and Roger, 2006; Hammond, 2012). Those features are: (1) An explicit central bank mandate to pursue price stability as the primary objective of monetary policy and high degree of operational autonomy. (2) Explicit quantitative public targets used for inflation. (3) Central bank accountability for performance in achieving the inflation objective, mainly through high transparency requirements for policy strategy and implementation. (4) A policy approach based on a forward looking assessment of inflation pressures, taking into account a wide array of information (Roger, 2010, p. 46). King (2005) provides two guidelines of the inflation targeting policy as: (1) A precise numerical target for inflation in the medium term. (2) A response to economic shocks in the short term. Jonas and Mishkin (2004) also support a medium-term horizon as the best focus, suggesting this allows for the inevitability of missed targets. They continue that if the central bank has complete transparency inflation target misses should not be detrimental to the economy, or a reason to abandon inflation targeting altogether.

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<sup>1</sup> Hammond (2012) provides both formal and informal adoption dates for Ghana, Israel, Republic of Korea, Serbia, and Sweden. Consistent with the majority of inflation targeting studies, we use formal adoption dates.

Of course, every country participates in some level of inflation monitoring and inflation control, but only a few put inflation control above all other national goals. Many prolific central banks, such as the U.S. Federal Reserve, the Bank of Japan, the European Central Bank, and the Swiss National Bank have taken on certain elements of inflation targeting (Roger, 2010). The monetary policy which uses inflation targeting as its primary objective to drive all of their monetary actions and decisions is labeled as inflation targeting throughout the academic literature. However, there is a clear difference between using inflation targeting as a tool for addressing multiple national goals and using it as the primary determinant of all monetary actions within a nation (Nessen and Vestin, 2005). Although the primary requirements previously listed do not vary significantly throughout the literature, each central bank does have and uses their own variety of strategies and tools within the inflation targeting framework. (Hammond, 2012; Cespedes, Chang and Velasco, 2013)

Since inflation targeting was first put into action in 1990 there has been much analysis on the country level regarding what inflation targeting is, how and why it should be implemented, how it should be managed, and brief analysis of what financial outcomes adopting countries have experienced (Green, 1996; Svensson, 1997, 1999; Walsh, 2002; Calvo and Mishkin, 2003; Jonas and Mishkin, 2004; Goncalves and Carvalho, 2009;). An early study by Fraga et al. (2003) analyzed some inflation control along with macro-economic statistics from a few of the early adopting nations. The authors found inflation targeting had been successful for developed and developing nations. Roger (2010) provided similar results from a brief statistical analysis of inflation control by adopting nations in his paper, which served more as a call for inflation

targeting research rather than analysis. Further statistical analysis has been minimal and mixed in regards to inflation targeting's effectiveness over controlling inflation, along with improving other economic indicators. A small time frame has certainly been a legitimate reason why. With inflation targeting approaching the 25 year mark, the time has come for a stream of more in-depth statistical analysis to better gauge if inflation targeting has been successful.

This study intends to take that next step in considering inflation targeting's impact in regards to foreign direct investment (FDI). Previous empirical inflation targeting research has focused on inflation targeting's influence on various statistics surrounding inflation and it's volatility (Neuman and von Hagen, 2002; Vega and Winkelried, 2005; Lin and Ye, 2007, 2009; Goncalves and Salles, 2008; Broto, 2011; Ginindza and Maasoumi, 2013), GDP (Ball and Sheridan, 2005; Goncalves and Salles, 2008; Siregar and Goo, 2010, Mollick, Cabral, and Carneiro, 2011; Abo-Zaid and Tuzemen, 2012), exchange rate pass through (Aleem and Lahiani, 2010; Prasertnukul, Kim, and Kakinaka, 2010; Siregar and Goo, 2010), exchange rate volatility (Prasertnukul et al., 2010 Pontines, 2011) and interest rates (Neumann and von Hagen, 2002).

Expanding the literature beyond these adopting nation's specific macro-economic indicators, we provide the first empirical study to our knowledge to go deep into the cross-border business influence of inflation targeting. Also, many past studies focus on just a small number of inflation targeting nations typically within the same region. Our primary focus is a large conglomerate spreading across 50 nations to better generalize the influence of inflation targeting. We consider past literature regarding FDI entry, inflation targeting practices, and inflation's impact on international business in order to

empirically test whether adopting nations attract higher levels of FDI than non-inflation targeting nations. The results show that inflation targeting is significant in attracting FDI cash flows. The attraction is slightly stronger for developed nations than for developing nations. However, when the developing nations are split between upper and middle income we do find inflation targeting to attract more FDI for the lesser developed nations. These findings, along with similar future studies will be critical on the firm and national levels for inflation targeting nations, trade partners of inflation targeters, as well as potential inflation targeting implementers.

The remainder of this paper is structured in the following manner. The introduction is followed by the theoretical and empirical review of inflation targeting and FDI which helps develop our hypotheses. The subsequent sections provide discuss our empirical research methodology and results. In the concluding portion of the paper, we discuss the potential implications of the research, as well as the limitations and future research possibilities.

## **THEORETICAL DEVELOPMENT**

### **Monetary Policy and Inflation Targeting**

Inflation targeting developed as an extension of the framework for a floating exchange rate. Throughout the early 1900s when globalization was first becoming a major factor for national economies, the issue of how a country should manage its currency in relation to exchange rates became a hot topic. There emerged two primary strategies. First a fixed exchange rate, where a nation sets a specific exchange rate

between its currency and one of the dominant currencies around the world (i.e. US Dollar, Japanese Yen, or British Pound). Arguments for fixed exchange rates were economic stability, increased international trade, and a much needed barricade to speculative attacks (Nurkse, 1944).

The alternative option is a floating exchange rate, where a nation has no fixed ties to any other currency. Friedman (1953) argued that with the floating rate investors could hedge against speculative attacks through forward contracts, a nation's central bank would have control over their monetary policy and be able to adjust accordingly for any situation, and that price levels, employment levels, and exchange rates will be free to balance out naturally at their most efficient levels.

Since this early debate there has been a great amount of literature arguing for each exchange rate extreme, while also producing a variety of combinations strategies. Calvo and Mishkin (2003) suggest the majority of countries choose an intermediate path, where an exchange rate is often stabilized by a central bank but allowed to shift with economic situations, often known as a "soft peg". However, the intermediate methods present another issue, what is publically stated versus what is actually applied.

This discrepancy throughout literature is known as the *de jure* versus *de facto* classifications. *De jure* is what the authority figures have announced their monetary policies to be, while *de facto* describes what classification the countries actions actually fall under (Broda, 2004). International organizations such as the World Trade Organization (WTO) and the International Monetary Fund (IMF) work diligently to control these inconsistencies, but have little authority to make a significant impact.

When applied specifically to inflation targeting this discrepancy may lead to the inflation bias. Green (1996) explains the inflation bias as the ability for monetary authorities to choose expansionary policies in an attempt to raise output above its potential level by engineering unexpected inflation (deviating from the target). Such policies would be fully anticipated by private agents and would serve only to raise the average rate of inflation, with no impact on output. The increase in average inflation is known as the “inflation bias” and it has been shown that high levels of bias can stymie economic growth (Svensson, 1997). Romer (1993) and Rogoff (2003) found the inflation bias of central banks are reduced with more open economies, where openness is defined as the percentage of imports plus exports out of total GDP.

The combination of the two exchange rate regimes complicates monetary policy decisions even more due to the uncertainty of monetary authority’s goals and actions (Hoffmann, 2007). For any exchange rate policy to instill confidence domestically and abroad complete transparency of all monetary authorities’ goals and actions is critical (Mishkin, 1998; Jonas and Mishkin, 2004). Kinoshita and Campos (2003) looked at FDI in transition economies and found that effective monetary institutions play a crucial mediating role in attracting international business, especially FDI.

It is from this ongoing debate that the inflation targeting framework has evolved. Its roots lie with the floating exchange rate because it typically has no set ties to any other currency. In order to give the exchange rate proper guidance, inflation control serves as the primary objective and determining factor for all monetary actions. Under the inflation targeting framework inflation is given a range, which allows for monetary flexibility with adjustments of other economic tools to a certain extent. For example,

2013 target ranges from the developed high income economy of Australia were 2% to 3%, the upper middle-income developing economy of Brazil was 2.5% to 6.5%, and lower middle-income Ghana's has 6% to 10% (Hammond 2012). Although inflation targeting is one of the many intermediate strategies, its framework addresses the majority of premier topics debated throughout literature regarding exchange rate policies. (Green, 1996; Svensson, 1997; Walsh, 2002; Fraga et al., 2003; Nessen and Vestin, 2005).

It was not until the 1960s and 1970s that scholars attempted to develop an underline theory to help determine the choice of a nation's exchange rate. Two very similar theoretical streams came forth in the form of the theory of optimal exchange rate regimes, and theory of optimal currency areas (Mundell, 1961; McKinnon, 1963; Poole, 1970). The theories did not look to determine a general answer for what exchange rate option was best. They attempted to develop and adapt a model that a nation or region could use to help determine their optimal monetary choice based on certain economic factors, such as financial stability, international trade patterns, and future forecasting among others. The literature that has progressed is typically not concerned with expanding on these theories, but will examine the pros and cons of different monetary frameworks in relation to certain nations and economic levels. While using these models the debate between a fixed exchange rate and a floating exchange rate evolved into rules-versus-discretion debate. This took the focus off of the policy choice, and on to the deeper level of implementation and monitoring of the chosen policy (Green, 1996). This study looks to take on a similar form by evaluating the relatively new inflation targeting framework. We look to empirically test by means of an OLS Fixed Effects regression inflation targeting's impact on national FDI for both developed and developing nations.



## **Inflation Targeting and Inflation Control**

Previous studies have already shown that adoption of the inflation targeting policy is significant in not just lowering inflation, but also increased control over the volatility of inflation as well as other economic indicators. Lin and Ye (2009) looked at a group of 13 developing inflation targeting nations against 39 control (non-inflation targeting) nations and found the inflation targeting policy to be significant in lowering inflation. On average, adopting nations help decrease inflation by an average of nearly 3% annually. This study also shows inflation targeting's significance in reducing inflation variability, which they defined as the standard deviation of the 3 year moving average of inflation. When doing a similar study of 7 developed inflation targeting nations against 15 control nations, Lin and Ye (2007) did not find significance of lowering inflation or inflation variability. After controlling for hyperinflation (defined as an annual inflation rate greater than 40%), their results stand.

Ginindza and Maasoumi (2013) looking at 12 inflation targeters against 18 control nations also find inflation targeting helps stabilize inflation, however there is no added benefit for the early adopters. Broto (2011) focused solely on South American countries (5 inflation targeting, 3 control) and found inflation targeting to be significant in lowering inflation, inflation volatility, and inflation uncertainty. Working with a sample of 25 nations (14 inflation targeting, 11 control), Capistran and Ramos-Francia (2010) found inflation targeting reduces the dispersion of long run inflation expectations; however the full effect is not felt until the third year following adoption. In sum, most studies show that inflation targeting adoption is effective in reducing and controlling inflation.

As the results for inflation targeting drift towards supporting its positive influence on inflation, scholars have started to branch out by testing additional economic statistics. Neumann and von Hagen (2002) look at inflation targeting's influence on volatility of inflation, output, and interest rates for a slightly smaller list of developed nations (6 inflation targeting, 3 control) and find results supporting the inflation targeting policy. However, Ball and Sheridan (2004) provide similar analysis on developed nations (7 inflation targeting, 13 control) and find no support for inflation targeting improving these monetary statistics. Goncalves and Salles (2008) focus strictly on developing nations (13 inflation targeting, 23 control) and find inflation targeters are able to lower inflation and lower GDP growth volatility. Goncalves and Salles also control for hyperinflation and retain their significance, however their cut off was measured at greater than 50% annual inflation. Siregar and Goo (2010) look specifically into adopting nations Indonesia and Thailand and find inflation targeting significantly increased GDP growth rates while decreasing GDP volatility. Abo-Zaid and Tuzemen (2012) using a sample of 50 countries (23 inflation targeting, 27 control) find developing inflation targeters have higher and more stable GDP growth along with lower and more stable inflation. Developed inflation targeting nations were also found to have higher GDP growth and conduct more disciplined fiscal policy after adopting. Overall the authors suggest non-inflation targeting nations would benefit from adopting the policy. Mollick et al. (2011) found inflation targeting leads to higher output income per capita for developed and developing nations, however the long run effect is lower for developing nations than for developed.

Prasertnukul et al. (2010) define the exchange rate pass-through as an indicator of how changes in nominal exchange rates affect domestic prices. When using data from

East-Asian inflation targeters (Indonesia, Philippines, Republic of Korea, and Thailand), the authors found inflation targeting helps stabilize inflation through reducing exchange rate pass-through and reduced exchange rate volatility. Siregar and Goo (2010) also found inflation targeting to be significant in reducing the pass-through effect. Aleem and Lahiani (2010) looked at developing inflation targeters in East-Asia and Latin America and found that inflation targeting helps lower exchange rate pass-through and was associated with a more credible monetary policy. Pontines (2011) used 23 inflation targeting nations and 51 control nations to find that exchange rate volatility is lower for inflation targeters, and the relationship is stronger for developing nations. As we can see, the inflation targeting literature has stayed mostly within the national economic statistics.

### **Inflation Targeting and FDI Entry**

Past research has led several scholars to exploring how inflation rates influence international business, and specifically with FDI. However, the inflation targeting policy has not yet been directly tested on any form of international business. Past literature suggests that price stability may be the prime indicator of a legitimate macroeconomic management by a host government (Kinoshita and Campos, 2003). A history of low inflation and manageable fiscal deficits signals to investors how committed and credible the government is. High and unpredictable inflation serves as a proxy for macroeconomic instability while distorting the information content of the market prices and the local incentive structure (Obwona, 2001). Under the location portion of the OLI paradigm (Dunning, 1980), some authors propose that locational advantages related to economic policy and history are key determinants of FDI (Pugel, Kragas, and Kimura, 1996; Kinoshita & Campos, 2003). Many studies in a variety of economic regions have

seen negative relationships between inflation rates and economic growth (Fisher, 1993; Briault, 1995; Sarel, 1996; Obwona 2001).

Certainly, in the majority of international business transaction exchange rates bring additional concerns and uncertainty. Pontines (2011) shows that developing nations with inflation targeting have lower nominal and real exchange rate volatility than non-inflation targeters. Prasertnukul et al. (2010) also found declines in exchange rate volatility for inflation targeting nations Republic of Korea and Thailand. Due to inflation targeting nations seeing significant declines and increased stability in their inflation and exchange rates, the prior relationships between inflation and FDI bring us to our first hypothesis.

*Hypothesis 1: Nations utilizing inflation targeting will see greater increases in FDI as a percentage of GDP than that of a non-inflation targeting nation.*

We will also run the same regression substituting FDI inflow and FDI outflow data (as a percentage of GDP), as well as import and export growth rates in place of FDI as the dependent variable. For each of our dependent variables we expect the same positive correlations with inflation targeting as we do for FDI.

### **The Role of Economic Development**

Although inflation targeting has helped economies of every level with their inflation, it may be best suited in aid to developing nations (Goncalves and Salles, 2008). The majority of developed economies already have established and historical economic success. The reputations they have built will help in attracting FDI beyond what the inflation level contributes. Ferreira de Mendonca and de Guimaraes e Souza (2012) find

inflation targeting is the ideal monetary regime for developing economies because it helps bring inflation levels down to “internationally acceptable levels”, levels which are already in place by the majority of developed inflation targeters. Calvo and Mishkin (2003) also suggest developing nations have more to gain from inflation targeting because they typically suffer from weak fiscal, financial and monetary institutions. Fraga et al. (2003) explains how developing nations have the difficult challenge of balancing low credibility and fragile economic institutions with higher macroeconomic instability and vulnerability to economic shocks.

The primary focus of the inflation targeting strategy is certainly to control inflation, but expected indirect effects are economic stability, increased international business, and a positive reputation for its monetary institutions (Green, 1996; Fraga et al., 2003; Roger, 2010). Garrett (2000) posits that before a country’s domestic economy can succeed, they need to interact through international trade. When studying transition economies in Eastern Europe, Kinoshita and Campos (2003) indicate that successful implementation of economic reform leading to both stable economic performance and low inflation are strong signals for potential FDI. The wider range of opportunities to positively impact a developing nation’s economy, along with their need of international business leads us to our next hypothesis.

*Hypothesis 2: The relationship between an inflation targeting nation and FDI will be stronger for developing nations than developed nations.*

## **METHODS AND DATA**

### **Sample**

The sample consists of 27 IT nations, along with 23 control nations, separated into 5 regional/economic clusters. The clusters used for our analysis are show in Table 2. The clusters were determined based on four sources. We started with the highly respected and cited clustering countries piece from Ronen and Shenkar (1985). With a diverse range of 27 inflation targeting nations covering 6 continents, this seminal clustering piece did well to include 17 inflation targeting nations throughout their clusters. The majority of our non-inflation targeting (control) nations were also taken from their work. Next we used Sirota and Greenwood's (1971) clusters which were based on similar determinants to those used by Ronen and Shenkar.

We then used the economic classification and world region of each nation from two sources. Descriptions were compared for similarity between the World Bank and International Monetary Fund (IMF) databases. Each nation's classification is shown in Table 1. Terminology used is that of the World Bank, where developed nations are labeled as High Income, and developing nations include lower-middle income and upper-middle income labels. Armenia and Ghana are the only inflation targeting nations without a natural cluster group, while India is the lone control nation without a cluster group. Although China and India are commonly labeled as "Other" or "Independent" in past clustering literature, we include them as control nations due to their high growth and significant impact on the global economy over the previous two decades<sup>2</sup>. In Table 2

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<sup>2</sup> In unreported regressions, removing China and India from the sample did not significantly change the results.

**Table II**  
**Inflation Targeting Clusters**

This table provides the cluster groups developed for proper control nations to be used. Data used was taken from Ronen and Shenkar (1985), Sirota and Greenwood (1971), the World Bank, the International Monetary Fund, as well as previous inflation targeting article samples. Ghana and Armenia are the only inflation targeting countries without a natural cluster, while India is the only control nation used without a natural cluster.

	<b>Anglo</b>	<b>Eastern European</b>	<b>East Asian</b>	<b>Latin American</b>	<b>Nordic</b>
<b>Inflation Targeting Nations</b>	Australia	Czech Republic	Indonesia	Brazil	Iceland
	Canada	Hungary	Philippines	Chile	Norway
	Israel	Poland	Republic of Korea	Colombia	Sweden
	New Zealand	Romania	Thailand	Guatemala	
	South Africa	Serbia		Mexico	
	United Kingdom	Turkey		Peru	
<b>Non-Inflation Targeting Nations</b>	Austria	Bulgaria	China	Argentina	Denmark
	Ireland	Croatia	Japan	Ecuador	Finland
	Switzerland	Greece	Hong Kong	Honduras	
	United States	Slovak Republic	Malaysia	Paraguay	
			Singapore	Uruguay	
			Vietnam	Venezuela	

Finland is listed as a control nation, however, from 1993-1997 they are considered to be an inflation targeter prior to their adoption of the Euro (Roger, 2010; Ginindza and Maasoumi, 2013)<sup>3</sup>. Therefore, our final sample of inflation targeting nations is 27, where the non-inflation targeting control nations for comparisons settled in at 23.

The group of inflation targeting nations, as well as their non-inflation targeting cluster nations represents a variety of economic levels. There are 25 developed and 25 developing nations, with nine of the developing nations considered lower-middle income and 16 upper-middle income. For this reason we will be running four additional regressions of the same model. The first regression will include the full sample of 50 nations mentioned previously. The second model will include just the 25 nations

<sup>3</sup> During the sample time frame Finland, Greece, Ireland, and the Slovak Republic each adopted the Euro as their currency. In unreported regressions, removing these control nations from the sample did not significantly change the results.

considered to be developing nations, while the third will consist of the 25 developed nations. This will allow us to test Hypothesis 2. We also go further into the developing group and run separate regressions between upper-middle income and lower-middle income classifications provided by the World Bank data bank.

Of the 27 countries adopting the inflation targeting monetary policy, their adoption years represent 13 different years of the possible 22 year range. New Zealand was the first to implement the strategy in 1990, and Ghana the most recent in 2007. Table 1 provides a complete list of the adoption years. Due to the availability of data our final sample time frame is 1996-2012. Full monetary data from the World Bank for many of the Eastern European and South American nations is incomplete through the early 1990s. Government and Economic control variables from the World Bank are also unavailable prior to 1996.

### **Variables**

Our primary dependent variable is the annual total Foreign Direct Investment (*FDIT*) as reported by the World Bank<sup>4</sup>. To gauge whether inflation targeting shows a difference between FDI inflows (*FDIIN*) and outflows (*FDIOUT*), each measure is also used as a dependent variable. Each variable is measured as the annual percentage of GDP by the World Bank. This allows for a measure of international trade which will not be skewed simply by an overall increase in an economy for a given year.

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<sup>4</sup> The World Bank Data Bank defines FDI as the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows total net, that is, net FDI in the reporting economy from foreign sources less net FDI by the reporting economy to the rest of the world. Data are in current U.S. dollars.



Although imports and exports are not considered to be part of FDI, they are certainly a major contributor to international business and the constant strides we take towards a truly global economy. As Lipsey (2004) points out, although the measures are significantly different (between FDI and imports/exports), there has always been a close connection with the determining factors. Where the controversial question comes in is if the relationship between FDI and imports/exports is complementary, or that of a substitute. Findings typically report mixed results or no significant relationship at all, however there is a small lean towards a complimentary relationship when significance is found (Lipsey and Weiss, 1981, 1984; Blomstrom, Lipsey, and Kulchychy, 1988). Most studies tend to use firm level data in a more isolated sample; however, by using annual growth in imports (*IMPG*) and exports (*EXPG*) as alternative dependent variables we offer a different perspective to this relationship, while also providing a wider range of economic indicators to better gauge where inflation targeting can benefit an economy.

The primary variable of interest is a dummy variable for nations using the inflation targeting monetary policy (*IT*). If a country has implemented inflation targeting *IT* will take on the value of 1, otherwise it will be represented by a 0. This variable speaks directly to the primary purpose of our study, in hopes to address the question if FDI levels are greater for a country utilizing the inflation targeting policy. The data for this variable was obtained from Hammond (2012) and Roger (2010) who each provide a comprehensive list of inflation targeting nations according to the Bank of England and IMF respectively.

Past research shows the significance of both economic and political factors in determining national level FDI (Schneider and Frey, 1985; Biswas, 2002; Bevan and

Estrin, 2004). We apply four controls related to these national level factors that are taken from the Worldwide Governance Indicators database produced annually by the World Bank<sup>5</sup>. Each is measured on a five point scale, with smaller values representing the more risky nations. Kaufmann, Kraay, and Mastruzzi (2010) provide the following descriptions for each indicator. First is a proxy for the control of corruption (*CORRUPT*). This variable captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests. The next proxy is for rule of law (*LAW*), which measures the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

Government effectiveness (*GOVEFF*) is a measurement of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies. The final proxy is for voice and accountability (*VOCACCT*), which is described as the extent to which a country’s citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Applying these control variables will put all nations on a more level playing field considering the riskiness of investing in the nation. Developing nations are typically more risky than developed nations. Therefore, the risk indicators may diminish the possibility of finding significance for

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<sup>5</sup> From 1996 to 2002 the Worldwide Governance Indicators were only collected during the even numbered years. For this reason we use an average of the two surrounding years to provide a statistic for the odd numbered years.

hypothesis 2, which predicts a difference in FDI likelihood between developing and developed nations.

The next control variable is a proxy for market size, measured by GDP per capita (*GDPPC*). This controls for the size and spending habits of the economy and has been a popular dependent variable among inflation targeting research (Neumann and von Hagen, 2002; Goncalves and Salles, 2008; Siregar and Goo, 2010; Abo-Zaid and Tuzemen, 2012). From Mollick et al. (2011) and Ferreira de Mendonca and Guimaraes e Souza (2012) we use a control for the level of globalization (*OPENNESS*) of each nation, measured as the percentage of imports and exports out of GDP. Due to strong correlation, we use annual import and export growth as alternative dependent variables instead of percentage of GDP. We also control for the population (*POPULATION*) by taking the log of the annual population for each nation.

A control for the education level (*EDUCATION*) of each nation is also included, measured as the public spending on education as a percentage of total government expenditures. As we can see from Table 3, which provides summary statistics for the independent variables, education severely limits our sample size. Rarely finding significance for the education variable, we run each regression without education in order to provide a larger sample size. The last control variable is the three year average lagged value of the annual percentage change in inflation (*LAGINFLPC*), in order to give potential investors time to react to the previous year's inflation for a specific nation. Obwona (2001) asserts that creating a favorable climate for investment takes time to develop the partnership between the government and the private sector with the necessary

level of transparency. Consistent with study from Goncalves and Salles (2008) we remove 34 observations with annual inflation greater than 50%.

**Table III**  
**Inflation Targeting Summary Statistics**

FDIT is total foreign direct investment (fdi) as a percentage of gross domestic product (gdp). FDIN is the total inbound fdi as a percentage of gdp. FDIOUT is the total outbound fdi as a percentage of gdp. IMPG is the annual growth of imports. EXPG is the annual growth of exports. IT is a binary variable where one signifies if the country was an inflation targeter during the observation year. CORRUPT is a measurement of the nation's control over their corruption on a scale from zero to five. LAW is a measurement of the nation's rule of law on a scale from zero to five. GOVEFF is a measurement of the effectiveness of a nation's government on a scale from zero to five. VOCACCT is a measurement of the nation's voice and accountability rights on a scale from zero to five. GDPPC is the gdp per capita based in current US\$. LAGINFLPC is the three year lagged average inflation percentage change based on the consumer price index OPENNESS is the total US\$ value of imports and exports as a percentage of gdp. POPULATION is the log value of the nation's total population. ECUCATION is the total public spending in US\$ on education as a percentage of government expenditures. Each variable is based on the individual country year observation.

Variable	Obs.	Mean	Std. Dev.	Min	Max
FDIT	718	7.130739	11.33165	-35.35181	101.7779
FDIN	826	4.214435	5.643436	-16.14542	52.05155
FDIOUT	718	2.734394	6.306216	-23.32876	50.06254
IMPG	813	6.820356	10.95763	-50.05955	57.66691
EXPG	788	6.553736	8.467293	-31.80498	50.65073
IT	830	0.391566	0.488395	0	1
CORRUPT	830	2.987024	1.170058	0.86	5
LAW	830	2.916319	1.061946	0.81	4.51
GOVEFF	830	3.095169	1.008416	0.96	4.87
VOCACCT	830	2.921849	0.902635	0.49	4.33
GDPPC	830	16588.59	17765.72	259.7111	99557.73
LAGINFLPC	816	0.327673	2.259284	-9.375421	26.38543
OPENNESS	827	90.26971	69.60545	14.93284	447.2391
POPULATION	830	7.288019	0.682888	5.429617	9.130557
EDUCATION	477	14.55243	4.043243	4.204572	33.10421

Also from table 3, we can see our primary variable of interest, the *IT* dummy, has a mean of 0.39, indicating that nearly half of the sample years are provided by inflation

targeting nations. FDI inflows account for approximately 60 percent of total FDI for all observations. The corruption maximum score is exactly five due to the Scandinavian nation's extremely low levels of corruption.

Table 4 provides the correlation matrix for the independent variables. A couple of the governance indicators experience correlations above 80 and 90 percent; however this was expected due to the small precision scale and unavoidable overlap in the measurement criteria. As Allison (2012) explains, as long as the collinear variables are used strictly as control variables, and are not collinear with your variable of interest, there is no problem with the high correlations.

### **Estimation Procedure**

In order to examine the statistical relationship between the independent variables and the dependent variables of FDI and international trade we run a fixed effects regression analysis. The chi-squared statistic from the Housman test was 0.0024, which is less than 0.05, therefore confirming fixed effects is to be used over random effects. Fixed effects include the country specific effects as regressors rather than assigning them to the error term. In turn, this reduces the omitted variable bias and the sample selection bias (Biswas 2002). The first dependent variable equation is shown here:

*Equation 1:*

$$\begin{aligned}
 FDI_{it} = & \beta_1 + \beta_2 IT_{it} + \beta_3 CORRUPT_{it} + \beta_4 LAW_{it} + \beta_5 GOVEFF_{it} \\
 & + \beta_6 VOCACCT_{it} + \beta_7 GDPPC_{it} + \beta_8 LAGINFLPC_{it} + \beta_9 OPENNESS_{it} \\
 & + \beta_{10} POPULATION_{it} + \beta_{11} EDUCATION_{it}
 \end{aligned}$$

**Table IV**  
**Inflation Targeting Correlation Matrix**

IT is a binary variable where one signifies if the country was an inflation targeter during the observation year. CORRUPT is a measurement of the nation's control over their corruption on a scale from zero to five. LAW is a measurement of the nation's rule of law on a scale from zero to five. GOVEFF is a measurement of the effectiveness of a nation's government on a scale from zero to five. VOCACCT is a measurement of the nation's voice and accountability rights on a scale from zero to five. GDPPC is the gdp per capita based in current US\$. LAGNFLPC is the three year lagged average inflation percentage change based on the consumer price index. OPENNESS is the total US\$ value of imports and exports as a percentage of gdp. POPULATION is the log value of the nation's total population. ECUCATION is the total public spending in US\$ on education as a percentage of government expenditures. Each variable is based on the individual country year observation.

	IT	CORRUPT	LAW	GOVEFF	VOCACCT	GDPPC	LAGNFLPC	OPENNESS	POPULATION	EDUCATION
<b>IT</b>	1.0000									
<b>CORRUPT</b>	0.1317	1.0000								
<b>LAW</b>	0.1153	0.9591	1.0000							
<b>GOVEFF</b>	0.1154	0.9625	0.9675	1.0000						
<b>VOCACCT</b>	0.1990	0.8177	0.8455	0.8149	1.0000					
<b>GDPPC</b>	0.0533	0.7524	0.7470	0.7273	0.5964	1.0000				
<b>LAGNFLPC</b>	-0.0079	0.1082	0.0901	0.0945	-0.0018	0.1118	1.0000			
<b>OPENNESS</b>	-0.1974	0.2557	0.2529	0.3023	-0.0066	0.1257	0.1690	1.0000		
<b>POPULATION</b>	0.0108	-0.3989	-0.3445	-0.3436	-0.3891	-0.3039	-0.0552	-0.3175	1.0000	
<b>EDUCATION</b>	0.0816	0.0676	0.0004	0.0508	-0.1313	-0.0411	0.0574	0.3266	-0.0034	1.0000

Where  $i$  indexes the nation, and  $t$  indexes the year. We complete this same regression for each of the five dependent variables, which were discussed previously in the *Sample* section.

## EMPIRICAL RESULTS

In this section we present the main results of the paper. Our primary variable of interest  $IT$  is significant for seven of the nine regressions using some form of FDI for a dependent variable shown in Table 5. Using the full sample we see the  $IT$  dummy is significant in increasing both FDI total, and FDI inflow. When separating the sample into developed and developing economies we find all three FDI variables to be significant for developed nations, while just inflow and outflow for developing nations. These results provide support for hypothesis 1 that adopting the inflation targeting monetary policy helps increase FDI as a percentage of GDP. However, results are similar, and slightly stronger for developed nations than developing nations, which is the opposite of hypothesis 2's prediction. This result is largely in part to the shorter time frame for which developing nations have been practicing the inflation targeting policy. Brazil was the first developing nation to adopt inflation targeting in 1999. A longer time frame may provide different results once an inflation targeting nation has enough time to portray their progress to the international business economy.

Looking at growth of imports and exports, we find  $IT$  to only be significant in the developed nation's regressions. However, these coefficients, along with the non-significant import and export coefficients are all found to be negative, supporting a

Table V  
Full Sample Fixed Effect Results

Full sample fixed effect regression with five measurements of international trade as the dependent variable for three sample groups. ALL NATIONS is the full sample of 96 nations, 27 nation largest, DEVELOPED NATIONS is a sub-sample of just the 25 high income nations, 12 nation largest, DEVELOPING NATIONS is a sub-sample of just the 25 middle income nations, 13 nation largest. FDI is total foreign direct investment (66) as a percentage of gross domestic product (64); FOMI is the total inbound FDI as a percentage of GDP; FDI/FOMI is the total outward FDI as a percentage of GDP; NPG is the annual growth of imports; EXPORT is the annual growth of exports; IT is a binary variable when one negotiates the country's entry into a trade agreement during the observation year; CORRUPT is a measurement of the nation's control over their company on a scale from zero to five; LAW is a measurement of the nation's rule of law on a scale from zero to five; GOVERN is a measurement of the effectiveness of a nation's government on a scale from zero to five; VOCACCT is a measurement of the nation's voice and accountability rights on a scale from zero to five; GROWTH is the GDP per cent based on current US\$; LAGNPLFC is the three year lagged average inflation percentage change based on the consumer price index; OPENNESS is the total US\$ value of imports and exports as a percentage of GDP; POPULATION is the log value of the nation's total population; EDUCATION is the total public spending in US\$ on education as a percentage of government expenditure. Each variable is based on the mid-year observation. P-values are provided in parentheses, where \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

	ALL NATIONS					DEVELOPED NATIONS					DEVELOPING NATIONS				
	FDI	FOMI	FDI/FOMI	NPG	EXPORT	FDI	FOMI	FDI/FOMI	NPG	EXPORT	FDI	FOMI	FDI/FOMI	NPG	EXPORT
IT	4.759** (0.004)	2.026** (0.051)	2.765* (0.111)	-2.174 (0.199)	-2.481 (0.121)	7.407*** (0.029)	3.126*** (0.041)	4.676*** (0.036)	-4.047** (0.024)	-2.781*** (0.028)	0.0704 (0.938)	1.062** (0.100)	-0.118*** (0.052)	-3.469* (0.317)	-3.242 (0.283)
CORRUPT	3.4537 (0.313)	1.9764 (0.262)	1.4397 (0.333)	2.3404 (0.422)	5.8435*** (0.007)	8.8731*** (0.022)	4.2167** (0.078)	4.6031*** (0.019)	2.0820 (0.537)	5.7466** (0.073)	-0.9947 (0.669)	0.4404 (0.748)	-0.0234 (0.977)	-3.3166 (0.427)	2.4126 (0.522)
LAW	10.6627** (0.046)	5.1892** (0.041)	4.531 (0.119)	-6.2360 (0.152)	-1.2023 (0.578)	7.3278 (0.047)	4.4684 (0.359)	2.8002 (0.612)	-5.2902 (0.332)	4.6833 (0.407)	1.6471 (0.120)	1.8407* (0.094)	-0.2534 (0.720)	19.8016*** (0.040)	20.1146* (0.043)
GOVERN	-4.9752 (0.179)	-4.0237 (0.107)	-2.8448 (0.269)	3.2322 (0.544)	-4.6732* (0.055)	-7.1010 (0.454)	-3.2340 (0.599)	-0.2972 (0.802)	10.7160* (0.053)	0.1748 (0.939)	0.6884 (0.530)	-1.2469 (0.194)	1.4700** (0.009)	-16.7437 (0.113)	4.8302*** (0.028)
VOCACCT	-4.6434 (0.236)	-2.0887 (0.208)	-1.6514 (0.441)	3.9034 (0.151)	-0.6175 (0.740)	-11.0529 (0.109)	-7.7208 (0.156)	-3.2151 (0.404)	-5.6692 (0.281)	-4.7288 (0.271)	1.1694 (0.473)	0.1964 (0.889)	0.1523 (0.700)	-0.3153 (0.927)	-2.4807 (0.453)
GROWTH	0.0000 (0.799)	0.0000 (0.729)	0.0001 (0.980)	-0.0001 (0.955)	-0.0001 (0.175)	0.0001 (0.741)	0.0000 (0.871)	0.0001 (0.451)	0.0001 (0.969)	0.0000 (0.731)	0.0000 (0.941)	0.0002 (0.440)	0.0003** (0.009)	-0.0005 (0.717)	-0.0006 (0.284)
LAGNPLFC	-0.0184 (0.830)	-0.1118*** (0.002)	0.0006 (0.234)	-0.5445** (0.010)	-0.1966** (0.012)	-0.0547 (0.640)	-0.1286** (0.011)	0.0720 (0.410)	-0.4637*** (0.001)	-0.2133** (0.015)	0.0234 (0.891)	0.0234 (0.934)	0.0001 (0.919)	-0.0136 (0.134)	-0.0325*** (0.001)
OPENNESS	0.2534*** (0.000)	0.1293*** (0.001)	0.1163*** (0.004)	0.1319*** (0.000)	0.1231*** (0.002)	0.3166*** (0.000)	0.1683*** (0.000)	0.1171 (0.009)	0.0517* (0.002)	0.0845** (0.022)	0.0007 (0.156)	0.0066 (0.112)	-0.0014 (0.872)	0.2043*** (0.000)	0.2161*** (0.001)
POPULATION	5.1315 (0.817)	0.8178 (0.956)	4.7491 (0.824)	-31.5463 (0.429)	-8.7293 (0.602)	-21.0222 (0.000)	-13.1452 (0.000)	-8.3786 (0.009)	-170.4467** (0.002)	-44.826*** (0.022)	-3.8679 (0.150)	-8.1181 (0.000)	1.6964*** (0.000)	81.7960 (0.292)	42.3975 (0.211)
EDUCATION	-0.3342 (0.357)	-0.0659 (0.676)	-0.2130 (0.697)	-0.1965 (0.697)	-0.0107 (0.911)	-0.2182 (0.447)	-0.4724 (0.267)	-0.2439 (0.555)	0.8417 (0.312)	0.2246 (0.519)	-0.1013 (0.261)	0.0069 (0.920)	-0.0480 (0.159)	-0.4254 (0.443)	-0.0864 (0.745)
CONST	-29.498 (0.816)	-14.270 (0.891)	-47.470 (0.753)	217.135 (0.441)	64.231 (0.198)	130.431 (0.839)	92.770 (0.898)	46.236 (0.940)	1177.668** (0.016)	439.290** (0.023)	20.935 (0.820)	59.239 (0.522)	-80.021*** (0.003)	-634.625 (0.268)	-336.919 (0.180)
R-Squared	0.166	0.147	0.145	0.076	0.082	0.203	0.150	0.182	0.168	0.087	0.235	0.112	0.204	0.224	0.162
Observations	435	470	403	468	445	275	282	275	285	282	140	188	160	183	183



substitution relationship between FDI and imports/exports. Lagged inflation and trade openness are the most frequently significant control variables. Openness has a positive relationship with all DVs for the full sample, but becomes split with the sub-samples, significant for FDI with the developed nations and for imports and exports with developing. The three year lag in inflation is significant for attracting imports and exports for all regressions, and for inbound FDI in the full sample and developed nations. Of the World Bank governance indicator variables, government effectiveness, rule of law, and control of corruption all carry significant variables in just 4 of the 15 regressions, and randomly spread out as well. Voice and accountability was never found to be significant.

The education variable was not found to be significant in any of the 15 regressions reported in Table 5. Removing this variable increases the full sample size by nearly 300 observations (435 to 710 for *FDIT*), and for developed and developing sub-samples by 100 to 200 observations depending on the regression provided in Table 6. The results for *IT* are nearly identical to the original regression; however, we find much more significance for import and export growth. Both regressions now find *IT* to be significant for both imports and exports in the full sample and developing nations, while maintaining the negative relationship. We also maintain the strong positive relationship from trade openness, being significant in 14 of the 15 regressions, while the three year lag in inflation maintains its significant negative relationship with imports and exports.

In Table 7 we use the World Bank's economic classifications to break down the developing nations sub-sample into upper-middle income and lower-middle income. Although this causes the sample sizes to decrease, interesting significant results are still found. We see that *IT* is only significant in decreasing exports for the upper-middle

Table VI  
Full Sample Means: Education Fixed Effects Results

Full sample, excluding the variable EDUCATION, fixed effects regression with five measurements of educational trade as the dependent variable for three sample groups. ALL NATIONS is the full sample of 50 nations; 27 nation targeters, DEVELOPED NATIONS is a subsample of just the 25 high income nations; 13 nation targeters, DEVELOPING NATIONS is a subsample of just the 25 middle income nations; 13 nation targeters. FDI is total foreign direct investment; (60) as a percentage of gross domestic product (GDP); FDIEN is the total inward FDI as a percentage of GDP; FDIOUT is the total outward FDI as a percentage of GDP; DIFG is the annual growth of imports; EXPG is the annual growth of exports; IT is a binary variable where one indicates if the country was an importing target during the observation year; CORRECT is a measurement of the nation's control over their composition on a scale from zero to five; LAW is a measurement of the nation's rule of law on a scale from zero to five; CONECT is a measurement of the differences of a nation's government on a scale from zero to five; VOCACCT is a measurement of the nation's voice and accountability rights on a scale from zero to five; GORPC is the GDP per capita based in current US\$; LABORPC is the three year lagged average inflation percentage change based on the consumer price index; OPENNESS is the total US\$ value of imports and exports as a percentage of GDP; POPULATION is the log value of the nation's total population. Each variable is based on the individual country year observation. P-values are provided in parentheses, where \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

	ALL NATIONS										DEVELOPED NATIONS										DEVELOPING NATIONS									
	FDI	FDIEN	FDIOUT	DIFG	EXPG	FDI	FDIEN	FDIOUT	DIFG	EXPG	FDI	FDIEN	FDIOUT	DIFG	EXPG	FDI	FDIEN	FDIOUT	DIFG	EXPG										
IT	2.947**	1.476**	1.5345	-2.936*	-2.718**	5.690**	2.275**	3.269**	-3.351	-1.321	0.0139	0.715*	0.236	-4.317*	-3.595**															
	(0.018)	(0.011)	(0.130)	(0.050)	(0.023)	(0.032)	(0.023)	(0.040)	(0.123)	(0.300)	(0.977)	(0.060)	(0.167)	(0.003)	(0.020)															
CORRECT	2.9724	1.7311	0.8413	1.4544	3.0159*	5.932*	3.4824*	2.4466	2.5944	3.9916**	0.9669	1.3131	0.3303	-4.712	0.441															
	(0.201)	(0.133)	(0.460)	(0.433)	(0.060)	(0.037)	(0.007)	(0.101)	(0.140)	(0.030)	(0.323)	(0.103)	(0.340)	(0.444)	(0.180)															
LAW	4.0518	1.7457	2.0746	-4.4007**	-2.9916	2.0298	1.1334	1.6790	-4.0297	-0.9125	0.7740	0.1162	0.1419	1.002	1.0182															
	(0.100)	(0.137)	(0.230)	(0.027)	(0.171)	(0.040)	(0.040)	(0.034)	(0.367)	(0.117)	(0.487)	(0.113)	(0.729)	(0.111)	(0.741)															
GOVERN	-3.0019	-2.3509*	-0.6471	-0.0067	-4.6892**	-7.3147	-4.3128	-2.6764	3.7657	-4.0653*	1.0431	0.7004	1.782**	-4.1631	-3.7384															
	(0.113)	(0.062)	(0.063)	(0.979)	(0.013)	(0.173)	(0.110)	(0.369)	(0.179)	(0.003)	(0.134)	(0.043)	(0.000)	(0.356)	(0.201)															
VOCACCT	-2.6377	-0.5733	-1.3961	6.7264**	2.8431	-3.9901	-2.2040	-1.8662	-2.7380	-1.7069	0.7337	0.9429	0.2139	7.5695**	3.1062															
	(0.334)	(0.611)	(0.373)	(0.002)	(0.174)	(0.330)	(0.305)	(0.013)	(0.332)	(0.320)	(0.531)	(0.289)	(0.530)	(0.033)	(0.209)															
GORPC	0.0000	0.0000	0.0001	-0.0002**	-0.0000***	0.0001	0.0000	0.0001	0.0000	-0.0001	0.0001	0.0000	0.0001	0.0001	0.0000															
	(0.671)	(0.806)	(0.330)	(0.002)	(0.007)	(0.629)	(0.910)	(0.348)	(0.942)	(0.123)	(0.230)	(0.982)	(0.151)	(0.411)	(0.008)															
LABORPC	-0.0163	-0.0083	0.0413	-0.4344**	-0.2340**	-0.0732	-0.0056**	0.0218	-0.2334**	-0.1505**	0.0163	0.0022	0.0306	-1.7355*	-1.0316															
	(0.347)	(0.117)	(0.209)	(0.014)	(0.011)	(0.198)	(0.024)	(0.530)	(0.000)	(0.008)	(0.747)	(0.987)	(0.340)	(0.052)	(0.149)															
OPENNESS	0.1478***	0.0749***	0.0570**	0.0083**	0.0791***	0.1508***	0.0973***	0.0900***	0.0416**	0.0229***	0.0409*	0.0863**	0.0013	0.2517***	0.1671**															
	(0.002)	(0.000)	(0.022)	(0.033)	(0.003)	(0.002)	(0.003)	(0.006)	(0.059)	(0.002)	(0.070)	(0.043)	(0.900)	(0.002)	(0.014)															
POPULATION	-11.7127	-5.4041	-5.3460	13.3547	-5.5225	-38.7214	-14.5191	-24.1188	-96.1196**	-49.6095**	0.8646	-2.9084	5.3686*	17.4066	19.9424															
	(0.549)	(0.483)	(0.633)	(0.534)	(0.642)	(0.300)	(0.646)	(0.423)	(0.000)	(0.016)	(0.900)	(0.621)	(0.095)	(0.245)	(0.230)															
CONS	74.198	35.300	31.000	-99.093	48.078	265.145	102.922	160.906	671.170**	362.507**	-14.794	17.721	0.44236*	-294.404	-154.045															
	(0.600)	(0.525)	(0.716)	(0.523)	(0.571)	(0.303)	(0.643)	(0.437)	(0.032)	(0.012)	(0.770)	(0.093)	(0.067)	(0.227)	(0.220)															
R-Squared	0.101	0.093	0.087	0.044	0.061	0.136	0.115	0.116	0.093	0.076	0.154	0.123	0.278	0.087	0.095															
Observations	710	809	710	801	778	357	398	317	402	377	223	411	223	399	399															

Table VI  
Developing Economies Fixed Effects Results

Sub-sample fixed effects regression using the World Bank economic classifications with five measurements of international trade as the dependent variable for three sample groups. UPPER-MIDDLE INCOME is a sub-sample consisting of the 16 (9 inflation targeters) more advanced nations from the previously used DEVELOPING NATIONS sample. LOWER-MIDDLE INCOME is a sub-sample consisting of the 9 (5 inflation targeters) less advanced nations from the previously used DEVELOPING NATIONS sample. FDIIT is total foreign direct investment (fdi) as a percentage of gross domestic product (gdp). FDIIN is the total inbound fdi as a percentage of gdp. FDIOUT is the total outbound fdi as a percentage of gdp. IMPG is the annual growth of imports. EXPG is the annual growth of exports. IT is a binary variable where one signifies if the country was an inflation targeter during the observation year. CORRUPT is a measurement of the nation's control over their corruption on a scale from zero to five. LAW is a measurement of the nation's rule of law on a scale from zero to five. GOVEFF is a measurement of the effectiveness of a nation's government on a scale from zero to five. VOACCT is a measurement of the nation's voice and accountability rights on a scale from zero to five. GDPPC is the gdp per capita based in current US\$. LAGINFLPC is the three year lagged average inflation percentage change based on the consumer price index. OPENNESS is the total US\$ value of imports and exports as a percentage of gdp. POPULATION is the log value of the nation's total population. EDUCATION is the total public spending in US\$ on education as a percentage of government expenditures. Each variable is based on the individual country year observation. P-values are provided in parenthesis, where \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

	UPPER-MIDDLE INCOME					LOWER-MIDDLE INCOME				
	FDIIT	FDIIN	FDIOUT	IMPG	EXPG	FDIIT	FDIIN	FDIOUT	IMPG	EXPG
IT	-3.9351 (0.516)	-2.7262 (0.298)	-0.6577 (0.843)	-6.7623 (0.320)	-8.2845*** (0.000)	1.2211 (0.112)	0.9688* (0.082)	0.0541 (0.732)	1.8161 (0.629)	4.8113 (0.317)
CORRUPT	2.8266 (0.739)	1.3929 (0.708)	0.2590 (0.954)	9.4552 (0.395)	13.8462*** (0.002)	1.7394 (0.282)	4.3693 (0.213)	0.7464 (0.244)	-15.7469 (0.406)	-15.4440 (0.339)
LAW	1.1585 (0.844)	1.5376 (0.630)	0.7103 (0.789)	17.8876* (0.099)	9.0674 (0.156)	1.8217 (0.146)	1.2252 (0.637)	-1.2091* (0.094)	28.4695 (0.154)	23.6311 (0.183)
GOVEFF	-5.9420 (0.518)	-1.9734 (0.670)	-3.9333 (0.369)	5.6210 (0.655)	-2.4094 (0.670)	3.4511 (0.147)	1.4508 (0.465)	2.0295** (0.042)	-43.8135** (0.011)	-21.5461 (0.301)
VOACCT	5.2294 (0.258)	3.6069 (0.181)	1.3377 (0.629)	5.0634 (0.427)	-0.8794 (0.574)	-2.6126*** (0.001)	-2.4277 (0.151)	-0.1814 (0.744)	0.8428 (0.952)	3.0884 (0.444)
GDPPC	0.0036** (0.018)	0.0016*** (0.009)	0.0019** (0.029)	-0.0008 (0.535)	-0.0003 (0.573)	0.0006* (0.092)	0.0000 (0.965)	0.0002 (0.289)	0.0015 (0.674)	-0.0017 (0.687)
LAGINFLPC	-0.4873 (0.480)	-0.1014 (0.803)	-0.4214 (0.118)	-4.1236*** (0.000)	-0.6895** (0.013)	1.5050** (0.044)	-0.4893 (0.606)	0.2678 (0.446)	-3.9780 (0.264)	-6.7713 (0.297)
OPENNESS	0.2778* (0.080)	0.1876** (0.012)	0.0911 (0.331)	0.4990*** (0.006)	0.3284** (0.014)	0.0732** (0.022)	0.0108 (0.294)	0.0144** (0.027)	0.5833** (0.027)	0.5268*** (0.000)
POPULATION	-136.8201** (0.039)	-66.1520*** (0.005)	-68.1046* (0.063)	131.2495** (0.021)	61.7551 (0.110)	0.3541 (0.976)	18.5987 (0.173)	0.8789 (0.809)	39.0713 (0.649)	42.6737 (0.384)
EDUCATION	-0.6594** (0.031)	-0.2426** (0.039)	-0.3920** (0.018)	-0.7795 (0.202)	-0.1453 (0.466)	0.0000 (1.000)	0.0596 (0.488)	-0.0250 (0.335)	0.0160 (0.988)	-0.2909 (0.663)
CONS	997.184** (0.043)	470.681*** (0.008)	507.257* (0.058)	-1099.775** (0.011)	-526.582* (0.078)	-15.597 (0.872)	-154.488 (0.145)	-10.767 (0.714)	-273.162 (0.683)	-336.408 (0.404)
R-Squared	0.395	0.369	0.396	0.277	0.240	0.508	0.492	0.368	0.286	0.266
Observations	115	125	115	125	125	51	61	51	56	56

income, and for increasing FDI inflow for the lower-middle income. With these smaller samples, we find much more significance for all five macro-economic control variables for the upper-middle income regressions, yet only with *OPENNESS* for lower-middle income. Lagged inflation is again positive and significant for imports and exports, but

only for the upper-middle income regressions. Openness continues to be significant and positive, while GDP per capita became highly significant in the upper-middle income group. The positive GDP per capita result is somewhat expected because this group would be those nations that have seen the greatest growth and transition over the time period, including many of the Eastern European and South American nations.

Removing education from this sample nearly doubles the sample sizes. Shown in Table 8 we see *IT* has a significant negative relationship with both growth of imports and exports for upper-middle income. *IT* is positive for FDI total and FDI inflow for lower-middle income, as well as negative for import growth. Tables 7 and 8 provide some support that going deeper than just developed vs developing may offer relevant information. Imports and exports tend to decrease more in the upper-middle income nations from inflation targeting, while it helps lower-middle income attract more foreign direct investment. Although the full sample results suggest the inflation targeting influence is stronger for developed than developing nations, tables 7 and 8 provide partial support for hypothesis 2, that less developed economies have a stronger relationship between inflation targeting and FDI. The comparison in these regressions happens to be between lower and higher levels of developing nations, as opposed to developing versus developed as hypothesis 2 speculated. These interesting results suggest that further studies separating developing nations into multiple groups can provide better insight into inflation targeting's potential value.

In sum, these results provide support that adoption of the inflation targeting monetary policy will positively impact a nation's involvement with foreign direct investment. At the same time, inflation targeting has a negative influence on imports and

Table VIII

## Developing Economies Minus Education Fixed Effects Results

Sub-sample, excluding the variable EDUCATION fixed effects regression using the World Bank economic classifications with five measurements of international trade as the dependent variable for three sample groups. UPPER-MIDDLE INCOME is a sub-sample consisting of the 16 (9 inflation targeters) more advanced nations from the previously used DEVELOPING NATIONS sample. LOWER-MIDDLE INCOME is a sub-sample consisting of the 9 (5 inflation targeters) less advanced nations from the previously used DEVELOPING NATIONS sample. FDI is total foreign direct investment (fdi) as a percentage of gross domestic product (gdp). FDIIN is the total inbound fdi as a percentage of gdp. FDIOUT is the total outbound fdi as a percentage of gdp. IMPG is the annual growth of imports. EXPG is the annual growth of exports. IT is a binary variable where one signifies if the country was an inflation targeter during the observation year. CORRUPT is a measurement of the nation's control over their corruption on a scale from zero to five. LAW is a measurement of the nation's rule of law on a scale from zero to five. GOVEFF is a measurement of the effectiveness of a nation's government on a scale from zero to five. VOCACCT is a measurement of the nation's voice and accountability rights on a scale from zero to five. GDPPC is the gdp per capita based in current US\$. LAGINFLPC is the three year lagged average inflation percentage change based on the consumer price index. OPENNESS is the total US\$ value of imports and exports as a percentage of gdp. POPULATION is the log value of the nation's total population. EDUCATION is the total public spending in US\$ on education as a percentage of government expenditures. Each variable is based on the individual country year observation. P-values are provided in parenthesis, where \* indicates significance at the 10% level; \*\* indicates significance at the 5% level; \*\*\* indicates significance at the 1% level.

	UPPER-MIDDLE INCOME					LOWER-MIDDLE INCOME				
	FDI	FDIIN	FDIOUT	IMPG	EXPG	FDI	FDIIN	FDIOUT	IMPG	EXPG
IT	-1.0391 (0.636)	-0.9598 (0.398)	-0.1687 (0.878)	-7.6856** (0.040)	-6.4374*** (0.001)	1.1990** (0.011)	1.4386* (0.056)	0.0240 (0.811)	-5.9179** (0.029)	-3.4605 (0.111)
CORRUPT	0.5797 (0.877)	1.1480 (0.423)	-1.3762 (0.477)	3.3294 (0.739)	10.1017*** (0.005)	2.0416 (0.159)	1.5355 (0.343)	0.4188* (0.083)	-16.4138 (0.267)	-11.7653 (0.242)
LAW	3.4862 (0.315)	1.8642 (0.228)	1.2030 (0.592)	7.4373 (0.280)	7.1288* (0.086)	-0.6016 (0.749)	0.8246 (0.428)	-1.5929** (0.016)	-0.6897 (0.955)	-2.2788 (0.819)
GOVEFF	-3.4968 (0.370)	-2.1711 (0.411)	-2.7079 (0.412)	-4.1576 (0.609)	-5.3550 (0.159)	1.6515 (0.508)	1.8455 (0.223)	1.3121 (0.131)	-4.2181 (0.631)	-8.4788 (0.327)
VOCACCT	2.0833 (0.267)	1.7403 (0.139)	0.1835 (0.877)	6.5755 (0.297)	-1.5867 (0.566)	-2.4826*** (0.003)	0.4944 (0.436)	-0.0457 (0.871)	4.9192 (0.213)	6.0889 (0.166)
GDPPC	0.0013 (0.147)	0.0005 (0.174)	0.0007 (0.152)	-0.0007 (0.211)	-0.0007** (0.023)	0.0006** (0.014)	0.0003 (0.338)	0.0002 (0.204)	0.0056** (0.031)	0.0004 (0.832)
LAGINFLPC	0.1218 (0.795)	0.0597 (0.674)	0.0106 (0.965)	-1.6110 (0.139)	-0.1647 (0.568)	0.6032** (0.033)	0.0787 (0.826)	-0.0181 (0.787)	-4.5270*** (0.002)	-4.6812** (0.012)
OPENNESS	0.2011* (0.099)	0.1110** (0.032)	0.0751 (0.281)	0.3407** (0.006)	0.2529*** (0.008)	0.0682*** (0.001)	0.0337*** (0.010)	0.0099* (0.063)	0.1819 (0.211)	0.1248 (0.255)
POPULATION	-69.7537 (0.187)	-30.7345* (0.074)	-36.7228 (0.243)	125.1393** (0.033)	43.5778** (0.036)	-8.9992 (0.147)	0.0690 (0.991)	-2.2842 (0.433)	-28.8255 (0.558)	24.6126 (0.495)
CONS	518.086 (0.198)	221.727* (0.089)	280.233 (0.239)	-993.420** (0.029)	-359.305** (0.029)	64.403 (0.201)	-10.877 (0.827)	16.298 (0.462)	232.569 (0.551)	-158.051 (0.572)
R-Squared	0.175	0.149	0.179	0.109	0.151	0.397	0.400	0.250	0.151	0.206
Observations	214	250	214	249	249	103	144	103	133	133

exports, suggesting the two dependent variables have a substitution based relationship as opposed to a complimentary suggested by Lipsey (2004). The impact on developing nations may take longer to gain significance due to the larger risk that comes from doing business in these nations, but the shift from imports/exports to foreign direct investment is certainly underway for nations adopting the young monetary policy.

## **ESSAY 2: DO CROSS-LISTED TARGETS MAKE A DIFFERENCE IN CROSS-BORDER ACQUISITIONS?**

### **INTRODUCTION AND DEVELOPMENT**

Although much literature has shown, from the perspective of the acquiring firm, that domestic merger and acquisition (M&A) activity results in higher shareholder value than when acquiring a foreign target (Moeller and Schlingemann 2005; Martynova and Renneboog 2008; Cosset and Meknassi 2013a), the trend of cross-border M&A activity is not slowing down. The inevitability of globalization and the increasing integration of the world's financial markets keep firms looking for cross border targets.

Market segmentation and cultural disparities are the primary difficulties leading to the lower returns associated with cross border M&A. However, along with the negatives come the potential for greater growth opportunities by way of access to previously distant markets that may provide a less competitive product market, reduction in operating costs, or a more appealing institutional environment. Many firms have looked at cross-listing on a foreign market, typically a more established market such as the New York Stock Exchange (NYSE), London Stock Exchange (LSE), or Tokyo Stock Exchange (TSE), in order to alleviate the concerns large multinational enterprises (MNEs) have when considering a cross border acquisition.

Cross-listing requires firms to take on a new set of regulations, which usually includes higher standards than that of their domestic market. From the transparency cross-listed firms are subject to, they are able to reduce the amount of information asymmetries for potential acquirers due to the newly enhanced level of disclosure and

increase in analyst coverage (Lang, Lins and Miller 2003; Cosset and Meknassi 2013b). For this purpose, our study focuses on the short run and long run impact to shareholder value with consideration of cross-listed targets against non-cross-listed targets. To help control for the variety of economies, both developed and developing, we focus strictly on United States bidders acquiring a foreign target. Cosset and Meknassi (2013a), with a sample of acquisitions from any combination of bidder/target countries, found that cross-listed targets lead to better acquirer long run returns, however short run reaction around the announcement date was not found to be significant. It should be noted that their sample was not limited to publically traded target firms, which allowed for more observations but hinders the reliability of, and accessibility to the financial data of the target firms.

Using primarily the same data set, Cosset and Meknassi (2013b) showed that cross-listed firms are more likely to be M&A targets than non-cross-listed firms. Acquirers benefit from the enhanced disclosure and increased analyst coverage, as well as an increased knowledge of the local market and culture of the cross-listed target. Target firm financial information and the target nation's culture and economy have also been shown to significantly impact an acquiring firm's returns at the time of an acquisition announcement (Palepu 1986; Powell 1997; Sarkissian and Schill 2004; Moeller and Schlingemann 2005; Lei and Miller 2008; Cosset and Meknassi 2013a).

Our study provides the first analysis of the impact of cross-listed targets while limiting the acquirer nation to just one possibility, the United States. Consistent with Cosset and Meknassi (2013a), we show that after controlling for appropriate financial and cultural variables, the effort to acquire a cross-listed firm does not lead to an increase in



the acquirer's short run stock return. The coefficient direction suggests acquiring a cross-listed firm actually results in lower bidder returns, however the results are not found to be significant. The direction of the cross-listing dummy for long run returns was positive; however, unlike Cosset and Meknassi (2013a) we do not find the results to be statistically significant.

Free cash flow of a target firm has seen mixed results in the past, we find significance here that it decreases bidder short run returns, as does a higher accounting standard in the target's home nation. We also find partial support to past literature that acquirer returns are lower when the target firm is from a more geographically distant nation (Martin and Valazquez 1997; Bevan and Estrin 2004). Contradictory to Roll's (1986) hubris hypothesis, we find that the size of the acquiring firm increases their short run returns, refuting the claim that larger firms will make poorer decisions, however the relationship is only significant in one of four regressions

The rest of this article proceeds as follows. In the following section we describe our data sources, sample selection and methods. Next we provide and interpret our OLS regression results. We then conclude the paper, discuss limitations, and encourage future research.

## **METHODS AND DATA**

### **Sample Selection**

The acquisition data was collected from Thomson's Securities Data Corporation (SDC) Merger and Acquisition database and covers the time period January 1<sup>st</sup>, 1990

through December 31<sup>st</sup>, 2010. To be included in the sample, transactions must meet the following criteria. An event announcement and deal completion must both take place within the twenty-one year span. All acquisition events were limited to publically traded United States bidders acquiring a publically traded non-US target. In line with a study by Doidge, Karolyi, Lins, Miller, and Stulz (2009), we removed transactions which include target firms headquartered in OECD classified Tax-Havens<sup>6</sup>. We also remove all acquisitions involving firms from the finance industry, those with 6000-6999 SIC codes.

In order to be considered for this study the transaction value must have been publically disclosed, while reaching the minimum value of one million US dollars (Moeller and Schlingemann 2005). The US bidder must also maintain ownership of less than 50% of the target firm prior to announcement, while ending the deal with an ownership level within the 75% to 100% range. Once these requirements were used to sort the data we were left with 227 cross border acquisition observations. After removing observations for missing target firm financial data the sample size ended with 130 cross-border acquisition observations.

From the aforementioned sample, the cross-listing status of each target firm is recorded to provide the dummy variable *CROSSLIST*, which serves as our primary variable of interest. If the target firm for a given acquisition is cross-listed in the United States prior to the date of the announcement, that observation takes on the value of 1, otherwise 0. The cross listing status is taken from SDC, where a firm is to be considered as cross-listed if it is directly listed on the NYSE, NASDAQ, or AMEX. 23 of the 130

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<sup>6</sup> The list of OECD Tax Haven nations is located in the appendix.

observations (approximately 18%) included a foreign target that was cross-listed on a United States financial market at the time of the announcement.

Table 9 provides acquisition sample statistics broken down by acquisition year (Panel A) and target nation (Panel B). From Panel A we can see that over 90% of the sample acquisitions (total and cross-listed) have taken place between 1997 and 2010. There also does not appear to be a slowdown in acquisition activity during and following the global financial crisis of 2008. The sample is already too small to remove observations or attempt sub-samples, however it should be noted that nearly half of the acquisitions took place in Canada and the United Kingdom. These nations are the two most closely integrated economies to the United States and are commonly removed from samples for a robustness check. Brazil, Malaysia, Mexico, and Taiwan<sup>7</sup> are the only target nations not considered to be a high income developed economy by the World Bank. The other 17 target nations representing 123 of the 130 acquisitions each have High Income status from the World Bank and are members of the Organization for Economic Cooperation and Development (OECD).

Canada and the United Kingdom also make up nearly half of the cross-listed acquisition observations, with seven and three cross-listed targets respectively. Interesting enough six of the eight target firms in Israel were cross-listed at the time of announcement. After these three nations, South Korea's two cross-listed targets make them the only other country to have more than one cross-listed acquisition.

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<sup>7</sup> SDC lists M&A activity separately for Taiwan even though it is officially part of the Republic of China.

**Table EX**  
**Cross-Listed Acquisition Statistics**

Panel A provides a list of the total number of cross-border acquisitions that took place during each year of the sample time frame. Cross-Listed provides the number of acquisitions each year that involved a target firm that was cross-listed on a United States stock exchange prior to the acquisition announcement. Panel B provides a list of the total number of cross-border acquisitions sorted by the target firm's home country. Cross-Listed provides the number of acquisitions for each country that involved a target firm that was cross-listed on a United States stock exchange prior to the acquisition announcement. The acquisition data was collected from Thomson's Securities Data Corporation (SDC) Merger and Acquisition database and covers the time period January 1st, 1990 through December 31st, 2010.

<i>Panel A:</i>			<i>Panel B:</i>		
<b>Year</b>	<b>Acquisitions</b>	<b>Cross-Listed</b>	<b>Target Nation</b>	<b>Acquisitions</b>	<b>Cross-Listed</b>
1991	1	0	Australia	10	0
1992	1	0	Belgium	3	0
1993	1	0	Brazil	1	0
1994	2	0	Canada	39	7
1995	3	0	Denmark	2	0
1996	1	0	Finland	1	1
1997	6	0	France	11	0
1998	6	2	Germany	5	0
1999	6	2	Greece	1	1
2000	6	1	Israel	8	6
2001	6	2	Japan	3	0
2002	14	2	Malaysia	1	0
2003	7	3	Mexico	1	1
2004	15	2	Netherlands	2	1
2005	11	2	Norway	3	0
2006	6	3	South Korea	3	2
2007	10	1	Spain	1	0
2008	9	2	Sweden	3	0
2009	10	1	Switzerland	3	1
2010	9	0	Taiwan	4	0
			United Kingdom	25	3
<b>Total</b>	<b>130</b>	<b>23</b>	<b>Total</b>	<b>130</b>	<b>23</b>

### **Dependent Variables**

Using EVENTUS and the Fama and French (1992) 3-factor model we calculate short run cumulative abnormal returns (CARs), a proxy for shareholder value, for each bidder's announcement period using historical daily stock data. We also apply a GARCH model in obtaining long run buy-and-hold returns (BHARs). The returns, which serve as

our dependent variable, are collected from the Center for Research in Security Prices database (CRSP). We test both short run and long run returns for the United States acquiring firms. For short run returns two time frames surrounding the acquisition announcement date are used, a three day (-1, 1) and seven day period (-3, 3) (Conn, Cosh, Guest and Hughes 2005; Cosset and Meknassi 2013a). For long run returns we use five years after the announcement (Loughran and Ritter 1995; Loughran and Vjih 1997; Rau and Vermaelen 1997). In order to check for robustness of the short run results we perform regression analysis using both the equally weighted and value weighted indexes obtained from CRSP.

In Table 10 we provide the summary statistics for the 130 observations. It should be noted that the average CAR for the short run dependent variables range from -0.0043 through 0.0012, with 3 of the 4 being negative. This suggests that regardless of a target being cross-listed or not, on average cross-border acquisitions lead to a short-run decrease in shareholder value for the acquiring firm, which confirms previous findings that the costs of global diversification outweigh the benefits from the viewpoint of the bidding firm (Denis, Denis and Yost 2002). However, looking at long run BHARs we do see a positive average, suggesting the initial loss in value is off set by the long run performance following the acquisition.

### **Control Variables**

We use a variety of control variables for firm, transaction, and country characteristics to better evaluate the potential impact from acquiring a cross-listed firm. We obtain target firm level and transaction variables from SDC, while acquiring firm financial data was collected from Standard and Poor's Compustat database. All financial

**Table X**  
**Cross-Listed Summary Statistics**

EW CAR (-1,1) is the three day equal weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. EW CAR (-3,3) is the seven day equal weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. VW CAR (-1,1) is the three day value weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. VW CAR (-3,3) is the seven day value weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. BHAR 5 YEAR is the buy-and-hold abnormal return for the five year period following the acquisition announcement date. CROSSLIST is a binary variable where one signifies if the target firm was cross-listed on a United States stock exchange prior to the acquisition announcement. SIZET is the log of the target firm market value four weeks prior to the announcement. LEVERAGET is the target firm total debt divided by total assets. GROWTHT is the target firm three year average growth rate in sales. FCFT is the target firm free cash flow divided by total assets. CULTPROX is a binary variable where one signifies if both the acquirer and target nations speak the same language or were previously part of the same colonial empire. GEOPROX is the distance (1000 miles) between the capital city of the acquirer and target nations. INVPROTECT is a measurement of the target nation's legal protection of shareholders and creditors on a scale from zero to one. ACCTSTAND is a measurement of the target nation's level of transparency to outside investors as well as factors related to accounting and disclosure standards on a scale from zero to one. SIZEA is the log value of the acquiring firm's market value four weeks prior to the acquisition announcement. LEVERAGEA is the acquiring firm's total debt divided by total assets. FCFA is the acquiring firm's free cash flow divided by total assets. TWODIGSIC is a binary variable where one signifies if the acquiring and target firms share the same two digit SIC code. DEALVALUE is the log value of the acquisition transaction cost. CONTESTED is a binary variable where one signifies if there was more than one bidder for the target firm. TOEHOLD is the percentage of target firm equity owned by the acquiring firm prior to the acquisition.

Variable	Obs.	Mean	Std. Dev.	Min	Max
EW CAR (-1,1)	130	-0.0026	0.0529	-0.2034	0.1511
EW CAR (-3,3)	130	0.0012	0.0745	-0.2752	0.2421
VW CAR (-1,1)	130	-0.0043	0.0540	-0.2113	0.1563
VW CAR (-3,3)	130	-0.0024	0.0770	-0.2588	0.2477
BHAR 5 YEAR	126	0.0010	0.0016	-0.0035	0.0065
CROSSLIST	130	0.1769	0.3831	0.0000	1.0000
SIZET	130	2.2164	0.7257	-0.6655	4.1148
LEVERAGET	130	0.1647	0.1951	0.0000	1.1476
GROWTHT	130	0.3984	2.4139	-0.1795	27.2793
FCFT	130	1.8010	2.9346	0.0088	24.4502
CULTPROX	130	0.5692	0.4971	0.0000	1.0000
GEOPROX	130	3.7135	2.7917	0.4558	9.9118
INVPROTECT	130	0.6825	0.2483	0.0679	0.9592
ACCTSTAND	130	71.5692	6.1328	54.0000	83.0000
SIZEA	130	3.7135	1.0321	1.9289	9.6549
LEVERAGEA	130	24.4126	16.7446	0.8480	97.7550
FCFA	130	0.0424	0.0757	-0.3750	0.3633
TWODIGSIC	130	0.5923	0.4933	0.0000	1.0000
DEALVALUE	130	2.2756	0.7135	0.2686	4.2734
CONTESTED	130	0.1077	0.3112	0.0000	1.0000
TOEHOLD	130	12.4141	17.2275	0.0000	47.3600

data is taken from the firm's fiscal year end preceding the date of the announcement except for firm size, which is taken as the market value of the firm four weeks prior to the announcement by both databases.

### *Target Firm Characteristics*

The first control variable is the target firm size (*SIZET*)<sup>8</sup>, which is measured as the logarithm of the target's market capitalization in US dollars. Acquisitions generate substantial costs related to the integration of the target firm into the acquirer's organizational structure. As the potential target firm gets larger, the costs associated with takeover also increase. Therefore, the larger the size of the target firm, the smaller the list of potential bidders becomes due to the strict financial demands (Powell 1997). In a study attempting to model takeover likelihood in a sample dealing primarily with firms from the United Kingdom, Powell (1997) found target size to have a significant negative influence on the likelihood of being acquired. In a similar follow up paper by Powell (2004), he confirms this negative influence from target size, and claims this relationship has received the most consistent support in the takeover literature.

The next two control variables come from the Growth-Resource Imbalance (GRI) theory, which Palepu (1986), using strictly US firms from the 1970s, finds support for in an empirical study comparing acquisition targets with non-targets. The GRI theory suggest that two combinations of a firm make for good targets, low growth--resource rich firms, and high growth--resource poor firms. Variables of firm leverage and growth have previously been shown to increase the value of an acquisition (Palepu 1986; Powell

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<sup>8</sup> To distinguish between bidder and target firm financial data we attach a T to the end of the name if the variable is from the target firm, and an A if from the acquiring firm.

1997). Firm growth (*GROWTH*) is measured as the rolling average three year growth rate in total sales, while leverage (*LEVERAGE*) is measured as the ratio of the target's total debt to total assets. High growth and high leverage (financially constrained) firms are more likely to be targeted since they have limited bargaining power, making them attractive targets. Targets with low growth and low leverage are more suitable for bidder firms simply looking to absorb resources (Cosset and Meknassi 2013b), as opposed to completing a mutually beneficial merger.

Another control variable is free cash flow (*FCF*), which is measured as the ratio of the target firm's free cash flow to total assets and has been shown to have a positive relationship with the likelihood of acquisition (Palepu 1986; Powell 1997, 2004). Jensen (1986) explained how free cash flows are expected to be distributed back to the shareholders (the true firm owners) in order to maximize firm value and efficiency. He continues that firms with incompetent management teams that have performed poorly, and firms that have done exceptionally well and have accumulated and kept large free cash flows are the most likely targets. Lehn and Poulsen (1989) found support for this part of Jensen's theory in a piece looking at free cash flows of firm's going private throughout the 1980s. However, Lang, Stulz and Walking (2001) find that target free cash flows have a negative relationship with bidder returns when the bidder has a low Tobin's Q value, and no relationship for high Q targets.

#### *Target Country Characteristics*

The Bonding Hypothesis suggests that, in relation to our US bidder/Foreign target acquisitions, by way of a US exchange listing, managers and controlling shareholders from countries with weaker investor protection commit themselves to protect minority



shareholders' interests (Coffee 1999; Stulz 1999; Lel and Miller 2008). Firms from countries with weaker legal protection for minority shareholders list abroad more frequently than do firms from other countries (Pagano, Roell, and Zechner 2002; Reese and Weisbach 2002). To control for target nation shareholder and creditor protection we use the investor protection index (*INVPROTECT*) from La Porta, Lopez-de-Silanes, Shleifer and Vishny (1998). The index is calculated as the given nation's Rule of Law score multiplied by its Anti-Director Rights score, which is then divided by 10.

On a similar note, we also use the national accounting standards index (*ACCTSTAND*) established by the Center for International Financial Analysis and Research in 1991 (LaPorta et al. 1998). The index serves as a proxy for the degree of transparency to outside investors while considering multiple factors related to accounting and disclosure standards for each nation's economy. As would be expected from the high income levels of the target nations, both mean values for *INVPROTECT* and *ACCTSTAND* are relatively high, 0.6825 out of 1, and 71.57 out of 100 respectively.

We also control for the similarity between the United States culture and the target firm national culture. The cultural proximity index (*CULTPROX*) we use was developed as a dummy variable by Sarkissian and Schill (2004). The variable takes on the value of 1 if either both the acquirer and the target countries share the same language, or if the target was historically part of the same colonial empire as the acquirer, otherwise it takes on the value of 0. The cultural proximity index is shown to have a significant positive relationship with three and five year BHARs for cross-border and cross-listed targets in Cosset and Meknassi's (2013a) empirical study involving 906 cross-border acquisitions, however, the relationship is weaker for cross-listed targets relative to the full sample.

Also taken from Sarkissian and Schill (2004) we provide a variable for geographical distance between two nations, *GEOPROX*, which they measure as the distance<sup>9</sup> between the two nation's capital cities. Geographical distance has been shown to have a negative relationship on attracting foreign direct investment (Martin and Valazquez 1997; Bevan and Estrin 2004).

#### *Acquiring Firm Characteristics*

Acquisition literature also commonly links a few bidder firm characteristics to abnormal returns. Similarly to target characteristics we use firm size (*SIZEA*) measured as the logarithm of the target's market capitalization in US dollars. Cosset and Meknassi (2013a) found support for the hubris hypothesis (Roll 1986) with a negative relationship between the size of the acquirer and their abnormal returns. The hubris hypothesis suggests that larger acquirers are more likely to make poor acquisition decisions.

We also control for excess cash on hand with SDC's measure of free cash flows (*FCFA*), which is expected to have a negative relationship with stock returns according to Jensen's (1986) free cash flow hypothesis. In a study of cash reserves and acquisitions Harford (1999) found not only a negative relationship between "cash-rich" acquirers and returns, but also with the post-acquisition operating performance. Doukas (1995) also used a sample of US bidder/foreign targets and found that higher free cash flows result in greater agency problems between a firm and its owners. Jensen (1986) also suggests the presence of high debt (*LEVERAGEA*) for an acquiring firm will have a positive relationship on acquirer returns. A firm choosing to issue debt often comes with a strong commitment for managers to work hard while mitigating the agency problem between

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<sup>9</sup> *GEOPROX* is measured as miles scaled by 1,000.

stockholders and managers (Grossman and Hart, 1982; Jensen 1986). Maloney, McCormick, and Mitchell (1993) find support this positive relationship between leverage and returns when analyzing United States bidder acquisitions throughout the 1960s, 70s, and 80s, as did Cosset and Meknassi (2013a) twenty years later.

### *Transaction Characteristics*

The last set of control variables taken from previous related literature concern the specific details of the acquisition itself. First we consider the “industry diversification discount” shown to be present when the acquirer and target operate in different industries (Morck, Shleifer and Vishny 1990; Doukas and Kan 2006). In a sample of over 300 US based acquisitions, Morck et al. (1990) found lower bidder returns when acquiring a firm that does not have at least one four-digit SIC code in common with their target. Doukas and Kan (2006) focused more on industry diversification within the global diversification aspect and found support for the contingent claims hypothesis where bond holder value increases and shareholder values decreases from acquiring more industry distant firms. However, Shleifer and Vishny (2003) found an increase in long run returns when acquiring a same industry target, while some studies provide mixed results that unrelated targets may not directly influence the diversification discount in either direction (Campa and Kedia 2002; Villalonga 2004). In a sample of over 4000 firms Campa and Kedia (2002) implore you must control for the endogeneity of the decision to diversify. After doing this, their study shows the diversification discount is reduced, although still existent, yet the choice of a firm to “refocus” can counteract the loss of value from the initial diversification. To test and control for the industry diversification effect we create

a dummy variable (*TWODIGSIC*) which takes on the value of 1 if the bidder and target share the same first two digits of their SIC codes, and 0 otherwise.

The *CULTPROX* mean of 0.5692 and *TWODIGSIC* mean of 0.5923 indicate that over half of the sample acquisitions take place in highly related cultures and/or industries. These risk proxy variables indicate that regardless of what some scholarly research results show, acquiring firms still look for familiarity and lower risk when considering foreign targets, and not just their financial statistics.

Another control variable is the log of the US dollar value of the acquisition. Taken from SDC our transaction size variable (*DEALVALUE*) is measured as the total value paid by the bidder, excluding fees and expenses. Moeller and Schlingemann (2005) found the deal transaction size to have a highly significant positive influence on short run returns when comparing domestic acquisitions to cross border acquisitions.

Another transaction variable with mixed results in past literature is *TOEHOLD*, which measures the percentage of shares owned by the acquiring firm prior to the new acquisition announcement. One side suggests that the greater the toehold, the lower the proportion of shares the acquirer needs to purchase after the announcement, which decreases the targets bargaining power and creates an inverse relationship with the CARs (Hirshleifer and Titman 1990). However, other studies such as Bris (2002) have shown that the bid premium is lower after the toehold creates a run-up in the stock price when it is detected by the market. From Table 10 the average starting ownership by the acquiring firms was only 12.4%, while a few more than half of the observations started with no prior investment with the target firm.

The last control variable is *CONTESTED*, which is a dummy variable that takes on the value of 1 if the target received acquisition interest from multiple bidding firms, otherwise it takes on the value of 0. Contested bids have been shown to lead to lower acquirer returns based on the winning firm needing to pay a higher premium following a back and forth bidding competition, which results in lower value extraction for the acquiring shareholders (Bradley, Desai and Kim 1988). Their study of over 200 acquisitions found short run returns are lower for the acquiring firm, yet larger for the target firm in a sample of strictly NYSE and AMEX listed bidders and targets. However, they also find that the synergistic gains post-merger are larger for contested acquisitions, helping to partially offset the loss in value immediately surrounding the acquisition announcement. Only 10% of the observations in our sample were contested.

#### **Estimation Procedure**

We run our event study regression using OLS with robust standard errors to help correct for any heteroskedasticity or serial correlation. The equation is shown here:

*Equation 1:*

$$\begin{aligned}
 CAR = & \beta_1 + \beta_2 CROSSLIST + \beta_3 SIZET + \beta_4 LEVERAGET + \beta_5 GROWTHI \\
 & + \beta_6 FCFT + \beta_7 CULTPROX + \beta_8 GEOPROX + \beta_9 INVPROTECT \\
 & + \beta_{10} ACCTSTAND + \beta_{11} SIZEA + \beta_{12} LEVERAGEA + \beta_{13} FCFA \\
 & + \beta_{14} TWODIGSIG + \beta_{15} DEALVALUE + \beta_{16} CONTESTED + \beta_{17} TOEHOLD
 \end{aligned}$$

We complete this same regression for each of the dependent variables which were discussed previously. Based on the Bonding Hypothesis (Coffee 1999; Stulz 1999; Lel

and Miller 2008) our primary variable of interest is the *CROSSLIST* dummy which feeds our hypothesis.

*Hypothesis 1: Firms acquiring a target company which, prior to the acquisition announcement, was cross-listed on a United States stock exchange will experience better short run and long run abnormal returns.*

The correlation matrix can be seen in Table 11. Only two pairs of variables have relatively high correlations, but each were anticipated and do not include our primary variable of interest. The first is between *DEALVALUE* and *SIZET*, which certainly makes sense that the larger the target firm is, the greater the cost of acquiring that firm should be. The second relationship is between the *INVPROTECT* and *CULTPROX*. The only three nations that share a language with the United States are Australia, Canada, and the United Kingdom; these nations also hold the three highest investor protection scores of the target nations.

## **EMPIRICAL RESULTS**

In this section we present the main results of the paper. We use an event study approach to investigate whether acquiring a foreign target that is cross-listed on a United States stock market leads to a better stock price performance for a US bidder than when acquiring a non-cross-listed foreign target. Our sample consists of 130 US bidder/foreign target acquisitions completed between 1990 and 2010. 23 of the 130 foreign targets were cross-listed on the NYSE, NASDAQ, or AMEX prior to the acquisition announcement. The dependent variables are the short-run and long-run Abnormal Returns of the US

Table XI  
Cross-Listed Correlation Matrix

CROSSLIST is a binary variable where one signifies if the target firm was cross-listed on a United States stock exchange prior to the acquisition announcement. SIZE1 is the log of the target firm market value four weeks prior to the announcement. LEVERAGET is the target firm total debt divided by total assets. GROWTH1 is the target firm three year average growth rate in sales. FCFT is the target firm free cash flow divided by total assets. CULTPROX is a binary variable where one signifies if both the acquirer and target nations speak the same language or were previously part of the same colonial empire. GEOPROX is the distance (1000 miles) between the capital city of the acquirer and target nations. INVPROTECT is a measurement of the target nation's legal protection of shareholders and creditors on a scale from zero to one. ACCTSTAND is a measurement of the target nation's level of transparency to outside investors as well as factors related to accounting and disclosure standards on a scale from zero to one. SIZEA is the log value of the acquiring firm's market value four weeks prior to the acquisition announcement. LEVERAGEA is the acquiring firm's total debt divided by total assets. FCFA is the acquiring firm's free cash flow divided by total assets. TWODIGSIC is a binary variable where one signifies if the acquiring and target firms share the same two digit SIC code. DEALVALUE is the log value of the acquisition transaction cost. CONTESTED is a binary variable where one signifies if there was more than one bidder for the target firm. TOEHOLD is the percentage of target firm equity owned by the acquiring firm prior to the acquisition.

	CROSSLIST	SIZE1	LEVERAGET	GROWTH1	FCFT	CULTPROX	GEOPROX	INVPROTECT	ACCTSTAND	SIZEA	LEVERAGEA	FCFA	TWODIGSIC	DEALVALUE	CONTESTED	TOEHOLD
CROSSLIST	1.0000															
SIZE1	0.2413	1.0000														
LEVERAGET	-0.1270	0.2052	1.0000													
GROWTH1	-0.0099	-0.1620	-0.0407	1.0000												
FCFT	0.1444	0.0586	-0.0724	0.0348	1.0000											
CULTPROX	-0.1259	-0.0532	0.0475	0.0835	0.0663	1.0000										
GEOPROX	-0.0205	0.1553	0.0970	0.0108	-0.0275	-0.3699	1.0000									
INVPROTECT	-0.0529	-0.0728	0.0036	0.0390	0.1122	0.8883	-0.4473	1.0000								
ACCTSTAND	-0.2049	-0.0608	0.0742	0.1027	0.0226	0.7371	-0.2252	0.6528	1.0000							
SIZEA	0.0499	0.2907	0.0602	-0.1154	0.1243	-0.0858	0.0134	-0.0838	0.0368	1.0000						
LEVERAGEA	-0.1098	0.0974	0.1963	-0.1448	-0.1094	0.1798	0.0301	0.1706	0.1099	0.0188	1.0000					
FCFA	0.0899	-0.0088	-0.0073	0.0316	0.2127	-0.1941	0.0831	-0.2046	-0.1446	0.1083	-0.1969	1.0000				
TWODIGSIC	-0.0666	0.0123	0.1301	0.0587	0.0383	0.1634	0.0382	0.1338	0.0337	-0.2592	0.0248	-0.0935	1.0000			
DEALVALUE	0.2809	0.8794	0.2039	-0.1223	0.1238	0.0844	0.0393	0.0845	0.0306	0.2306	0.0896	0.0016	-0.0277	1.0000		
CONTESTED	-0.0310	0.1561	0.0991	-0.0405	-0.0736	0.1519	-0.0157	0.0525	0.1057	0.0119	-0.0381	-0.0189	0.1367	0.2015	1.0000	
TOEHOLD	-0.0863	0.0330	-0.0141	-0.0547	-0.1966	-0.2375	0.1191	-0.2452	-0.2464	0.0078	0.0184	-0.1327	0.0994	-0.3087	-0.1655	1.0000

bidder, while our primary variable of interest is the dummy variable, *CROSSLIST*, indicating if the target was cross-listed or not.

Table 12 provides the regression results for all five specifications. The only difference between each regression is the alternate measure of the dependent variable. We use both value weighted and equally weighted indexes to provide CARs for two time periods, (-1, 1) and (-3, 3), surrounding the announcement date for each acquisition. A GARCH model is also applied to collect the 5 year BHARs. Due to the small sample of cross-listed targets, the primary variable of interest, *CROSSLIST*, should be interpreted with caution, regardless of significance levels.

The results of *CROSSLIST* are negative across the board for short run returns, indicating that acquiring a foreign firm that is cross-listed in the bidder's domestic capital market leads to decreased shareholder value for the acquiring firm immediately surrounding the acquisition announcement. However, each regression does not find statistical significance for the *CROSSLIST* variable, with a p-value of (0.176) being the smallest for the value weighted (-3, 3) CAR model. The long run returns also do not find significance, however the coefficients are positive, indicating there is an initial negative reaction, but the long term effects of acquiring that foreign firm wanting to hold itself to the high United States standards eventually adds value to the acquiring firm. The lack of significance in the short run is consistent with previous literature; however Cosset and Meknassi (2013a) found a positive coefficient for their cross-listing dummy variable. The same study found a positive significant relationship in the long run.



**Table XII**  
**Acquiring Firm Announcement Returns**

Ordinary least squares regression with five measurements of stock return performance as the dependent variable. EW CAR (-1,1) is the three day equal weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. EW CAR (-3,3) is the seven day equal weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. VW CAR (-1,1) is the three day value weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. VW CAR (-3,3) is the seven day value weighted cumulative abnormal return for the acquiring firm surrounding the acquisition announcement date. BHAR 5 YEAR is the buy-and-hold abnormal return for the five year period following the acquisition announcement date. CROSSLIST is a binary variable where one signifies if the target firm was cross-listed on a United States stock exchange prior to the acquisition announcement. SIZET is the log of the target firm market value four weeks prior to the announcement. LEVERAGET is the target firm total debt divided by total assets. GROWTHT is the target firm three year average growth rate in sales. FCFT is the target firm free cash flow divided by total assets. CULTPROX is a binary variable where one signifies if both the acquirer and target nations speak the same language or were previously part of the same colonial empire. GEOPROX is the distance (1000 miles) between the capital city of the acquirer and target nations. INVPROTECT is a measurement of the target nation's legal protection of shareholders and creditors on a scale from zero to one. ACCTSTAND is a measurement of the target nation's level of transparency to outside investors as well as factors related to accounting and disclosure standards on a scale from zero to one. SIZEA is the log value of the acquiring firm's market value four weeks prior to the acquisition announcement. LEVERAGEA is the acquiring firm's total debt divided by total assets. FCFA is the acquiring firm's free cash flow divided by total assets. TWODIGSIC is a binary variable where one signifies if the acquiring and target firms share the same two digit SIC code. DEALVALUE is the log value of the acquisition transaction cost. CONTESTED is a binary variable where one signifies if there was more than one bidder for the target firm. TOEHOLD is the percentage of target firm equity owned by the acquiring firm prior to the acquisition. P-values are provided in parenthesis, where \* indicates significance at the 10% level, \*\* indicates significance at the 5% level, \*\*\* indicates significance at the 1% level.

	EW CAR (-1,1)	EW CAR (-3,3)	VW CAR (-1,1)	VW CAR (-3,3)	BHAR 5 YEAR
CROSSLIST	-0.0042 (0.7520)	-0.0202 (0.2570)	-0.0101 (0.4570)	-0.0242 (0.1760)	0.0002 (0.6460)
SIZET	-0.0055 (0.7990)	0.0009 (0.9700)	0.0008 (0.9760)	0.0085 (0.7690)	-0.0006 (0.2420)
LEVERAGET	0.0239 (0.3060)	-0.0313 (0.3830)	0.0249 (0.2990)	-0.0243 (0.5120)	0.0008 (0.2170)
GROWTHT	-0.0016** (0.0190)	-0.0023** (0.0150)	-0.0015** (0.0390)	-0.0021** (0.0360)	0.0001*** (0.0080)
FCFT	0.0001 (0.9230)	-0.0051* (0.0790)	-0.0011 (0.4060)	-0.0061** (0.0170)	0.0001 (0.1800)
CULTPROX	-0.0252 (0.2070)	-0.0045 (0.8720)	-0.0190 (0.3320)	0.0061 (0.8340)	0.0003 (0.6720)
GEOPROX	-0.0010 (0.5680)	-0.0044* (0.0920)	-0.0012 (0.4980)	-0.0045 (0.1060)	-0.0001* (0.0560)
INVPROTECT	0.0326 (0.3990)	-0.0166 (0.7310)	0.0294 (0.4420)	-0.0248 (0.6230)	-0.0001 (0.9270)
ACCTSTAND	-0.0020* (0.0670)	-0.0024 (0.1510)	-0.0021* (0.0560)	-0.0025 (0.1560)	0.0000 (0.2740)
SIZEA	0.0072 (0.1170)	0.0028 (0.6360)	0.0074* (0.1000)	0.0021 (0.7150)	-0.0001 (0.3670)
LEVERAGEA	0.0003 (0.2670)	0.0005 (0.1580)	0.0003 (0.3620)	0.0004 (0.2680)	0.0000 (0.7580)
FCFA	-0.0340 (0.7080)	-0.1320 (0.2030)	-0.0129 (0.8950)	-0.1139 (0.2810)	0.0031 (0.1600)
TWODIGSIC	0.0108 (0.3520)	0.0073 (0.6210)	0.0061 (0.6050)	0.0010 (0.9480)	0.0003 (0.2710)
DEALVALUE	-0.0028 (0.8870)	0.0020 (0.9360)	-0.0069 (0.7600)	-0.0056 (0.8470)	0.0005 (0.3910)
CONTESTED	-0.0075 (0.6330)	-0.0240 (0.2490)	-0.0066 (0.6710)	-0.0207 (0.3200)	0.0003 (0.5800)
TOEHOLD	-0.0001 (0.8390)	0.0001 (0.8670)	-0.0001 (0.7640)	0.0000 (0.9860)	0.0000 (0.2010)
CONS	0.1124 (0.1150)	0.1965* (0.0830)	0.1230* (0.0970)	0.2082* (0.0810)	0.0032 (0.1110)
R-Squared	0.136	0.189	0.122	0.159	0.160
Observations	130	130	130	130	126

Overall, the only consistent significant variable is *GROWTHT*. All four CAR regressions find significance at the 0.05% level; however, each regression supports *GROWTHT* having a negative influence on the bidder's stock returns. Earlier studies found higher growth to be attractive and positive for acquirer returns (Palepu 1986, Powell 1997), suggesting the high growth restrains the target firms making them worse off in negotiations. Our results show the opposite, that it is possible higher growth targets may be in a better position to negotiate, causing the acquiring firm to overpay for the target, therefore causing a decrease in the acquirer short run returns. Growth would also lead to a larger target size which would require larger deal values as well. Our results support the claim that targets with low growth are more suitable for bidder firms simply looking to absorb resources (Cosset and Meknassi 2013b), as opposed to completing a mutually beneficial merger.

The BHARs regression also finds significance for *GROWTHT*, but here it has a small positive coefficient. This suggests recent success by the target firm initially makes for a more expensive and value decreasing deal surrounding the announcement, but perhaps the high growth and recent success of the target firm increases value in the long run do to the momentum and success that they bring to the partnership to help establish a positive synergy in the long run.

Target firm free cash flow has a significant negative relationship with just the value weighted and equal weighted CAR (-3,3) measurements, indicating a larger amount of available cash on hand for a target firm leads to a decrease in bidder shareholder value. From the side of the acquiring firm's stock returns, free cash flows have been shown to result in lower abnormal returns after a cross-border acquisition (Lang et al. 1991). This

result would also lend partial support to the positive relationship between free cash flows and agency costs (Jensen, 1986; Doukas 1995), causing these targets to be less attractive.

The variable *ACCTSTAND* also finds negative significance for both the value weighted and equal weighted CAR (-1, 1) returns. Although intuitively you might think acquiring firms with more transparent information environments would be ideal, but perhaps this also brings better negotiating ability and in turn, higher demands from the target firms. Less regulation and transparency within a target nation may reduce the complexity of a merger and offer more straight forward negotiations between the two firms. We also have to consider the advanced economic level of our target nations, which all fall under high income or upper-middle income by the World Bank. If targets from the least developed nations or lower-middle income were to appear in the sample the results could vary.

The only other variables to receive significance were *GEOPROX* and *SIZEA*. The distance between two nations has a significant negative relationship at the 0.1% level for the equal weighted CAR (-3, 3) and 5 year BHAR. This result indicates the further the geographical distance is between the two partnering firms will result in lower returns for the bidder, which is consistent with previous findings (Martin and Valaquez 1997; Bevan and Estrin 2004). The size of the acquiring firm has a positive significant relationship for the value weighted CAR (-1, 1), which rejects the hubris hypothesis (Roll 1986), which suggests larger acquirers are more likely to make poor decisions. However, both *GEOPROX* and *SIZEA* each only found significance in one of four regressions, therefore must be interpreted carefully.

## CONCLUSIONS

Essay 1 provides the first analysis of the impact of inflation targeting on foreign direct investment and imports/exports. The majority of previous empirical research on inflation targeting has focused on, and found a significant impact in both control and reduction of inflation. Inflation targeting has also been found to reduce and control exchange rates, while having a positive influence on GDP growth. We find similar positive results using FDI and negative results with imports/exports as the dependent variables while controlling for these previously tested macro-economic variables.

However, when analyzing only developing nations, which have greater potential to benefit from the inflation targeting policy (Calvo and Mishkin, 2003; Fraga et al., 2003; Goncalves and Salles, 2008), we do not see as big of improvements as with developed nations. When breaking up the developing nations into further sub-samples, we do find partial support that the inflation targeting policy may in fact be more suitable and helpful to lesser developed nations.

As young as the policy is, we may not have a sufficient amount of data to properly analyze the relationship at this point in time, especially for the more recent adopting nations which are primarily developing. As countries continue practicing, and new countries join the trend, new research will be critical for further support of the inflation targeting policy. Future research may also explain if there is a plateau and/or eventual reversal of the initial positive impacts. Future regressions for more specific sample groups may also be useful, such as the clusters previously discussed. In sum, we find that: (i) adoption of the inflation targeting monetary policy has a positive impact on

FDI; (ii) when isolating developing nations, that impact loses some significance; (iii) the impact is larger for FDI inflows than FDI outflows; (iv) the relationship between FDI and imports/exports is that of a substitute, not of a compliment.

Essay 2 provides a fairly small sample of publically traded United States bidders acquiring a publically traded foreign target from 1990 through 2010. We focus on the decision of the bidding firms to acquirer a foreign target that is or is not cross-listed on a stock exchange located in the bidder's home country. We do not find support for our hypothesis that acquiring a cross-listed firm will lead to higher stock returns for the acquiring firm in the short run or the long run. Although our short run observations show the opposite that acquisitions involving a cross-listed target decrease the bidder's shareholder value within the week surrounding the announcement, these results are not found to be significant. This finding is consistent with previous literature in that there is no significant short run effect for a bidder acquiring a cross-listed firm (Cosset and Meknassi 2013a). The BHARs do produce a positive coefficient consistent with the previous study, however our cross listing dummy is not found to be significant.

We also test previously used bidder, target and transaction characteristics and examine their impact on bidder returns. Target firm free cash flows are also significant in determining an acquisitions short run effect on shareholder value. Higher free cash flows lead to a decrease in shareholder value for acquiring firms surrounding the announcement, providing partial support for the positive relationship between free cash flows and agency costs (Jensen, 1986; Doukas 1995). Higher accounting standards within the target nations firm, along with distance between the US and the target nation

each show partial significance for a negative influence on stock returns. The size of the US acquiring firm also finds partial support for increasing their returns.

Although much of the M&A research over the years, including this study, show a negative impact to bidding firms in cross-border acquisitions, the trend of globalization and integrated financial markets is not slowing down. The short run benefit by default seems to be completely absorbed by the target firms, while the positive long run results help counteract the short term losses. Cross-border acquisition research may need to consider a shift in their primary model structure. If targets are not seeing positive effect to shareholder value, perhaps there is a greater focus on long run financial analysis, synergistic gains post acquisition, or stakeholder value which keeps the cross-border M&A volume high.

There may also be alternative motives related to taxes which help keep the cross-border acquisition volume growing. Although we did, and previous studies commonly control for "Tax Haven" nations, the issue of double taxation may be encouraging companies to maintain revenues from foreign nations within that nation. Instead of earning revenue abroad, which has to be taxed abroad, then bringing that revenue back into the home country to be taxed again, MNEs may be choosing to use revenues abroad, possibly for M&As, in order to avoid extra domestic taxes from their headquartered nation. Future cross-border M&A research should consider the alternative benefits, as well as the alternative motives for bidding firms to continue their involvement regardless of the lack of increased shareholder value.

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**APPENDIX 1: OECD TAX HAVEN NATIONS**

Andorra	Liechtenstein
Anguilla	Malta
Antigua and Barbuda	Marshall Islands
Aruba	Mauritius
Bahamas	Monaco
Bahrain	Montserrat
Belize	Nauru
Bermuda	Netherlands Antilles
British Virgin Islands	Niue
Cayman Islands	Panama
Cook Islands	Samoa
Cyprus	San Marino
Commonwealth of Dominica	Seychelles
Gibraltar	St. Kitts & Nevis
Grenada	St. Lucia
Guernsey	St. Vincent and the Grenadines
Isle of Man	Turks & Caicos Islands
Jersey	US Virgin Islands
Liberia	Vanuatu

## VITA

### Ryan Lawrence Mason

Strome College of Business • Norfolk, VA 23529  
 PHONE: (616) 402-8953 • E-MAIL: rmason@odu.edu

#### EDUCATION

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Old Dominion University, Norfolk, VA	September 2010 – December 2014
PhD in Finance/International Business	PhD GPA: 3.66
Masters in Economics	MA GPA: 3.88
Dissertation	Final Defense: August 4 <sup>th</sup> 2014
	Chair: Dr. Mohammad Najand
Anderson University, Anderson, IN	September 2003 – June 2008
Masters in Business Administration	MBA GPA: 3.87
BA in Economics	BA GPA: 3.14 (3.45 last 60hrs.)

#### INTELLECTUAL CONTRIBUTIONS

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##### Working Papers:

- Mason, R. *Inflation Targeting's Impact on Attracting Foreign Direct Investment*
- Mason, R. *Do Cross Listed Targets Make a Difference in Cross-Border Acquisitions?*
- Mason, R. *Stock Market Reaction to Voluntary Reporting: The Case of GRI Reports*
- Vracheva, V. & Mason, R. *The role of regulation in creating shareholder value through stakeholder management*

##### Research Interest:

Corporate Finance, Investments, Capital Markets, Corporate Social Responsibility,  
 Monetary Policy, International Trade

#### PROFESSIONAL EXPERIENCE

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##### North Central College; Naperville, IL (Fall 2014 – present)

Title: Full Time Visiting Assistant Professor

- Fall: FIN 350 (Corporate Finance)
- Winter: FIN 350 (Corporate Finance)  
FIN 400 (Investments and Portfolio Management)
- Spring: FIN 450 (Advanced Corporate Finance)  
FIN 635 (Advanced Financial Management – MBA)  
ECN 252 (Macroeconomic Principles)

Contact: Doh-Khul Kim – (630) 637-5043      Ellen DeBerge – (630) 637-5240  
 125 S. Loomis                                      125 S. Loomis  
 Naperville, IL 60540                              Naperville, IL 60540

##### Christopher Newport University; Newport News, VA (Fall 2013 – Spring 2014)

Title: Adjunct Instructor

- Taught BUS 323 (Corporate Finance)
- Taught ECON 201 (Principles of Macroeconomics)

Contact: Ronnie Cohen – (757) 594-7075      Michelle Vachris – (757) 594-7719  
 114 Luter Hall                                      227 Luter Hall  
 Newport News, VA 23606                              Newport News, VA 23606

